Kathir College of Engineering

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Wisdom Tree, Neelambur, Avinashi Road, Coimbatore-62

Criterion – 6 Governance, Leadership and Management

Key Indicator- 6.5 Internal Quality Assurance System

6.5.3 Quality assurance initiatives of the institution include

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KATHIR COLLEGE OF ENGINEERING

[Approved by AICTE and affiliated to Anna University]

Wisdom Tree, Avinashi Road, Neelambur, Coimbatore 641062

Web: www.kathir.ac.in, Email: kathirce@kathir.ac.in

Ref: KCE/IQAC/2016-2017/1

08.09.2016

Internal Quality Assurance Cell (IQAC)

Circular

Sub: IQAC Meeting – Intimation to the members of the IQAC

Dear Member,

An IQAC Meeting is arranged on 15.09.2016at Board room. All the members of the IQAC are requested to attend the meeting at 3PM. The points to be discussed in the meeting are as follows:

AGENDA:

1. Web Site updation
2. Parents meet
3. NSS Activities
4. Any other matter

Principal/Chairman of IQAC

Copy to

1. All IQAC members
2. IQAC File for record
3. Management

PRINCIPAL
Kathir College Of Engineering
Neelambur.
Coimbatore - 641 062.

Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
Principal
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"Wisdom Tree" Avinashi Road,
Neelambur,Coimbatore - 641 062.

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Internal Quality Assurance Cell

IQAC Meeting held on 15.09.2016

Attendance sheet

S.No	Name	Designation	Signature
1.	Dr. G. Doraisamy	GEO/Management Representative	
2.	Dr. P. Banumathi	Principal/ Chairman, HOD-CSE	
3.	Dr. S.K. Latha	HOD-S&H/Member	
4.	Dr. M. Kannan	HOD-ECE/Coordinator	
5.	Dr. B. Vaikundaselvan	HOD-EEE/Member	
6.	Dr. P. Murthi	HOD-Civil/Member	
7.	Ms. R. Karpagam	HOD-MBA/Member	
8.	Dr. A.R. Suresh	HOD-Mechanical/Member	

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Website : www.kathir.ac.in

15th September 2016

INTERNAL QUALITY ASSURANCE CELL (IQAC)
MINUTES OF MEETING

Meeting was held on 15th September 2016 at 3 PM in Board room of the college. Following members were present for the meeting:

S.No	Name	Designation/IQAC
1.	Dr. G. Doraisamy	CEO/Management Representative
2.	Dr. P. Banumathi	Principal/ Chairman, HOD-CSE
3.	Dr. S.K. Latha	HOD-S&H/Member
4.	Dr. M. Kannan	HOD-ECE/Coordinator
5.	Dr. B. Vaikundaselvan	HOD-EEE/Member
6.	Dr. P. Murthi	HOD-Civil/Member
7.	Ms. R. Karpagam	HOD-MBA/Member
8.	Dr. A.R. Suresh	HOD-Mechanical/Member

The chairperson Dr.P.Banumathi welcomed the members. The following points were discussed in the meeting.

S. No.	Details	Action to be taken
1.	The Principal welcomed all the members for the meeting. She insisted to update the website of the KCE frequently with the latest data.	All the faculty members
2.	The IQAC has proposed to conduct parents meeting frequently.	All the HODs
3.	The management insisted to conduct more activities in NSS.	NSS Coordinator
4.	The members insisted to organise more events through the department associations.	All the HODs
5.	The members proposed to make an action plan for improving the academic performance of the weak students.	All the members

The meeting was concluded with a vote of thanks from the IQAC Coordinator, Dr. M. Kannan.

Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
Principal
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"Wisdom Tree" Avinashi Road,
Neelambur,Coimbatore - 641 062.

Principal
[Dr.P.Banumathi]
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Ref: KCE/IQAC/2016-2017/2

27.01.2017

Internal Quality Assurance Cell (IQAC)

Circular

Sub: IQAC Meeting – Intimation to the members of the IQAC

Dear Member,

An IQAC Meeting is arranged on 02.02.2017 at Board Room. All the members of the IQAC are requested to attend the meeting at 11AM. The points to be discussed in the meeting are as follows:

AGENDA:

1. Academic Calendar 2016-2017
2. Class committee meetings
3. FDPs
4. Any other matter

Principal/Chairman of IQAC

PRINCIPAL
Kathir College Of Engineering
Neelambur
Coimbatore - 641 062.

Copy to

1. All IQAC members
2. IQAC File for record
3. Management

Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
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Internal Quality Assurance Cell

IQAC Meeting held on 02.02.2017

Attendance sheet

S.No	Name	Designation/IQAC	Signature
1.	Dr. G. Doraisamy	CEO/Management Representative	
2.	Dr. P. Banumathi	Principal/ Chairman, HOD-CSE	
3.	Dr. S.K. Latha	HOD-S&H/Member	
4.	Dr. M. Kannan	HOD-ECE/Coordinator	
5.	Dr. B. Vaikundaselvan	HOD-EEE/Member	
6.	Dr. P. Murthi	HOD-Civil/Member	
7.	Ms. R. Karpagam	HOD-MBA/Member	
8.	Dr. A.R. Suresh	HOD-Mechanical/Member	

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2nd February 2017

INTERNAL QUALITY ASSURANCE CELL (IQAC)
MINUTES OF MEETING

Meeting was held on 2nd February 2017 at 11 AM in Board room of the college. Following members were present for the meeting:

S.No	Name	Designation/IQAC
1.	Dr. G. Doraisamy	CEO/Management Representative
2.	Dr. P. Banumathi	Principal/ Chairman, HOD-CSE
3.	Dr. S.K. Latha	HOD-S&H/Member
4.	Dr. M. Kannan	HOD-ECE/Coordinator
5.	Dr. B. Vaikundaselvan	HOD-EEE/Member
6.	Dr. P. Murthi	HOD-Civil/Member
7.	Ms. R. Karpagam	HOD-MBA/Member
8.	Dr. A.R. Suresh	HOD-Mechanical/Member

The chairperson Dr.P.Banumathi welcomed the members. The following points were discussed in the meeting.

S. No.	Details	Action to be taken
1.	Principal welcomed the members for the meeting and she informed to follow the Academic Calendar of 2016-2017 even semester.	All the faculty members
2.	The committee has insisted to conduct regular class committee meetings for the students and get feedback for improvement.	All the HODs and Class Advisors
3.	The members insisted the HOD's to encourage their staff members to participate in Various Faculty Development Programmes.	All the HODs
4.	HODs discussed about their students visit to industries for gaining practical knowledge.	All the HODs
5.	The members insisted to make well defined perspective plans and deployment.	IQAC Coordinator

The meeting was concluded with a vote of thanks from the IQAC Coordinator, Dr. M. Kannan.

Principal
[Dr.P.Banumathi]

Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
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"Wisdom Tree" Avinashi Road,
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Ref: KCE/IQAC/2017-2018/1

03.07.2017

Internal Quality Assurance Cell (IQAC)

Circular

Sub: IQAC Meeting – Intimation to the members of the IQAC

Dear Member,

An IQAC Meeting is arranged on 07.07.2017 at Board room. All the members of the IQAC are requested to attend the meeting at 2:30PM. The points to be discussed in the meeting are as follows:

AGENDA:

1. Responsibilities of IQAC
2. Placements for final year students
3. Journal Publications
4. Any other matter

Principal/Chairman of IQAC

Copy to

1. All IQAC members
2. IQAC File for record
3. Management

Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
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Internal Quality Assurance Cell

IQAC Meeting held on 07.07.2017

Attendance sheet

S.No	Name	Designation	Signature
1.	Dr. G. Doraisamy	CEO/Management Representative	
2.	Dr. D. AnanthaKrishnan	Principal/ Chairman	
3.	Dr. P. Banumathi	HOD-CSE	
4.	Dr. K.V. Kannan Nithin	HOD-S&H/Member	
5.	Dr. M. Kannan	HOD-ECE/Coordinator	
6.	Dr. B. Vaikundaselvan	HOD-EEE/Member	
7.	Dr. P. Murthi	HOD-Civil/Member	
8.	Dr. R. Karpagam	HOD-MBA/Member	
9.	Dr. A.R. Suresh	HOD-Mechanical/Member	

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7th July 2017

INTERNAL QUALITY ASSURANCE CELL (IQAC)
MINUTES OF MEETING

Meeting was held on 7th July 2017 at 2:30 PM in Board room of the college. Following members were present for the meeting:

S.No	Name	Designation/IQAC
1.	Dr. G. Doraisamy	CEO/Management Representative
2.	Dr. D.Anantha krishnan	Principal/ Chairman
3.	Dr. P. Banumathi	HOD-CSE
4.	Dr. K.V. Kannan Nithin	HOD-S&H/Member
5.	Dr. M. Kannan	HOD-ECE/Coordinator
6.	Dr. B. Vaikundaselvan	HOD-EEE/Member
7.	Dr. P.Murthi	HOD-Civil/Member
8.	Dr. R. Karpagam	HOD-MBA/Member
9.	Dr. A.R. Suresh	HOD-Mechanical/Member

The chairperson Dr. D.Anantha krishnan welcomed the members. The following points were discussed in the meeting.

S. No.	Details	Action to be taken
1.	The chairman of IQAC welcomed all the members and he explained the prime responsibility of IQAC to initiate, plan and various activities which are essential to increase the quality of the education imparted in the college.	IQAC
2.	IQAC Coordinator insisted the training and placement cell to strengthen the number of placements by bringing in more numbers of reputed companies for on-campus placements.	Training and Placement cell
3.	The members discussed about the journal publication of staff members.	All staff members
4.	The members insisted to conduct the regular Academic and Administrative Audit.	All staff members
5.	The members discussed about the NBA Accreditation status.	All staff members

The meeting was concluded with a vote of thanks from the IQAC Coordinator, Dr. M. Kannan.

Principal

Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
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"Wisdom Tree" Avinashi Road,
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Ref: KCE/IQAC/2017-2018/2

05.01.2018

Internal Quality Assurance Cell (IQAC)

Circular

Sub: IQAC Meeting – Intimation to the members of the IQAC

Dear Member,

An IQAC Meeting is arranged on 11.01.2018 at Board Room. All the members of the IQAC are requested to attend the meeting at 2:30PM. The points to be discussed in the meeting are as follows:

AGENDA:

1. Innovative teaching methods for course delivery
2. VAC/Add on Courses
3. Internal Assessment Tests
4. Any other matter

Principal/Chairman of IQAC

Copy to

1. All IQAC members
2. IQAC File for record
3. Management

Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
Principal
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Internal Quality Assurance Cell

IQAC Meeting held on 11.01.2018

Attendance sheet

S.No	Name	Designation/IQAC	Signature
1.	Dr. G. Doraisamy	CEO/Management Representative	
2.	Dr. D. AnanthaKrishnan	Principal/Chairman	
3.	Dr. P. Banumathi	HOD-CSE/Member	
4.	Dr. K.V. Kannan Nithin	HOD-S&H/Member	
5.	Dr. M. Kannan	HOD-ECE/Coordinator	
6.	Dr. B. Vaikundaselvan	HOD-EEE/Member	
7.	Dr. P.Murthi	HOD-Civil/Member	
8.	Dr. R. Karpagam	HOD-MBA/Member	
9.	Dr. A.R. Suresh	HOD-Mechanical/Member	

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11th January 2018

INTERNAL QUALITY ASSURANCE CELL (IQAC)
MINUTES OF MEETING

Meeting was held on 11th January 2018 at 2:30 PM in Board room of the college. Following members were present for the meeting:

S.No	Name	Designation/IQAC
1.	Dr. G. Doraisamy	CEO/Management Representative
2.	Dr. D. Anantha Krishnan	Principal/ Chairman
3.	Dr. P. Banumathi	HOD-CSE
4.	Dr. K.V. Kannan Nithin	HOD-S&H/Member
5.	Dr. M. Kannan	HOD-ECE/Coordinator
6.	Dr. B. Vaikundaselvan	HOD-EEE/Member
7.	Dr. P. Murthi	HOD-Civil/Member
8.	Dr. R. Karpagam	HOD-MBA/Member
9.	Dr. A.R. Suresh	HOD-Mechanical/Member

The chairperson Dr. D.Anantha krishnan welcomed the members. The following points were discussed in the meeting.

S. No.	Details	Action to be taken
1.	The committee insisted the faculty to use innovative teaching method during their course delivery to enhance the students learning capability.	All the faculty members
2.	The members suggested to conduct more value added courses and Add on courses in this semester.	All the HODs
3.	The committee insisted that the internal assessment test should not deviate with the academic calendar and the standard of the question paper should meet BT level.	All the faculty members
4.	The members suggested that the HODs should involve their staff and students to participate in national and international conferences.	All the HODs
5.	The chairperson insisted all the faculty members to publish their work in the Scopus indexed journal.	All the faculty members

The meeting was concluded with a vote of thanks from the IQAC Coordinator, Dr. M. Kannan.

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Principal

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Dr. P.Murthi, B.E., MBA., M.Tech., Ph.D.,
Principal

Latest notification of Formation of IQAC

Internal Quality Assurance Cell (IQAC) members

Circular

5th June 2018

The following is the revised list of members of IQAC with effect from today, the 5th June 2018.

S.No	Name	Designation/IQAC	Mobile No.	Official Email Id
1.	Dr.G.Doraisamy	CEO/Management Representative	9442545666	gdswamy3@yahoo.com
2.	Dr.P.Murthi	Principal/ Chairman	8220772148	principal@kathir.ac.in
3.	Dr.K.V. Kannan -Nithin	HOD-S&H/Member	9043444746	Kannannithin_sh@kathir.ac.in
4.	Dr. M. Kannan	HOD-ECE/Member	9597420107	ecehod@kathir.ac.in
5.	Dr. B. Vaikundaselvan	HOD-EEE/Coordinator	9843648317	eeehod@kathir.ac.in
6.	Mr. TKP. Rajagopal	HOD-CSE/Member	9443769726	csehod@kathir.ac.in
7.	Dr. A.R.Suresh	HOD-Mech/Member	9442765776	mechhod@kathir.ac.in
8.	Ms. R. Priyanka	HOD-Civil/Member	9597970780	civilhod@kathir.ac.in
9.	Mr. D. Davidbaburaj	HOD-MBA/Member	9790751257	davidbaburaj@yahoo.com
10	Mr. M.Ramkumar	AP-EEE/Member	9952805076	ramfrmkce@gmail.com
11	Mr.R.Rameshbabu	Manager-Training School, Fanuc India/Representative from Industry	9900589096	rameshbabu.r@fanucindia.com

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Principal
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Ref: KCE/IQAC/2018-2019/1

07.09.2018

Internal Quality Assurance Cell (IQAC)

Circular

Sub: IQAC Meeting – Intimation to the members of the IQAC

Dear Member,

An IQAC Meeting is arranged on 14.09.2018 at ground floor conference room. All the members of the IQAC are requested to attend the meeting at 3PM. The points to be discussed in the meeting are as follows:

AGENDA:

1. Research Labs
2. NBA Accreditation
3. Any other matter

Principal/Chairman of IQAC

PRINCIPAL
Kathir College Of Engineering
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Coimbatore - 641 062.

Copy to

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2. IQAC File for record
3. Management

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Internal Quality Assurance Cell

IQAC Meeting held on 14.09.2018

Attendance sheet

S.No	Name	Designation/IQAC	Signature
1.	Dr.G.Doraisamy	CEO/Management Representative	
2.	Dr.P.Murthi	Principal/ Chairman	
3.	Dr.K.V. Kannan Nithin	HOD-S&H/Member	
4.	Dr. M. Kannan	HOD-ECE/Member	
5.	Dr. B. Vaikundaselvan	HOD-EEE/Coordinator	
6.	Mr. TKP. Rajagopal	HOD-CSE/Member	
7.	Dr. A.R.Suresh	HOD-Mech/Member	
8.	Ms. R. Priyanka	HOD-Civil/Member	
9.	Mr. D. Davidbaburaj	HOD-MBA/Member	
10.	Mr.R.Rameshbabu	Manager-Training School, Fanuc	

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Dr. P.Murthi, B.E., MBA., M.Tech., Ph.D.,
Principal

14th September 2018

INTERNAL QUALITY ASSURANCE CELL (IQAC)
MINUTES OF MEETING

Meeting was held on 14th September at 3 PM in the ground floor conference hall of the college. Following members were present for the meeting:

S.No	Name	Designation/IQAC
1.	Dr.G.Doraisamy	CEO/Management Representative
2.	Dr.P.Murthi	Principal/ Chairman
3.	Dr.K.V. Kannan Nithin	HOD-S&H/Member
4.	Dr. M. Kannan	HOD-ECE/Member
5.	Dr. B. Vaikundaselvan	HOD-EEE/Coordinator
6.	Mr. TKP. Rajagopal	HOD-CSE/Member
7.	Dr. A.R.Suresh	HOD-Mech/Member
8.	Ms. R. Priyanka	HOD-Civil/Member
9.	Mr. D. Davidbaburaj	HOD-MBA/Member
10.	Mr.R.Rameshbabu	Manager-Training School, Fanuc India/Representative from Industry

The chairperson, Dr.P.Murthi welcomed Dr.G.Doraisamy, the management representative, Mr.R.Rameshbabu, Representative from Industry and other members. The following points were discussed in the meeting.

S.No	Details	Action to be taken
1.	The HOD, Mechanical department proposed to set up research labs in thrust areas like industry 4.0 and nano materials lab. He mentioned that the proposed labs would support research by both faculty and students. He added that it will enrich their knowledge and greatly improve student's placement opportunities.	HOD-Mechanical
2.	The management insisted that the institution should prepare to work towards obtaining NBA accreditation which would help the institution in solicit support from various government programs as well as improve the operations from within the institute.	All the HOD's of ECE, Mechanical and Computer Science
3.	IQAC Coordinator mentioned that the proforma for Student Satisfaction Survey mailed to the respective HODs, to be utilized for getting the feedback from students.	All the HODs
4.	The Industry member, Mr R.Rameshbabu, appreciated installation of wi-fi in campus. He emphasized the importance of digitization. He further suggested having paperless office and resorting to emails over paper communication.	All the members

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PRINCIPAL
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NEELAMBUR

KATHIR COLLEGE OF ENGINEERING

[Approved by AICTE and affiliated to Anna University]

Wisdom Tree, Avinashi Road, **Neelambur**, **Coimbatore 641062**

Web: www.kathir.ac.in, **Email:** kathirce@kathir.ac.in

Ref: KCE/IQAC/2018-2019/2

13.02.2019

Internal Quality Assurance Cell (IQAC)

Circular

Sub: IQAC Meeting – Intimation to the members of the IQAC

Dear Member,

An IQAC Meeting is arranged on 20.02.2019 at MBA Conference Hall. All the members of the IQAC are requested to attend the meeting at 11AM. The points to be discussed in the meeting are as follows:

AGENDA:

1. Industry-Institute Interaction
2. Industrial Visits
3. Result Analysis
4. Any other matter

Principal/Chairman of IQAC

PRINCIPAL
Kathir College Of Engineering
Neelambur,
Coimbatore - 641 062.

Copy to

1. All IQAC members
2. IQAC File for record
3. Management

Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
Principal
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"Wisdom Tree" Avinashi Road,
Neelambur,Coimbatore - 641 062.

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Internal Quality Assurance Cell

IQAC Meeting held on 20.02.2019

Attendance sheet

S.No	Name	Designation/IQAC	Signature
1.	Dr.G.Doraisamy	CEO/Management Representative	
2.	Dr.P.Murthi	Principal/ Chairman	
3.	Dr.K.V. Kannan Nithin	HOD-S&H/Member	
4.	Dr. M. Kannan	HOD-ECE/Member	
5.	Dr. B. Vaikundaselvan	HOD-EEE/Coordinator	
6.	Mr. TKP. Rajagopal	HOD-CSE/Member	
7.	Dr. A.R.Suresh	HOD-Mech/Member	
8.	Ms. R. Priyanka	HOD-Civil/Member	
9.	Mr. D. Davidbaburaj	HOD-MBA/Member	
10.	Mr.R.Rameshbabu	Manager-Training School, Fanuc	

Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
Principal
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KATHIR COLLEGE OF ENGINEERING

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Phone : 0422 - 6554778, 2203737. Tele Fax : 08030723600.
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Dr. P.Murthi, B.E., MBA., M.Tech., Ph.D.,
Principal

20th February 2019

INTERNAL QUALITY ASSURANCE CELL (IQAC)
MINUTES OF MEETING

Meeting was held on 20th February 2019 at 11 AM in the MBA conference hall of the college. Following members were present for the meeting:

S.No	Name	Designation/IQAC
1.	Dr.G.Doraisamy	CEO/Management Representative
2.	Dr.P.Murthi	Principal/ Chairman
3.	Dr.K.V. Kannan Nithin	HOD-S&H/Member
4.	Dr. M. Kannan	HOD-ECE/Member
5.	Dr. B. Vaikundaselvan	HOD-EEE/Coordinator
6.	Mr. TKP. Rajagopal	HOD-CSE/Member
7.	Dr. A.R.Suresh	HOD-Mech/Member
8.	Ms. R. Priyanka	HOD-Civil/Member
9.	Mr. D. Davidbaburaj	HOD-MBA/Member
10.	Mr.M.Ramkumar	AP-EEE/Member
11.	Mr.R.Rameshbabu	Manager-Training School, Fanuc India/Representative from Industry

The chairperson, Dr.P.Murthi welcomed all the members. The following points were discussed in the meeting.

S.No	Details	Action to be taken
1.	The committee suggested to undergo the Industry-Institute Interaction through Membership & MOU's by conducting various activities through them.	All the HODs
2.	The committee suggested all the members to arrange more numbers of industrial tours in the next semester.	All the Members
3.	The results of B.E, M.E & MBA Examinations were reviewed	All the Members
4.	The committee instructed all HODs to conduct at least one guest lecture and workshop in next semester.	All the HODs
5.	The committee reviewed the placements of this academic year and instructed to communicate with more number of reputed companies to conduct placement drives in our campus.	Placement Officer

The meeting ended with formal vote of thanks by IQAC Coordinator Dr. B. Vaikundaselvan.

Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
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COIMBATORE-62.

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Fax : 08030723600
E-mail : kathirce@gmail.com
Website : www.kathir.ac.in

Dr.A.R.Suresh, M.E., Ph.D.,
Principal

Internal Quality Assurance Cell (IQAC) members

Circular

4th June 2019

The following is the revised list of members of IQAC with effect from today, the 4th June 2019.

S.No	Name	Designation/IQAC	Mobile No.	Official Email Id
1.	Dr.G.Doraisamy	CEO/Management Representative	9442545666	gdswamy3@yahoo.com
2.	Dr. A.R.Suresh	Principal/ Chairman, HOD-Mech/Member	9442765776	principal@kathir.ac.in, mechhod@kathir.ac.in
3.	Dr.K.V. Kannan Nithin	HOD-S&H/Member	9043444746	Kannannithin_sh@kathir.ac.in
4.	Dr. M. Varatharaj	HOD-ECE/Member	9994400085	ecehod@kathir.ac.in
5.	Dr. B. Vaikundaselvan	HOD-EEE/Coordinator	9843648317	eeehod@kathir.ac.in
6.	Mrs.T.Sakthisree	HOD-CSE/Member	9500653620	csehod@kathir.ac.in
7.	Mr. S. Ganeshkumar	HOD-Civil/Member	7373663113	civilhod@kathir.ac.in
8.	Mr. D. Davidbaburaj	HOD-MBA/Member	9790751257	davidbaburaj@yahoo.com
9.	Mr. M.Ramkumar	AP-EEE/Member	9952805076	ramfrmkce@gmail.com
10	Mr.R.Rameshbabu	Manager-Training School, Fanuc India/Representative from Industry	9900589096	rameshbabu.r@fanucindia.com

Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
Principal
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Principal 4/6/19
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Website : www.kathir.ac.in

12th September 2019

INTERNAL QUALITY ASSURANCE CELL (IQAC)
MINUTES OF MEETING

Meeting was held on 12th September 2019 at 11 AM in MBA seminar hall of the college. Following members were present for the meeting:

S.No	Name	Designation/IQAC
1.	Dr.G.Doraisamy	CEO/Management Representative
2.	Dr. A.R.Suresh	Principal/ Chairman, HOD-Mech/Member
3.	Dr.K.V. Kannan Nithin	HOD-S&H/Member
4.	Dr. M. Varatharaj	HOD-ECE/Member
5.	Dr. B. Vaikundaselvan	HOD-EEE/Coordinator
6.	Mrs.T.Sakthisree	HOD-CSE/Member
7.	Mr. S. Ganeshkumar	HOD-Civil/Member
8.	Mr. D. Davidbaburaj	HOD-MBA/Member
9.	Mr. M.Ramkumar	AP-EEE/Member
10.	Mr.R.Rameshbabu	Manager-Training School, Fanuc India/Representative from Industry

The chairperson Dr.A.R.Suresh welcomed the members. The following points were discussed in the meeting.

S. No.	Details	Action to be taken
1.	The HOD-EEE department proposed to set up centre of excellence in PLC lab, also requested to setup Incubation centre to enrich students' co-curricular and placement opportunities	HOD-EEE
2.	The management insisted to organise the employability skill training programs to enhance the employability of the students	All the HODs
3.	IQAC coordinator mentioned that Students counseling regarding academic and personal problems should be taken care by the respective mentors	All the HODs
4.	The council members recommended conducting GATE coaching classes for UG students, Research Methodology lectures and talks from Industry experts for students.	All the HODs
5.	The council members proposed making an action plan for improving the academic performance of the weak students	All the members

Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
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12/9/19
Principal
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NEELAMBUR

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E-mail : kathirce@gmail.com
Website : www.kathir.ac.in

17th February 2020

INTERNAL QUALITY ASSURANCE CELL (IQAC)
MINUTES OF MEETING

Meeting was held on 17th February 2020 at 10 AM in the MBA seminar hall of the college. Following members were present for the meeting:

S.No	Name	Designation/IQAC
1.	Dr.G.Doraisamy	CEO/Management Representative
2.	Dr. A.R.Suresh	Principal/ Chairman, HOD-Mech/Member
3.	Dr.K.V. Kannan Nithin	HOD-S&H/Member
4.	Dr. M. Varatharaj	HOD-ECE/Member
5.	Dr. B. Vaikundaselvan	HOD-EEE/Coordinator
6.	Mrs.T.Sakthisree	HOD-CSE/Member
7.	Mr. S. Ganeshkumar	HOD-Civil/Member
8.	Mr. D. Davidbaburaj	HOD-MBA/Member
9.	Mr. M.Ramkumar	AP-EEE/Member
10.	Mr.R.Rameshbabu	Manager-Training School, Fanuc India/Representative from Industry

The chairperson Dr.A.R.Suresh welcomed the members. The following points were discussed in the meeting.

S. No.	Details	Action to be taken
1.	The AQAR report of the academic year 2019-20 and NBA accreditation process for the upcoming years	NAAC & NBA Co-ordinator
2.	The management insisted that our Institute should follow a standard academic system in place to take care of the slow-learners, to improve their knowledge and to get good academic performance	All the HODs
3.	The council members recommended to send proposals like Research Proposal Scheme and MODROB to various funding agencies especially to AICTE, DST and TNSCST	All the HODs
4.	The council members reviewed the complete statement on teaching learning programs, action plan for high intensity training and other events	All the HODs

The meeting came to an end with a vote of thanks by IQAC Coordinator Dr. B. Vaikundaselvan.

Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
Principal
Kathir College of Engineering
"Wisdom Tree" Avinashi Road,
Neelambur, Coimbatore - 641 062.

Principal
PRINCIPAL
KATHIR COLLEGE OF ENGINEERING,
NEELAMBUR.

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INTERNAL QUALITY ASSURANCE CELL (IQAC)

Ref: KCE/IQAC/2020-2021/1

20.8.2020

Dear Member,

Please find the Composition of the IQAC of Kathir College of Engineering, Neelambur, Coimbatore for Academic year 2020-2021. This is based on the guidelines of NAAC. The Primary objective of our IQAC is to develop an eco-system for Industry driven Academics to improve the overall performance of our institution. I hereby request you to contribute with your valuable inputs during our meetings towards reaching the goal.

S No.	Name	Designation	Category
1	Dr. R. Udaiyakumar	Principal, KCE	Chairman
2	Dr. G. Doraisamy	CEO, Kathir Institutions	Management Representative
3	Shri. Malligarjunababu	Administrative Officer, KCE	Senior administrative officers of College
4	Smt. Preetha Moulishankar	Accounts Officer, KCE	
5	Dr. S J K Jagadeeshkumar	Professor & HoD, Department of Computing Sciences	Teachers
6	Dr. N.A. Natarajan	Associate professor in ECE	
7	Dr. D. Tamilmani	Professor in Civil Engg	
8	Dr. Kannan Nithin	Professor in Physics	
9	Shri.J.Hariharan Reg.No:71161714010	IV Year Mech	Students
10	Shri.T.Raja Reg.No:711618105011	III Year EEE	
11	Smt.V.Gayathiri Reg.No:711619106008	II Year ECE	
12	To be identified (NYJ)	I year AI & DS	
13	Mr. Vigneshwaran	Chief Executive Officer Virtual Frontier Robotics Private Limited. Email:	Alumni

Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
Principal
Kathir College of Engineering

		vignesh.waran905@gmail.com Mobile: 99441 53424	
14	Dr. R. Pradeep Kumar	Chief Innovation Officer, Amphisoft Technologies. Email: pradeep@amphisoft.in Mobile: 9944424861	Employer
15	Mr. R. Rameshbabu	Manager- Training school, Fanuc India Email: rameshbabu.r@fanucindia.com Mobile: 9900589096	Industrialist
16	Dr. B. Vaigunda Selvan	Associate Professor & HoD, Department of EEE	Coordinator of the IQAC

25/8/20

PRINCIPAL

Copy To

All members concerned
IQAC file for record
Notice Board
Secretary, KCE

KATHIR COLLEGE OF ENGINEERING

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Ref: KCE/IQAC/2020-2021/2

26.8.2020

Internal Quality Assurance Cell (IQAC)

Circular

Sub: IQAC Meeting – Intimation to the members of the IQAC

Dear Member,

An IQAC Meeting is arranged on 02.09.2020 which will be conducted through online. All the members of the IQAC are requested to attend the meeting at 3:30PM. The points to be discussed in the meeting are as follows:

AGENDA:

1. Action taken on the previous meeting minutes
2. Mandatory disclosure submission
3. KCE website updation
4. Online classes
5. Alumni and Parent's meet
6. Webinars
7. Faculty performance appraisal
8. Faculty publications
9. Any other matter

26/8/20

Principal/Chairman of IQAC

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3. Management

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Neelambur
Coimbatore - 641 062.

Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
Principal
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"Wisdom Tree" Avinashi Road,
Neelambur, Coimbatore - 641 062.

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Name of the Meeting: Internal Quality Assurance Cell (IQAC) meeting	**Ref. No. :KCE/IQAC/2020-2021/3**
Venue : online mode	**Date of the Meeting : 02.09.2020**
Members Present : all IQAC members except Dr. G. Doraisamy, CEO/MR, KCE	**Time : 3:30PM - 5PM**

SL. No.	Points taken up for Discussion	Remarks / Action to be taken	Responsibility	Target date
1	Academic year plan	▪ Principal welcomed all the members for the meeting. ▪ Follow up process is ongoing for the action taken for the academic year plan for even semester 2019-2020 and odd semester 2020-2021	All the HODs	31.12.2020
2	Mandatory Disclosure submission	▪ The IQAC coordinator told that the process of preparing mandatory disclosure for the Academic Year 2020-2021 is in process	IQAC Team	31.12.2020
3	Website updation	▪ Principal insisted to update the KCE website in line with the current data	All the HODs	15.01.2021
4	Online classes	▪ Principal briefed the process of handling academic classes in online mode through the EBox platform.	All Faculty	Continuous
5	Alumni and Parent's meet	▪ IQAC proposes to organize Alumni and Parent's meet more frequently in order to acquire inputs from them regarding	All the HODs	31.12.2020

Dr. R. UDAIYAR KUMAR, ME., Ph.D.,
Principal

6	Webinars	▪ Princ, al suggested that the faculty members may be encouraged to attend more webinars offered by various reputed organisations.	All faculty	Continuous
7	Faculty performance Appraisal	▪ The Governing Council members insisted to design and implement standard format for Faculty Performance Appraisal for the forthcoming years	Principal	31.12.2020
8	Faculty publications	▪ All department NAAC coordinators were requested to give the updated faculty list and their publication to IQAC cell	IQAC coordinator	15.01.2021
9	NSS Activities	▪ The management insisted to conduct NSS activities for the upcoming semester	NSS coordinator	31.12.2020
10	Concluding Remarks	▪ The meeting was concluded with a vote of thanks from IQAC Coordinator	IQAC co-ordinator	

IQAC Coordinator

[Dr. B. Prabakaran]

21.12.20

PRINCIPAL

PRINCIPAL
Kathir College Of Engineering
Neelambur,
Coimbatore - 641 062.

Copy to

1. All IQAC members
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Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
Principal
[illegible] College of Engineering
[illegible]
[illegible] Coimbatore-641 062.

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INTERNAL QUALITY ASSURANCE CELL (IQAC)

Ref: KCE/IQAC/2020-2021/9

18.1.2021

Dear Member,

Please find the revised composition of the IQAC of Kathir College of Engineering, Neelambur, Coimbatore for Academic year 2020-2021. This is based on the guidelines of NAAC. The Primary objective of our IQAC is to develop an eco-system for Industry driven academics to improve the overall performance of our institution. I hereby request you to contribute with your valuable inputs during our meetings towards reaching the goal.

S No.	Name	Designation	Category
1	Dr. R. Udaiyakumar	Principal, KCE	Chairman
2	Dr. G. Doraisamy	CEO, Kathir Institutions	Management Representative
3	Shri. Malligarjunababu	Administrative Officer, KCE	Senior administrative officers of College
4	Smt. Preetha Moulishankar	Accounts Officer, KCE	
5	Dr. S J K Jagadeeshkumar	Professor & HoD, Department of Computing Sciences	Teachers
6	Dr. V L Mangesh	Professor & HoD, Department of Mechanical Engineering	
7	Dr. G. Manjula	Professor & HoD in Civil Engg.	
8	Dr. K.V.Kannan Nithin	Professor in Physics	
9	Shri.J.Hariharan Reg.No:71161714010	IV Year Mech	Students
10	Shri.T.Raja Reg.No:711618105011	III Year EEE	
11	Smt.V.Gayathiri Reg.No:711619106008	II Year ECE	
12	Shri. K.B.Aakaash Reg.No:711620243001	I year AI & DS	
13	Mr. Vigneshwaran	Chief Executive Officer Virtual Frontier Robotics	Alumni

Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
Principal
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"Wisdom Tree" Avinashi Road
Neelambur, Coimbatore

		Private Limited. Email: vignesh.waran905@gmail.com Mobile: 99441 53424	
14	Dr. R. Pradeep Kumar	Chief Innovation Officer, Amphisoft Technologies. Email: pradeep@amphisoft.in Mobile: 9944424861	Employer
15	Mr. R. Rameshbabu	Manager- Training school, Fanuc India Email: rameshbabu.r@fanucindia.com Mobile: 9900589096	Industrialist
16	Dr. B. Prabakaran	Head of the Department, EEE	Coordinator of the IQAC

18/1/21

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All members concerned

IQAC file for record

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Secretary, KCE for information

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Ref: KCE/IQAC/2020-2021/10

22.1.2021

Internal Quality Assurance Cell (IQAC)

Circular

Sub: IQAC Meeting – Intimation to the members of the IQAC

Dear Member,

An IQAC Meeting is arranged on 28.01.2021 at MBA Seminar Hall. All the members of the IQAC are requested to attend the meeting at 3:30PM. The points to be discussed in the meeting are as follows:

AGENDA:

1. Governance at KCE
2. Online classes
3. Placement Record
4. System for slow learners
5. Conducting FDPs
6. Department association activities
7. Internal Academic Audit
8. AQAR 2020-2021

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Principal
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9. Content preparation
10. **Students counselling**
11. Funded research projects
12. Any other matter

22-1-21

Principal/Chairman of IQAC

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3. Management

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Internal Quality Assurance Cell

IQAC Meeting held on 28.01.2021

Attendance sheet

S.No	Name	Designation	Signature
1.	Dr. R. Udaiyakumar	Principal, KCE	
2.	Dr. G. Doraisamy	CEO, Kathir Institutions	Leave on Absence
3.	Shri. Malligarjunababu	Administrative Officer, KCE	
4.	Smt. PreethaMoulishankar	Accounts Officer, KCE	
5.	Dr. S J K Jagadeeshkumar	Professor &HoD, Department of Computing Sciences	
6.	Dr. V L Mangesh	Professor &HoD, Department of Mechanical Engineering	
7.	Dr. G. Manjula	Professor &HoDin Civil Engg.	
8.	Dr. K.V.Kannan Nithin	Professor in Physics	
9.	Shri.J.Hariharan Reg.No:71161714010	IV Year Mech	
10.	Shri.T.Raja Reg.No:711618105011	III Year EEE	
11.	Smt.V.Gayathiri Reg.No:711619106008	II Year ECE	
12.	Shri. K.B.Aakaash Reg.No:711620243001	I year AI & DS	
13.	Mr. Vigneshwaran	Chief Executive Officer Virtual Frontier Robotics Private Limited.	
14.	Dr. R. Pradeep Kumar	Chief Innovation Officer, Amphisoft Technologies.	
15.	Mr. R. Rameshbabu	Manager- Training school, Fanuc India	
16.	Dr. B. Prabakaran	Coordinator-IQAC	

Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
Principal
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Name of the Meeting: Internal Quality Assurance Cell (IQAC) meeting	**Ref. No. :KCE/IQAC/2020-2021/11**
Venue : MBA Seminar Hall	**Date of the Meeting : 28.01.2021**
Members Present : all IQAC members except Dr. G. Doraisamy, CEO/MR, KCE	**Time : 3:30PM - 5PM**

SL. No.	Points taken up for Discussion	Remarks / Action to be taken	Responsibility	Target date
1	Governance at KCE	▪ Principal welcomed all the members for the meeting. ▪ Strategic Planning for good governance at KCE was discussed	Principal and IQAC coordinator All faculty members	31.05.2021
2	Online Classes	▪ Online classes are conducted successfully by the faculty.	All faculty members	Continuous
3	Placement Record	▪ Members were keen on knowing the steps taken to identify the career perspectives of final year students and suggested to improve the placement record further	Principal, Placement officer and all HoDs	Continuous
4	System for slow learners	▪ Members were keen on understanding the system followed to take care of slow-learners and insisted to improve their knowledge for better academic performance	All the HODs	31.05.2021

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5	Conducting FDPs	▪ The members insisted to take initiation for the conduction of FDPs in the emerging areas	All the Faculty	31.05.2021
6	Department association activities	▪ The members insisted to improve all the department association activities	All the HODs	31.05.2021
7	Internal Academic Audit	▪ The members insisted to conduct IQAC Internal Academic Audit	IQAC co-ordinator	31.05.2021
8	AQAR2020-2021	▪ The AQAR report of the academic year 2020-21 and accreditation process for the upcoming years	IQAC co-ordinator	31.12.2021
9	Content preparation	▪ Principal insisted the content preparation for the upcoming semester	All the Faculty	15.02.2021
10	Students counselling	▪ Principal insisted all the mentors for periodic counselling of the students to address their grievances	All the HODs	31.05.2021
11	Funded research projects	▪ Principal insisted all the faculty members to apply and get the funds on research projects	All the faculty	31.05.2021
12	Concluding Remarks	▪ The meeting was concluded with a vote of thanks from IQAC Coordinator	IQAC co-ordinator	

IQAC Coordinator
[Dr. B. Prabakaran]

PRINCIPAL

PRINCIPAL
Kathir College Of Engineering
Neelambur
Coimbatore - 641 062.

Copy to

1. All IQAC members
2. IQAC File for record
3. Management

The Annual Quality Assurance Report (AQAR) of the IQAC

2016-17

Submitted to

National Assessment and Accreditation Council

Bangalore.



by

Kathir College of Engineering

(Approved by AICTE , New Delhi & Affiliated to Anna University, Chennai)
Accredited by NAAC
Neelambur, Coimbatore – 641062, Tamilnadu.
www.kathir.ac.in iqac@kathir.ac.in

PREFACE

Kathir College of Engineering (KCE) is an ISO 9001:2008 Certified institution, affiliated to Anna University, Chennai, recognized by UGC under 2(f) and approved by AICTE, New Delhi, was established in the academic year 2008- 2009, by the Lamika Educational and Charitable Trust, Coimbatore, Tamil Nadu.

KCE has been an important contributor to rejuvenate engineering education to the students also rural background, which constitutes the major part of its student population. KCE has emerged with the vision to accomplish and maintain international eminence for fostering Research and Development and in addition, it also encourages entrepreneurship for meeting national and global needs as well as demands.

The college started with 4 engineering disciplines has come a long way, and has progressed with 5 UG programmes and 4 PG programmes in Engineering and a PG course in Management studies. All the academic programmes offered by the college are in line with the institutional goals and objectives. The college also conducts additional courses beyond syllabus to improve the students' interpersonal and interpretive skills to meet its educational and career objectives.

Wi-Fi campus of KCE aids the students to avail the latest trends and advancement in the respective field, which is changing day by day. It helps the students to enhance their academic proficiency from various resources and develop an integrated method to facilitate advanced technology and empower the students to build a meaningful career. The second Annual Quality Assessment Report (AQAR) has been prepared with extreme care for the academic year 2016:17 and realistic perspective, following the guidelines given in the AQAR format. We take pleasure in submitting this AQAR to the NAAC's office for further processing.

Dr.P.Banumathi

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The Annual Quality Assurance Report (AQAR) of the IQAC

All NAAC accredited institutions will submit an annual self-reviewed progress report to NAAC, through its IQAC. The report is to detail the tangible results achieved in key areas, specifically identified by the institutional IQAC at the beginning of the academic year. The AQAR will detail the results of the perspective plan worked out by the IQAC. *(Note: The AQAR period would be the Academic Year. For example, July 1, 2012 to June 30, 2013)*

Part – A

1. Details of the Institution

1.1 Name of the Institution	**KATHIR COLLEGE OF ENGINEERING**
1.2 Address Line 1	WISDOM TREE, AVINASHI ROAD
Address Line 2	NEELAMBUR
City/Town	COIMBATORE
State	TAMIL NADU
Pin Code	641062
Institution e-mail address	kathirce@gmail.com
Contact Nos.	0422-2203715
Name of the Head of the Institution:	Dr.P.BANUMATHI
Tel. No. with STD Code:	0422-2203773
Mobile:	9566533366

Name of the IQAC Co-ordinator: Dr.M.KANNAN

Mobile: 8870599199

IQAC e-mail address: iqac@kathir.ac.in

1.3 **NAAC Track ID** *(For ex. MHCOGN 18879)* TNCOGN 24510

1.4 **NAAC Executive Committee No. & Date:**
(For Example EC/32/A&A/143 dated 3-5-2004. This EC no. is available in the right corner- bottom Of your institution's Accreditation Certificate) EC(SC)/15/A&A/45.1 DATED ON 25.5.2016

1.5 Website address: www.kathir.ac.in

Web-link of the AQAR: http://www.kathir.ac.in/wp-content/uploads/2016-2017/aqar.pdf

For ex. http://www.ladykeanecollege.edu.in/AQAR2012-13.doc

1.6 Accreditation Details

Sl. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	1st Cycle	B	2.53	2016	5 YRS

1.7 Date of Establishment of IQAC : DD/MM/YYYY 25/04/2016

1.8 AQAR for the year *(for example 2010-11)* 2016-2017

1.9 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC (*(for example AQAR 2010-11submitted to NAAC on 12-10-2011)*

i. AQAR 2015-2016 & 07/08/2016

ii. 1.10 Institutional Status

University State [ ] Central [ ] Deemed [ ] Private [ ]

Affiliated College Yes [✓] No [ ]

Constituent College Yes [ ] No [ ]

Autonomous college of UGC Yes [ ] No [ ]

Regulatory Agency approved Institution Yes [✓] No [ ]

(eg. AICTE, BCI, MCI, PCI, NCI)

Type of Institution Co-education [✓] Men [ ] Women [ ]

Urban [✓] Rural [ ] Tribal [ ]

Financial Status Grant-in-aid [ ] UGC 2(f) [✓] UGC 12B [ ]

Grant-in-aid + Self Financing [ ] Totally Self-financing [✓]

1.11 Type of Faculty/Programme

Arts [ ] Science [ ] Commerce [ ] Law [ ] PEI (Phys Edu) [ ]

TEI (Edu) [ ] Engineering [✓] Health Science [ ] Management [✓]

Others (Specify) [ ]

1.12 Name of the Affiliating University *(for the Colleges)* ANNA UNIVERSITY, CHENNAI.

1.13 Special status conferred by Central/ State Government-- UGC/CSIR/DST/DBT/ICMR etc

Autonomy by State/Central Govt. / University ANNA UNIVERSITY, CHENNAI

University with Potential for Excellence [ ] UGC-CPE [ ]

DST Star Scheme [ ] UGC-CE [ ]

UGC-Special Assistance Programme		DST-FIST	
UGC-Innovative PG programmes		Any other (*Specify*)	
UGC-COP Programmes			

2. IQAC Composition and Activities

2.1 No. of Teachers	5
2.2 No. of Administrative/Technical staff	1
2.3 No. of students	2
2.4 No. of Management representatives	1
2.5 No. of Alumni	1
2. 6 No. of any other stakeholder and community representatives	2
2.7 No. of Employers/ Industrialists	1
2.8 No. of other External Experts	1
2.9 Total No. of members	14
2.10 No. of IQAC meetings held	2

2.11 No. of meetings with various stakeholders: No. 1 Faculty ✓

Non-Teaching Staff Students ✓ Alumni ✓ Others ✓

2.12 Has IQAC received any funding from UGC during the year? Yes [ ] No ✓

If yes, mention the amount

2.13 Seminars and Conferences (only quality related)

(i) No. of Seminars/Conferences/ Workshops/Symposia organized by the IQAC

Total Nos.	2	International		National		State		Institution Level	✓

(ii) Themes | Awareness program on IQAC/ISO Quality Policy and procedures. |

2.14 Significant Activities and contributions made by IQAC

- Examination reform
- Academic Audit of Faculty
- Feedback system
- Institutional workshops
- NIRF data Submission
- AICTE (Industry Academia Collaboration in Technical Institutes) data submission
- Orientation program for I year
- MoU's with several Industries
- ISO Annual Audit
- National Skill development Program initiative
- Induction of IAS Academy
- Products of Products through EDC & KCARDS
- Establishment of IEDP hub
- Conducted few social service programs through NSS
- Establishment of Hi-tech labs

2.15 Plan of Action by IQAC/Outcome

The plan of action chalked out by the IQAC in the beginning of the year towards quality Enhancement and the outcome achieved by the end of the year *

Plan of Action	Achievements
1. Academic Audit of Faculty	Executed
2. MOU	Executed
3. International Conference	Executed
4. NIRF	Executed
5. AICTE (Industry Academia Collaboration in Technical Institutes)	Executed

6. ISO Audit	Executed
7. Research Projects	Submitted

** Attach the Academic Calendar of the year as Annexure III.*

2.15 Whether the AQAR was placed in statutory body Yes [✓] No [ ]

Management [✓] Syndicate [ ] Any other body [ ]

Provide the details of the action taken

NIL

Part – B
Criterion – I

1. Curricular Aspects

1.1 Details about Academic Programmes

Level of the Programme	Number of existing Programmes	Number of programmes added during the year	Number of self-financing programmes	Number of value added / Career Oriented programmes
PhD				
PG	5	NIL	5	NIL
UG	5	NIL	5	6
PG Diploma				
Advanced Diploma				
Diploma				
Certificate				15
Others				
Total	10	NIL	10	21

Interdisciplinary				
Innovative				

1.2 (i) Flexibility of the Curriculum: CBCS/Core/Elective option / Open options
(ii) Pattern of programmes:

Pattern	Number of programmes
Semester	10
Trimester	NIL
Annual	NIL

1.3 Feedback from stakeholders* Alumni [✓] Parents [✓] Employers [✓] Students [✓]
(On all aspects)

Mode of feedback : Online [ ] Manual [✓] Co-operating schools (for PEI) [ ]

Please provide an analysis of the feedback in the Annexure

1.4 Whether there is any revision/update of regulation or syllabi, if yes, mention their salient aspects.

NA, since affiliated to Anna University, Chennai and we are following their norms and regulations.

1.5 Any new Department/Centre introduced during the year. If yes, give details.

Yes, the following centres are established.

- IEDP
- IAS Academy
- Cypress Semiconductor PSoC Lab

Criterion – II

2. Teaching, Learning and Evaluation

2.1 Total No. of permanent faculty

Total	Asst. Professors	Associate Professors	Professors	Others
161	126	13	8	14

2.2 No. of permanent faculty with Ph.D. 7

2.3 No. of Faculty Positions Recruited (R) and Vacant (V) during the year

Asst. Professors		Associate Professors		Professors		Others		Total	
R	V	R	V	R	V	R	V	R	V
17	NIL	0	NIL	1	NIL	11	NIL	29	NIL

2.4 No. of Guest and Visiting faculty and Temporary faculty 18 | 6 | 2

2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended	26	9	2
Presented papers	12	4	-
Resource Persons	10	2	-

2.6 Innovative processes adopted by the institution in Teaching and Learning:

- Webinars enable both student and faculty to interact with subject experts across continents.
- Students and faculty have access to e-journals on subjects of interest.
- Digital library, NPTEL, CDs' etc are available and they are used by the students and faculty members.
- Seminar halls and class rooms are also equipped to deliver the lectures through LCD projectors and OHP.
- Simulation software is being used by the faculty members to ensure quality learning and teaching.
- Faculty members are motivated to undergo programs under SWAYAM.
- Experimenting theoretical aspects.
- Faculty members are trained by experts from IIT Bombay through webinars and also certified.
- Students are trained by advanced technologies and motivated to do product developments.
- Special coaching for academic subjects for needy one.
- Periodic conduction of Technical club activities.
- Career Oriented training programs.

2.7 Total No. of actual teaching days during this academic year: 146

2.8 Examination/ Evaluation Reforms initiated by the Institution (for example: Open Book Examination, Bar Coding, Double Valuation, Photocopy, Online Multiple Choice Questions): ANNA UNIVERSITY, CHENNAI

2.9 No. of faculty members involved in curriculum restructuring/revision/syllabus Development as member of Board of Study/Faculty/Curriculum Development workshop: 1 8 1

2.10 Average percentage of attendance of students: 78.2%

2.11 Course/Programme wise Distribution of pass percentage: 2016 BATCH

Title of the Programme	Total no. of students appeared	Division				
		Distinction %	I %	II %	III %	Pass %
B.E(CIVIL)	60	0	70	0	0	70
B.E(MECH)	129	0	59	19	0	78
B.E(ECE)	104	1	78	17	0	95
B.E(EEE)	62	0	50	26	0	76
B.E(CSE)	54	0	44	28	0	72
MBA	28	0	54	29	0	83
M.E(AE)	3	0	100	0	0	100
M.E(CSE)	6	0	100	0	0	100
M.E(PED)	17	0	65	18	0	83
M.E(ME)	4	0	25	0	0	25

2.12 How does IQAC Contribute/Monitor/Evaluate the Teaching & Learning processes:

- Assignments to II , III year Students and projects to IV Year & PG students
- Students Assigned to do Mini Projects & Product Developments
- Redesigning the add on programs as per the requirement of the industry.

- Faculty Development programmes.
- Organized Pedagogic programs.
- Planning and execution of coursework.
- Conducted bridge course for freshers.
- Promoting experimental learning.
- Industrial visits.
- Encouraging students to participate in national/international events to improve their technical competency.
- Periodic conduction of technical club activities by students.
- Conducting academic audit and suggestions for improvements.
- Class committee meeting before every CIA's.
- Preparing and following academic calendar.
- Student assessments though class test/Continuous Internal assessments/Assignments.
- Receiving feedback from Students/Parents periodically.

2.13 Initiatives undertaken towards faculty development

Faculty / Staff Development Programmes	*Number of faculty benefitted*
Refresher courses	NIL
UGC – Faculty Improvement Programme	NIL
HRD programmes	11
Orientation programmes	61
Faculty exchange programme	NIL
Staff training conducted by the university	NIL
Staff training conducted by other institutions	42
Summer / Winter schools, Workshops, etc.	37
Others	10

2.14 Details of Administrative and Technical staff

Category	Number of Permanent Employees	Number of Vacant Positions	Number of permanent positions filled during the Year	Number of positions filled temporarily
Administrative Staff	5	NIL	3	NIL
Technical Staff	10	1	4	NIL

Criterion – III

3. Research, Consultancy and Extension

3.1 Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution

- Promoting research Mini & Major Projects
- Initiating Funded Proposals to conduct Seminar, Workshops, Conference, etc.,
- High tech labs in association with leading Industries

3.2 Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	-	-	2	9
Outlay in Rs. Lakhs			7	147

3.3 Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	-	-	-	3
Outlay in Rs. Lakhs	-	-	-	1.8

3.4 Details on research publications

	International	National	Others
Peer Review Journals	9	-	-
Non-Peer Review Journals	-	-	-
e-Journals	50	-	-
Conference proceedings	4	-	-

3.5 Details on Impact factor of publications:

Range [ ] Average [ ] h-index [17] Nos. in SCOPUS [1]

3.6 Research funds sanctioned and received from various funding agencies, industry and other organisations

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received (Rs.)
Major projects	0.3	TNSDC	7L	-
Minor Projects				
Interdisciplinary Projects				

Industry sponsored	1	AVATHAR Cypress Semiconductor NxP Semiconductor		300000 81000 126000
Projects sponsored by the University/ College				
Students research projects *(other than compulsory by the University)*	0.4	Management Contribution		40000
Any other(Specify)				
Total	1.7			**547000**

3.7 No. of books published i) With ISBN No. 3 Chapters in Edited Books

ii) Without ISBN No. 14

3.8 No. of University Departments receiving funds from : NA

UGC-SAP CAS DST-FIST

DPE DBT Scheme/funds

3.9 For colleges Autonomy CPE DBT Star Scheme

INSPIRE CE Any Other (specify) 1

3.10 Revenue generated through consultancy 1,10,000

3.11 No. of conferences organized by the Institution

Level	International	National	State	University	College
Number		2			
Sponsoring agencies		College			

3.12 No. of faculty served as experts, chairpersons or resource persons 11

3.13 No. of collaborations International 3 National 7 Any other 1

3.14 No. of linkages created during this year: 4

3.15 Total budget for research for current year in lakhs:

From funding agency 1,00,000 From Management of University/College 0.4

Total 1,00,000

3.16 No. of patents received this year

Type of Patent		Number
National	Applied	NIL
	Granted	NIL
International	Applied	NIL
	Granted	NIL
Commercialised	Applied	NIL
	Granted	NIL

3.17 No. of research awards/ recognitions received by faculty and research fellows of the institute in the year

Total	International	National	State	University	Dist	College
20	14	4	2			

3.18 No. of faculty from the Institution who are Ph. D. Guides and students registered under them 2 7

3.19 No. of Ph.D. awarded by faculty from the Institution 2

3.20 No. of Research scholars receiving the Fellowships (Newly enrolled + existing ones)

JRF - SRF - Project Fellows - Any other -

3.21 No. of students Participated in NSS events:

University level State level 10

National level International level

3.22 No. of students participated in NCC events:

University level State level 2

National level International level

3.23 No. of Awards won in NSS: Nil

University level		State level	
National level		International level	

3.24 No. of Awards won in NCC: Nil

University level		State level	
National level		International level	

3.25 No. of Extension activities organized

University forum	1	College forum	1		
NCC		NSS		Any other	3

3.26 Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility.

- Mega job mela is organized in association with Regional Employment and training Institute.
- Gramia Manam Season 2 event is hosted to explore traditional cultural events with public participations.

Criterion – IV

4. Infrastructure and Learning Resources

4.1 Details of increase in infrastructure facilities:

Facilities	Existing		Newly created	Source of Fund	Total
Campus area	Campus area in sq.mts. 51030.85	Built up area in sq.mts. 28084.99	NIL	Management	NIL
Class rooms	39		NIL	Management	NIL
Laboratories	29		NIL	Management	NIL
Seminar Halls	6		NIL	Management	NIL
No. of important equipments purchased (≥ 1-0 lakh) during the current year.	NIL		NIL	Management	NIL
Value of the equipment purchased during the year (Rs. in Lakhs)	NIL		1	Management	NIL
Others	NIL		NIL	Management	NIL

4.2 Computerization of administration and library

- Fully Computerized Library administration using Barcode Technologies
- Rever Innovation software for students academic management
- Electronic Entry and Exit
- Circulation of books and non-book materials (Issues & Returns)
- OPAC, Web OPAC (Books, CDs and Questions)
- Using E-Resources (online Journals e-books)
- NPTEL Resources

4.3 Library services:

	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	19001	69,04,076			19001	6904076
Reference Books	9885	3598140	104	37112	9989	3635252
e-Books			DELNET			
Journals	209	6,67,213			209	6,67,213
e-Journals	DELNET					11,500
Digital Database						

CD & Video	1410					
Others (specify)		NPTEL facilities				

4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Depart ments	Others
Existing	652	450	20mbps	150	---	22	30	
Added								
Total	652	450	20mbps	150	---	22	30	

4.5 Computer, Internet access, training to teachers and students and any other programme for technology upgradation (Networking, e-Governance etc.)

- Students make use of the internet, lab facilities to prepare for seminars /Conferences / paper presentations etc.
- Students benefitted from Online Public Access Catalogue for online access of E-Journals and NPTEL.

4.6 Amount spent on maintenance in lakhs :

i) ICT	70000
ii) Campus Infrastructure and facilities	7, 66, 139
iii) Equipments	50,000
iv) Others	-

Criterion – V

5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

- Conducted Orientation Program for first semester Students
- Parent teacher meeting
- Alumni meeting
- Institutional workshop/seminars/conferences
- Skill development programmes
- Add on courses for placement/training
- Induction of IAS Academy
- Establishment of Technological labs
- Conducted few social service programs
- Experimenting theoretical aspects
- Placement support through on/off campus Interviews
- Internship and Industrial visit

5.2 Efforts made by the institution for tracking the progression

- Feedback form
- Self appraisal
- Student and staff counselling
- Suggestion box

5.3 (a) Total Number of students

UG	PG	Ph. D.	Others
1363	129	-	-

(b) No. of students outside the state

39

(c) No. of international students | NA |

Men	No	%
	1195	80

Women	No	%
	297	20

Last Year						This Year					
General	SC	ST	OBC	Physically Challenged	Total	General	SC	ST	OBC	Physically Challenged	Total
0	233	1	1258	-	1492	0	204	1	798	-	1003

Demand ratio : -

Dropout %:0.02%

5.4 Details of student support mechanism for coaching for competitive examinations (If any)

- The Training and Placement Cell notifies students and provides information about competitive examinations.
- Aptitude tests are conducted in-house by the departments and also by external agencies.
- IAS Academy
- Our Central library is flooded with books for competitive exams

No. of students beneficiaries | 300

5.5 No. of students qualified in these examinations: NIL

NET		SET/SLET		GATE		CAT	
IAS/IPS etc		State PSC		UPSC		Others	

5.6 Details of student counselling and career guidance

The college has a career counseling and guidance cell.

- Academic and Career Counseling
- Personal and Psycho-Social Counseling
- Alumni meeting for Industrial connect
- Career oriented technical programs
- Aptitude training through soft skill department

No. of students benefitted | 200

5.7 Details of campus placement

On campus			*Off Campus*
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
44	331	281	-

5.8 Details of gender sensitization programmes

- The Institution has Anti ragging, Grievance and Redressal committee.
- Grievances are represented in student forums like class committee meetings, Hostel committee meetings etc.
- Complaints from parents are obtained in parent teacher meeting.
- Grievances and complaints are taken utmost care, analyzed and rectified at the earliest.

5.9 Students Activities

5.9.1 No. of students participated in Sports, Games and other events

State/ University level [18] National level [104] International level [5]

No. of students participated in cultural events

State/ University level [1] National level [ ] International level [ ]

5.9.2 No. of medals /awards won by students in Sports, Games and other events

Sports : State/ University level [6] National level [1] International level [ ]

Cultural : State/ University level [ ] National level [ ] International level [ ]

5.10 Scholarships and Financial Support

	Number of students	Amount
Financial support from institution	21	6,30,000
Financial support from government	778	41,53,035
Financial support from other sources	NIL	NIL
Number of students who received International/ National recognitions	NIL	NIL

5.11 Student organised / initiatives

Fairs	: State/ University level		National level		International level	
Exhibition:	State/ University level	1	National level	2	International level	-

5.12 No. of social initiatives undertaken by the students 3

5.13 Major grievances of students (if any) redressed: NIL

Criterion – VI

6. Governance, Leadership and Management

6.1 State the Vision and Mission of the institution

Vision

- To accomplish and maintain international eminence for fostering research and development.
- To be an Institution for higher learning.
- To encourage entrepreneurship for meeting the global demands.

Mission

- To attain leadership in planning and resource management.
- To inspire creativity and motivate innovating skills.
- To organize a pluralistic and professional environment that will stimulate scholars of the highest caliber and contribute immensely to nation building.

6.2 Does the Institution has a management Information System

- Kathir Computing facility department will provide support service for the complete information management system through software for all the departments
- Fully Computerized Library administration using Barcode Technologies
- Rever Innovation software for students academic management
- Electronic Entry and Exit
- Circulation of books and non-book materials (Issues & Returns)
- OPAC, Web OPAC (Books, CDs and Questions)
- Using E-Resources (online Journals e-books)
- NPTEL Resources

6.3 Quality improvement strategies adopted by the institution for each of the following:

6.3.1 Curriculum Development

- Curriculum, syllabi and regulation are framed by the Anna University on academic delivery and evaluation of the courses.
- The course content of add-on programs are framed by respective faculty experts.

6.3.2 Teaching and Learning

- The syllabi, curriculum, reference books are informed to the students at the beginning of every semester.
- Conducting internal test periodically to monitor the progress of the students
- Extra coaching classes are being conducted for the slow learners for improving their performance.
- Faculty members continuously update their knowledge by attending seminars, workshops, conferences etc.,
- Effective feedback system is followed to monitor the performance of the faculty.

6.3.3 Examination and Evaluation

- Continuation Internal assessments.
- Periodic class test.
- Assignments and projects.
- Internal evolution process reset.
- Quiz programs through respective technical clubs.

6.3.4 Research and Development

- Faculty members are permitted to register/pursue MPhil/PhD programs with leave facility.
- Encouraging academic departments for Industrial collaborations and technological lab setup.
- Encouraging faculty members for consultancy work.
- Deputing faculty members for Industrial training.
- Incentives for Paper Publications in peer reviewed impact factor journals.

6.3.5 Library, ICT and physical infrastructure / instrumentation

- Students and faculty have access to e-journals on subjects of interest.
- Digital library, NPTEL, CDs' etc are available and they are used by the students and faculty members.
- Local Chapter for NPTEL
- OPAC software for book search and library management.
- IIT Bombay Seminar hall for conduction workshops by IIT.
- Sufficient Text and Reference books for all disciplines.
- All the departments are having separate library.
- Member of ICT Academy

6.3.6 Human Resource Management

- Faculty recruitment strictly following the norms laid by AICTE.
- Expert selection committee will scrutinize profiles and select the employee as per the norms.
- Self appraisal reports to monitor the academic performance status of faculty members and will be reviewed by HOD's, Principal and Management.
- Periodic conduction of FDP's for faculty quality improvements.
- Encouraging the faculty members to update their knowledge/skill set through Industrial training programs.
- Tutor recored will be maintained for every batch of students and appropriate counseling will be given on requirement.
- Suggestion box will be used by student's community and it will be reviewed by higher authority.

6.3.7 Faculty and Staff recruitment

- Faculty recruitment strictly following the norms laid by AICTE.

6.3.8 Industry Interaction / Collaboration

- MoU's with many companies by every department.
- Faculty members/Students are permitted to undergo Industrial training.
- Industrial visit.
- Establishing funded labs by leading companies.
- Add-on Programs are conducted by expert from Industries.
- Establishment of Centre of Excellence.
- Promoting faculty members to interact with Industries to extend consultancy services.
- Motivating students take up Internship/Placement from leading Organizations.

6.3.9 Admission of Students

- Students are admitted as per the eligibility norms of Anna University, Chenni through Single window counselling and as well as management quota.
- College Advertisements will be given before the commencement of counselling.
- Management quota seats will be filled through consortium examination.

6.4 Welfare schemes for

Teaching	Group Insurance scheme, Employee Provident Fund, Transportation, On-duty leaves facilities, Sponsorship for attending seminars/workshops/ conferences
Non teaching	Group Insurance scheme, Employee Provident Fund, Transportation, On-duty leaves facilities,
Students	Group Insurance scheme, Transportation, On-duty leaves facilities, Sponsorship for attending seminars/workshops/ conferences

6.5 Total corpus fund generated 59,65,000

6.6 Whether annual financial audit has been done Yes ✓ No

6.7 Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	YES	YES	YES	YES
Administrative	YES	YES	YES	YES

6.8 Does the University/ Autonomous College declare results within 30 days?

For UG Programmes Yes No ✓

For PG Programmes Yes No ✓

6.9 What efforts are made by the University/ Autonomous College for Examination Reforms?

NA

6.10 What efforts are made by the University to promote autonomy in the affiliated/constituent colleges?

NA

6.11 Activities and support from the Alumni Association

- Corpus fund is generated under alumni association
- Alumni meet will be held every year, receive comments/feedbacks from them for further development of the institution.

6.12 Activities and support from the Parent – Teacher Association

- Complaints from parents are obtained in parent teacher meeting.
- Grievances and complaints are taken utmost care, analyzed and rectified at the earliest.

6.13 Development programmes for support staff

- Institution has Faculty Development Cell headed by the Principal.
- Granting permission to attend orientation programs organized by other institutions.
- Encouraging faculty participation in national and international events.
- Supporting the faculty financially to meet their travelling and registration expenses in attending the seminars, workshops, Conferences etc.
- Organizing seminars and FDPs within the college for supporting the faculty to improve their academic skills.
- A well equipped library with numerous books, journal, and magazines helps the faculty to enrich their knowledge.
- Providing special on duty leaves to pursue their Ph.D. Assistance in submitting funded Research proposals.

6.14 Initiatives taken by the institution to make the campus eco-friendly

- Energy Conservation
- Use of Renewable Energy
- Rain Water Harvesting System
- Efforts for Carbon Neutrality
- Tree Plantation

Criterion – VII

7. Innovations and Best Practices

7.1 Innovations introduced during this academic year which have created a positive impact on the Functioning of the institution. Give details.

- Technical Club activities.
- Permitting students to under training on add on program on latest technologies.
- Establishment of high tech. Funded labs
- Creating a culture for research & Product development.
- Involving in social activities.
- Supporting faculty for Research & Development.
- IIT Bombay Remote training programs.
- KCARDS an infrastructure for R&D and P&D.
- Membership in professional bodies.
- Management scholarship to the students.
- Teaching learning process.
- Technically qualified and experienced faculty members.
- MoU's signed with leading Industries.
- Faculty Development Programs.
- Add-on programs.
- Helping for Internship.
- Having a good placement record.

7.2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the beginning of the year

Yes, as per plan (Annexure-III)

7.3 Give two Best Practices of the institution *(please see the format in the NAAC Self-study Manuals)*

- Action plan of the department
- Review of Academic performance
- Self appraisal of faculty members and review
- Department level Association activities to empower the students
- Extension activities by staff and students
- Achievements of staff and students
- Motivational measures for poor performers
- Industrial visits, in-plant training and internships
- Feedback of stakeholders and its review
- Review of best/ innovative practices
- Training and placement activities
- Research and development
- Overall personality development of the students
- EDC/IEDP Skill developments.
- Technical club activities.
- Motivating students to involve in sports/cultural/technical events.
- Periodic conduction of programs under NSS/YRC club.

8. **Plans of institution for next year**

- Further promoting Research and Consultancy work.
- Encouraging faculty members to register for MPhil/PhD
- Extending technological training programs for outsiders.
- Product developments and commercialisations.
- Improving academic results and placements.
- Support service for Entrepreneurship skill developments.
- Planning for applying NBA.
- Anna University recognized research centres.
- Improving social activities and gender sensitising programs.
- More collaboration with Industries.
- Getting funding proposals for research projects.

Name : Dr.M.KANNAN

IQAC CO-ORDINATOR

M. Kannan

Signature of the Coordinator, IQAC

Name Dr.P.BANUMATHI

PRINCIPAL

Signature of the Chairperson, IQAC

PRINCIPAL
KATHIR COLLEGE OF ENGINEERING,
NEELAMBUR,
COIMBATORE-62.

***

Abbreviations:

CAS	-	Career Advanced Scheme
CAT	-	Common Admission Test
CBCS	-	Choice Based Credit System
CE	-	Centre for Excellence
COP	-	Career Oriented Programme
CPE	-	College with Potential for Excellence
DPE	-	Department with Potential for Excellence
GATE	-	Graduate Aptitude Test
NET	-	National Eligibility Test
PEI	-	Physical Education Institution
SAP	-	Special Assistance Programme
SF	-	Self Financing
SLET	-	State Level Eligibility Test
TEI	-	Teacher Education Institution
UPE	-	University with Potential Excellence
UPSC	-	Union Public Service Commission

****

ANNEXURE-II

Strengths

- Recognized by UGC under 2(f).
- Certified with ISO 9001:2008 by TUV Rhineland.
- Highly transparent Governance and Administration with well-defined decentralization of authority.
- Sound financial position of the trust for managing the institution.
- One of the sought after institutes by students in Coimbatore.
- Committed management and dedicated faculty members.
- Constant encouragement is given to faculty members in pursuing research work
- Orientation programmes at the institution and department level for both new and existing faculty members on the vision, mission and campus culture.
- Seminars, workshops, conferences and faculty development programmes are organized at the department and college level to strengthen the existing knowledge base.
- Staff welfare schemes that are beneficial for maintaining strong bonds between the institution and the faculty
- Transport facility to meet the requirement of the students and staff.
- Separate hostels for male and female students.
- Class mentoring and monitoring of the students.
- Special care is taken for slow learners to improve overall academic performance.
- Meritorious and economically weak students are offered scholarships.
- Bridge courses and remedial teaching sessions are conducted for the students who require assistance to improve their academic performance.
- Students are encouraged to present papers in National / International symposia /Conferences.
- Value added courses are conducted in collaboration with industries to integrate knowledge with skill, which in turn will enhance learning and creativity.
- The well-established industrial powered labs, which provide the required training to make the students industry ready.
- Professional Societies student chapters are established.
- Modern infrastructure with a massive campus renovation (including facilities like modern ICT-enabled classrooms).
- Well established IT infrastructure with 652 latest computers.
- Faculty members and students are provided with 20 Mbps, 24×7 Wi-Fi connectivity throughout the campus.
- Personal login ID to all students, faculty members and non-teaching staff for inter and intra communication.

- The central library has 27789 books and subscription to 105 National and International Journals/ magazines.
- The college has a very good feedback system, which collects feedback from all the stakeholders and makes use of this feedback for implementing new systems
- Whenever and wherever necessary for self-correction continuous improvement.
- A strong Alumni Association network.
- Various clubs and associations to improve the co-curricular and extra-curricular activities of the students.
- Installation of bio-gas, solar water heaters, solar street light and rainwater harvesting are well established.
- Technical club activities.
- EDC/IEDP/KCARDS/IIT Bombay nodal center.
- Promoting students/faculty members for Industrial training.
- Good Placement record.
- NPTEL Local chapter.
- Special attention to slow learners to improve their academic and placement performance.

Weaknesses

- Awareness of IPR among faculty needs to be enhanced to accelerate effective conversion of research activities into viable / commercial projects.
- Number of funded R & D projects in cutting-edge technologies needs to be improved.
- Average experience of overall faculty members is not appreciable.
- Journal publications in Scopus indexed journals are less.

Opportunities

- Increasing the research programs offered at the institute to meet the rapidly increasing demand.
- Adequate infrastructural facilities collaborate with leading industries.
- Networking and sharing of facilities with other institutions and industries.
- Leveraging the strong links with distinguished alumni to develop the industrial relations for development projects, consultancy works etc.,
- Collaboration with foreign Universities for exchange programmes.
- Introduce innovative add-on programmes to suit divergent needs of students and satisfy industry expectations.

- More activity-based events associated in enhancing technical capability and career opportunities to kindle the interest among the students.
- Opportunities are available for students to become entrepreneurs through Entrepreneurship Development Cell/IEDP.

Challenges

- Number of students from non-English medium schools and rural background, including first graduates.
- Getting grants through Government funded Projects and consultancies.
- Migration of faculty members in high-demand areas to industry / other institutes /foreign Universities.
- Fast changing technologies and modern educational challenges that are certain to place huge demands on the efforts to mobilize resources for upgrading human resources and physical infrastructure.
- Number of students joining PG programs is appreciably reduced.

ANNEXURE-III

ACADEMIC CALENDAR 2016 – 2017 (ODD SEMESTER)

JULY 2016			
Date	**Day**	**Particulars**	**Days**
1	Fri		
2	Sat		
3	Sun		
4	Mon		
5	Tue		
6	Wed		
7	*Thu*	*RAMZAN - Holiday*	
8	Fri		
9	Sat		
10	*Sun*	*Holiday*	
11	Mon	**Re-opening for Senior B.E/B.Tech**	01
12	Tue		02
13	Wed		03
14	Thu		04
15	Fri		05
16	Sat		06
17	Sun	*Holiday*	
18	Mon		07
19	Tue	Completion of I Unit (08 working days)	08
20	Wed		09
21	Thu		10

22	Fri		11
23	Sat		12
24	*Sun*	*Holiday*	
25	Mon		13
26	Tue		14
27	Wed		15
28	Thu	Completion of II Unit (08 working days)	16
29	Fri		17
30	Sat		18
31	*Sun*	*Holiday*	
Total No. of Working Days : 18			

AUGUST 2016			
Date	**Day**	**Particulars**	**Days**
1	Mon		19
2	Tue	Completion of III Unit (Half) (04 working days)	20
3	Wed		21
4	Thu		22
5	Fri	Class Committee Meeting - I	23
6	*Sat*	*First Saturday - Holiday*	
7	*Sun*	*Holiday*	
8	Mon		24
9	**Tue**	***CIA Test - I***	
10	**Wed**	***CIA Test - I***	
11	**Thu**	***CIA Test - I***	
12	*Fri*		25

)

13	*Sat*		26
14	*Sun*	*Holiday*	
15	*Mon*	*Independence Day – Holiday*	
16	Tue		27
17	Wed	Completion of III Unit (Half) (04 working days)	28
18	Thu		29
19	Fri		30
20	Sat		31
21	*Sun*	*Holiday*	
22	Mon		32
23	Tue		33
24	Wed		34
25	*Thu*	*Krishna Jayanthi – Holiday*	
26	Fri		35
27	Sat	Completion of IV Unit (08 working days)	*36*
28	*Sun*	*Holiday*	
29	Mon		37
30	Tue		38
31	Wed		39
Total No. of Working Days : 39			

SEPTEMBER 2016			
Date	**Day**	**Particulars**	**Days**
1	Thu		40
2	Fri		41
3	Sat		42
4	*Sun*	*Holiday*	
5	*Mon*	*Vinayagar Chathurthi- Holiday*	
6	Tue		43
7	Wed	Completion of V Unit (08 working days)	44
8	Thu		45
9	Fri	Class Committee Meeting - II	46
10	Sat		47
11	*Sun*	*Holiday*	
12	Mon		48
13	*Tue*	*Bakrid - Holiday*	
14	Wed	***CIA Test – II***	
15	Thu	***CIA Test – II***	
16	Fri	***CIA Test – II***	
17	Sat	*Third Saturday - Holiday*	
18	*Sun*	*Holiday*	
19	Mon		49
20	Tue		50
21	Wed		51
22	*Thu*		52
23	Fri		53

24	Sat		54
25	*Sun*	*Holiday*	
26	Mon		55
27	Tue		56
28	Wed		57
29	Thu		58
30	Fri		59
Total No. of Working Days : 67			

OCTOBER 2016			
Date	**Day**	**Particulars**	**Days**
1	*Sat*	*First Saturday - Holiday*	
2	*Sun*	*Gandhi Jayanthi - Holiday*	
3	Mon	Class Committee Meeting - III	60
4	Tue		61
5	Wed		62
6	Thu	***CIA Test – III***	
7	Fri	***CIA Test – III***	
8	Sat	***CIA Test – III***	
9	*Sun*	*Holiday*	
10	*Mon*	*Ayutha Pooja - Holiday*	
11	*Tue*	*Vijaya Dasami – Holiday*	
12	*Wed*	*Muharram – Holiday*	
13	**Thu**	***Commencement of University Practical Exams***	**63**
14	*Fri*		64
15	Sat		65

16	Sun	*Holiday*	
17	*Mon*		66
18	*Tue*		67
19	*Wed*		68
20	Thu		69
21	Fri		70
22	Sat		71
23	*Sun*	*Holiday*	
24	Mon		72
25	Tue		73
26	Wed		74
27	Thu	*Last Working Day*	75
28	Fri		
29	Sat	*Deepavali - Holiday*	
30	*Sun*		
31	*Mon*		
Total No. of Working Days : 75			

NOVEMBER 2016			
Date	**Day**	**Particulars**	**Days**
1	Tue		
2	**Wed**	***Commencement of End Semester Examination***	
3	Thu		
4	Fri		
5	Sat		
6	*Sun*	*Holiday*	

7	Mon		
8	Tue		
9	Wed		
10	Thu		
11	Fri		
12	Sat		
13	*Sun*	*Holiday*	
14	Mon		
15	Tue		
16	Wed		
17	Thu		
18	Fri		
19	Sat		
20	*Sun*	*Holiday*	
21	Mon		
22	Tue		
23	Wed		
24	Thu		
25	Fri		
26	Sat		
27	*Sun*	*Holiday*	
28	Mon		
29	Tue		
30	Wed		
Total No. of Working Days : 75			

Kathir College of Engineering

An ISO 9001:2008 certified Institution
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COIMBATORE – 62

ACADEMIC CALENDAR 2016 – 2017 (EVEN SEMESTER)

JANUARY 2017			
Date	**Day**	**Particulars**	**Days**
1	*Sun*	*Holiday*	
2	Mon		
3	Tue		
4	Wed	**Re-opening for VIII Semester B.E/B.Tech**	01
5	Thu		02
6	Fri		03
7	Sat		04
8	*Sun*	*Holiday*	
9	Mon		05
10	Tue		06
11	Wed		07
12	Thu		08
13	Fri		09
14	Sat	*Pongal - Holiday*	
15	*Sun*	*Holiday*	
16	Mon	*Uzhavar Tirunal - Holiday*	
17	Tue		10
18	Wed		11
19	Thu	Completion of Unit - I	12
20	Fri		13
21	Sat		14
22	*Sun*	*Holiday*	
23	Mon		15
24	Tue		16
25	Wed		17
26	Thu	*Republic Day - Holiday*	
27	Fri		18
28	Sat		19
29	*Sun*	*Mud – fest'2017*	
30	Mon	Class Committee Meeting - I	20
31	Tue		21
Total No. of Working Days : 21			

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ACADEMIC CALENDAR 2016 – 2017 (EVEN SEMESTER)

FEBRUARY 2017			
Date	**Day**	**Particulars**	**Days**
1	Wed		22
2	Thu	CIA – I TEST	
3	Fri	CIA – I TEST	
4	Sat	CIA – I TEST	
5	*Sun*	*Holiday*	
6	Mon		23
7	Tue	Completion of Unit - II	24
8	Wed		25
9	Thu		26
10	Fri		27
11	Sat		28
12	*Sun*	*Holiday*	
13	Mon		29
14	Tue		30
15	Wed		31
16	Thu		32
17	Fri		33
18	*Sat*	*Third Saturday - Holiday*	
19	*Sun*	*Holiday*	
20	Mon		34
21	Tue		35
22	Wed	Completion of Unit - III	36
23	Thu		37
24	Fri		38
25	Sat		39
26	*Sun*	*Holiday*	
27	Mon	Class Committee Meeting - II	40
28	Tue		41
Total No. of Working Days : 41			

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ACADEMIC CALENDAR 2016 – 2017 (EVEN SEMESTER)

MARCH 2017			
Date	**Day**	**Particulars**	**Days**
1	Wed		42
2	Thu	CIA – II TEST	
3	Fri	CIA – II TEST	
4	Sat	CIA – II TEST	
5	*Sun*	*Holiday*	
6	Mon		43
7	Tue		44
8	Wed		45
9	Thu		46
10	Fri		47
11	Sat	Completion of Unit - IV	48
12	*Sun*	*Holiday*	
13	Mon		49
14	Tue		50
15	Wed		51
16	Thu		52
17	Fri		53
18	Sat	*Third Saturday - Holiday*	
19	*Sun*	*Holiday*	
20	Mon		54
21	Tue		55
22	Wed		56
23	Thu		57
24	Fri		58
25	Sat		59
26	*Sun*	*Holiday*	
27	Mon	Completion of Unit - V	60
28	Tue	Class Committee Meeting - III	61
29	*Wed*	*Telugu New Year - Holiday*	
30	Thu	CIA – III TEST	
31	Fri	CIA – III TEST	
Total No. of Working Days : 61			

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ACADEMIC CALENDAR 2016 – 2017 (EVEN SEMESTER)

APRIL 2017			
Date	**Day**	**Particulars**	**Days**
1	Sat	CIA – III TEST	
2	*Sun*	*Holiday*	
3	Mon		62
4	Tue		63
5	Wed		64
6	Thu		65
7	Fri		66
8	Sat		67
9	*Sun*	*Holiday*	
10	Mon		68
11	Tue		69
12	Wed		70
13	Thu	Last Working day	71
14	*Fri*	*Tamil New Year - Holiday*	
15	Sat	*Third Saturday - Holiday*	
16	*Sun*	*Holiday*	
17	Mon		
18	Tue		
19	Wed		
20	Thu		
21	Fri		
22	Sat		
23	*Sun*	*Holiday*	
24	Mon		
25	Tue		
26	Wed		
27	Thu		
28	Fri		
29	Sat		
30			
Total No. of Working Days : 71			

Academic Co-ordinator

PRINCIPAL

The Annual Quality Assurance Report (AQAR) of the IQAC

2017-18

Submitted to

National Assessment and Accreditation Council

Bangalore.



by

Kathir College of Engineering

(Approved by AICTE , New Delhi & Affiliated to Anna University, Chennai)
Accredited by NAAC
Neelambur, Coimbatore – 641062, Tamilnadu.
www.kathir.ac.in iqac@kathir.ac.in

PREFACE

Kathir College of Engineering (KCE) is an ISO 9001:2008 Certified institution, affiliated to Anna University, Chennai, recognized by UGC under 2(f) and approved by AICTE, New Delhi, was established in the academic year 2008- 2009, by the Lamika Educational and Charitable Trust, Coimbatore, Tamil Nadu.

KCE has been an important contributor to rejuvenate engineering education to the students also rural background, which constitutes the major part of its student population. KCE has emerged with the vision to accomplish and maintain an international eminence for fostering Research and Development, in addition also to encourage entrepreneurship for meeting national and global needs as well as demands.

The college started with 4 engineering disciplines has come a long way, and has progressed with 5 UG programmes and 4 PG programmes in Engineering and a PG course in Management studies. All the academic programmes offered by the college are in line with the institutional goals and objectives. The college also conducts additional courses beyond syllabus to improve the students' interpersonal and interpretive skills to meet their educational and career objectives.

Wi-Fi campus of KCE aids the students to avail the latest trends and advancement in the respective field, which is changing day by day. It helps the students to enhance their academic proficiency from various resources and develop an integrated method to facilitate advanced technology and empower the students to build a meaningful career. The second Annual Quality Assessment Report (AQAR) has been prepared with extreme care for the academic year 2017:18 and realistic perspective, following the guidelines given in the AQAR format. We take pleasure in submitting this AQAR to the NAAC's office for further processing.

Dr.D.ANANTHA KRISHNAN
PRINCIPAL

The Annual Quality Assurance Report (AQAR) of the IQAC

All NAAC accredited institutions will submit an annual self-reviewed progress report to NAAC, through its IQAC. The report is to detail the tangible results achieved in key areas, specifically identified by the institutional IQAC at the beginning of the academic year. The AQAR will detail the results of the perspective plan worked out by the IQAC. *(Note: The AQAR period would be the Academic Year. For example, July 1, 2012 to June 30, 2013)*

Part – A

1. Details of the Institution

1.1 Name of the Institution	**KATHIR COLLEGE OF ENGINEERING**
1.2 Address Line 1	WISDOM TREE, AVINASHI ROAD
Address Line 2	NEELAMBUR
City/Town	COIMBATORE
State	TAMIL NADU
Pin Code	641062
Institution e-mail address	kathirce@gmail.com
Contact Nos.	0422-2203715
Name of the Head of the Institution:	Dr.D.ANANTHA KRISHNAN
Tel. No. with STD Code:	0422-2203773
Mobile:	9566533366

Name of the IQAC Co-ordinator: Dr.M.KANNAN

Mobile: 8870599199

IQAC e-mail address: iqac@kathir.ac.in

1.3 **NAAC Track ID** *(For ex. MHCOGN 18879)* TNCOGN 24510

1.4 **NAAC Executive Committee No. & Date:**
(For Example EC/32/A&A/143 dated 3-5-2004. This EC no. is available in the right corner- bottom Of your institution's Accreditation Certificate) EC(SC)/15/A&A/45.1 DATED ON 25.5.2016

1.5 Website address: www.kathir.ac.in

Web-link of the AQAR: http://www.kathir.ac.in/wp-content/uploads/2017-2018/aqar.pdf

For ex. http://www.ladykeanecollege.edu.in/AQAR2012-13.doc

1.6 Accreditation Details

Sl. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	1st Cycle	B	2.53	2016	5 YRS

1.7 Date of Establishment of IQAC : DD/MM/YYYY 25/04/2016

1.8 AQAR for the year *(for example 2010-11)* 2017-18

1.9 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC (*(for example AQAR 2010-11submitted to NAAC on 12-10-2011)*

i. AQAR 2016-2017 & 10/10/2017

ii. 1.10 Institutional Status

University State [ ] Central [ ] Deemed [ ] Private [ ]

Affiliated College Yes [✓] No [ ]

Constituent College Yes [ ] No [ ]

Autonomous college of UGC Yes [ ] No [ ]

Regulatory Agency approved Institution Yes [✓] No [ ]

(eg. AICTE, BCI, MCI, PCI, NCI)

Type of Institution Co-education [✓] Men [ ] Women [ ]

Urban [ ] Rural [✓] Tribal [ ]

Financial Status Grant-in-aid [ ] UGC 2(f) [✓] UGC 12B [ ]

Grant-in-aid + Self Financing [ ] Totally Self-financing [✓]

1.11 Type of Faculty/Programme

Arts [ ] Science [ ] Commerce [ ] Law [ ] PEI (Phys Edu) [ ]

TEI (Edu) [ ] Engineering [✓] Health Science [ ] Management [✓]

Others (Specify) [.]

1.12 Name of the Affiliating University *(for the Colleges)* ANNA UNIVERSITY, CHENNAI.

1.13 Special status conferred by Central/ State Government-- UGC/CSIR/DST/DBT/ICMR etc

Autonomy by State/Central Govt. / University AFFILIATED TO ANNA UNIVERSITY, CHENNAI

University with Potential for Excellence [ ] UGC-CPE [ ]

DST Star Scheme		UGC-CE	
UGC-Special Assistance Programme		DST-FIST	
UGC-Innovative PG programmes		Any other (*Specify*)	
UGC-COP Programmes			

2. IQAC Composition and Activities

2.1 No. of Teachers	5
2.2 No. of Administrative/Technical staff	1
2.3 No. of students	2
2.4 No. of Management representatives	1
2.5 No. of Alumni	1
2. 6 No. of any other stakeholder and community representatives	2
2.7 No. of Employers/ Industrialists	1
2.8 No. of other External Experts	1
2.9 Total No. of members	14
2.10 No. of IQAC meetings held	2

2.11 No. of meetings with various stakeholders: No. 4 Faculty ✓

Non-Teaching Staff Students ✓ Alumni ✓ Others ✓

2.12 Has IQAC received any funding from UGC during the year? Yes [ ] No [✓]

2.13 Seminars and Conferences (only quality related)

(i) No. of Seminars/Conferences/ Workshops/Symposia organized by the IQAC

Total Nos. [2] International [ ] National [ ] State [ ] Institution Level [✓]

(ii) Themes [Awareness program on IQAC/ISO Quality Policy and procedures.]

2.14 Significant Activities and contributions made by IQAC

- Examination reform
- Academic Audit of Faculty
- Feedback system
- Institutional workshops
- NIRF data Submission
- AICTE (Industry Academia Collaboration in Technical Institutes) data submission
- Orientation program for I year
- MoU's with several Industries
- ISO Annual Audit
- National Skill development Program conducted.
- Induction of IAS Academy
- Products of Products through EDC & KCARDS
- Establishment of IEDP hub
- Conducted 3 social service programs through NSS
- Establishment of Hi-tech labs
- Recommendation made to management for establishing start -up company with in campus
- Add-on Courses & Placement Training programs

2.15 Plan of Action by IQAC/Outcome

The plan of action chalked out by the IQAC in the beginning of the year towards quality Enhancement and the outcome achieved by the end of the year *

Plan of Action	Achievements
1. Academic Audit of Faculty	Executed
2. MOU	Executed

3. International Conference	Executed
4. NIRF	Executed
5. AICTE (Industry Academia Collaboration in Technical Institutes)	Executed
6. ISO Audit	Executed
7. Research Projects	Submitted
8. Start Up Companies	Executed

** Attach the Academic Calendar of the year as Annexure III.*

2.15 Whether the AQAR was placed in statutory body Yes [✓] No [ ]

Management [✓] Syndicate [ ] Any other body [ ]

Provide the details of the action taken

This AQAR was placed for perusal by the college administration team before submission.

The report was checked by the members of the administration team and areas for improvements in each department is identified.

Suggestions and comments for improvement were incorporated through minor corrections.

Part – B

Criterion – I

1. Curricular Aspects

1.1 Details about Academic Programmes

Level of the Programme	Number of existing Programmes	Number of programmes added during the year	Number of self-financing programmes	Number of value added / Career Oriented programmes
PhD	NIL	NIL	NIL	NIL
PG	5	NIL	NIL	NIL
UG	5	NIL	NIL	NIL
PG Diploma	NIL	NIL	NIL	NIL
Advanced Diploma	NIL	NIL	NIL	NIL
Diploma	NIL	NIL	NIL	NIL
Certificate	10*	NIL	NIL	NIL
Others	NIL	NIL	NIL	NIL
Total	20	NIL	NIL	NIL

Interdisciplinary				
Innovative				

*- Each dept. conducts 2 add on programs per year.

1.2 (i) Flexibility of the Curriculum: CBCS/Core/Elective option / Open options
(ii) Pattern of programmes:

Pattern	Number of programmes
Semester	2
Trimester	NIL
Annual	NIL

1.3 Feedback from stakeholders*Alumni [✓] Parents [✓] Employers [✓] Students [✓]
(On all aspects)

Mode of feedback :Online [ ] Manual [✓] Co-operating schools (for PEI) [ ]

Please provide an analysis of the feedback in the Annexure

1.4 Whether there is any revision/update of regulation or syllabi, if yes, mention their salient aspects.

As per the Anna university norms, we follow 2017 & 2013 regulation as prescribed.

1.5 Any new Department/Centre introduced during the year. If yes, give details.

- No academic departments are established.
- Two centres are established under TNSDC (Tamilnadu Skill Development Corporation) one in Electrical and another one in Computer discipline under sponsored program.

Criterion – II

2. Teaching, Learning and Evaluation

2.1 Total No. of permanent faculty

Total	Asst. Professors	Associate Professors	Professors	Others
159	145	8	6	-

2.2 No. of permanent faculty with Ph.D. 8

2.3 No. of Faculty Positions Recruited (R) and Vacant (V) during the year (2016-2017)

Asst. Professors		Associate Professors		Professors		Others		Total	
R	V	R	V	R	V	R	V	R	V
38	1	0	0	4	0	11	0	53	1

2.4 No. of Guest and Visiting faculty and Temporary faculty 24 | 0 | NIL

2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended	42	15	1
Presented papers	65	13	NIL
workshop			7
Resource Persons	4	NIL	NIL

2.6 Innovative processes adopted by the institution in Teaching and Learning:

- Motivating students to participate in NPTEL and similar programs and 3 of them were certified.
- Theoretical study are experimentally demonstrated.
- Students are trained on advanced technologies through special programs and are involved towards product developments.
- Technical club activities.
- Promoting students for Internship.
- Permitting new faculty members to participate in FDTP.
- Periodic Industrial visit for students and staffs to enrich their knowledge as per current trends.
- Supporting students for journal publications.

2.7 Total No. of actual teaching days during this academic year: 165

2.8 Examination/ Evaluation Reforms initiated by the Institution (for example: Open Book Examination, Bar Coding, Double Valuation, Photocopy, Online Multiple Choice Questions): As per ANNA UNIVERSITY, Chennai.

2.9 No. of faculty members involved in curriculum Re-structuring/revision/syllabus development as member of Board of Study/Faculty/Curriculum Development workshop

1	NIL	NIL

2.10 Average percentage of attendance of students

81.84%

2.11 Course/Programme wise
Distribution of pass percentage:

Title of the Programme	Total no. of students appeared	Division				
		Distinction %	I %	II %	III %	Pass %
B.E (CIVIL)	102	0	32.5	22.5	NA	55
B.E (CSE)	42	2	67	0	NA	69
B.E (ECE)	79	0	59.5	19	NA	78
B.E (EEE)	38	5.26	44.7	5.26	NA	55.26
B.E (MECH)	201	0	45.27	22.38	NA	67.66
M.E (CSE)	6	17	83	00	NA	100
M.E (ECE)	07	0	71	0	NA	71
M.E (PED)	04	0	25	0	NA	25
M.E (Manufacturing)	4	0	25	0	NA	25
MBA	13	0	77	0	NA	77

2.12 How does IQAC Contribute/Monitor/Evaluate the Teaching & Learning processes:

- Assignment to II, III year students and projects to IV year students and as well as PG Students
- Students are assigned to do mini projects and real time product developments.
- Redesigning the add on programs as per the requirement of the Industries.
- Faculty development programs.
- Conducted bridge courses for freshers.
- Promoting experimental learning.
- Industrial visits.
- Encouraging students to participate in national/international events to improve their technical competency.
- Periodically conducted of technical club activities by students.
- Class committee meeting before the commencement of internal assessments.
- Preparing and following academic calendar.
- Student assessment through class test/continuous internal assessments/assignments.
- Receiving feedback from students/parents periodically.
- Planning and execution of course work.

2.13 Initiatives undertaken towards faculty development

Faculty / Staff Development Programmes	*Number of faculty benefitted*
Refresher courses	NIL
UGC – Faculty Improvement Programme	4
HRD programmes	-
Orientation programmes	5
Faculty exchange programme	-
Staff training conducted by the university	20
Staff training conducted by other institutions	13
Summer / Winter schools, Workshops, etc.	8
Others	2

2.14 Details of Administrative and Technical staff

Category	Number of Permanent Employees	Number of Vacant Positions	Number of permanent positions filled during the Year	Number of positions filled temporarily
Administrative Staff	11	NIL	0	NIL
Technical Staff	26	NIL	0	NIL

Criterion – III

3. Research, Consultancy and Extension

3.1 Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution

- Promoting faculty members and students for developing prototypes that can be extended for research and consultancy work.
- Awareness programs on patents/copyrights.
- Support services for publications.
- Motivating faculty members to participate/conduct conference/seminars/workshops/technical training associate with research.

3.2 Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	NIL	NIL	NIL	NIL
Outlay in Rs. Lakhs	NIL	NIL	NIL	NIL

3.3 Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	16*	NIL	NIL	NIL
Outlay in Rs. Lakhs	Rs.80000	NIL	NIL	NIL

*Projects assigned and completed based on internal funding support

3.4 Details on research publications

	International	National	Others
Peer Review Journals	36	NIL	NIL
Non-Peer Review Journals	NIL	NIL	NIL
e-Journals	31	NIL	NIL
Conference proceedings	23	NIL	NIL

3.5 Details on Impact factor of publications:

Range 2 Average h-index 7 Nos. in SCOPUS

3.6 Funds sanctioned and received from various funding agencies, industry and other organisations

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
Major projects				
Minor Projects	17-18	P&T BUILDERS SYSTEL	50,000 100000	20,000 50000
Interdisciplinary Projects				
Industry sponsored	17-18	Blooms knit, Tirupur	10000	10000
Projects sponsored by the University/ College				
Students research projects *(other than compulsory by the University)*				
Any other(Specify)	17-18	TNSDC	726000	452760
Total			**Rs.886000**	**Rs.532760**

3.7 No. of books published i) With ISBN No. [ ] Chapters in Edited Books [ ]

ii) Without ISBN No. [10]

3.8 No. of University Departments receiving funds from: - NA

UGC-SAP [ ] CAS [ ] DST-FIST [ ]

DPE [ ] DBT Scheme/funds [ ]

3.9 For colleges Autonomy [ ] CPE [ ] DBT Star Scheme [ ]

INSPIRE [ ] CE [ ] Any Other (specify) [-]

3.10 Revenue generated through consultancy [**Rs. 80,000/-**]

3.11 No. of conferences organized by the Institution

Level	International	National	State	University	College
Number	1				
Sponsoring agencies	Management				

3.12 No. of faculty served as experts, chairpersons or resource persons [12]

3.13 No. of collaborations International [-] National [-] Any other [-]

3.14 No. of linkages created during this year [8]

3.15 Total budget for research for current year in lakhs: Rs. 100000

From funding agency [ ] Management of University/College [✓]

Total [Rs. 100000]

3.16 No. of patents received this year

Type of Patent		Number
National	Applied	-
	Granted	-
International	Applied	-
	Granted	-
Commercialised	Applied	-
	Granted	-

3.17 No. of research awards/ recognitions received by faculty and research fellows of the institute in the year

Total	International	National	State	University	Dist	College
33	33					

3.18No. of faculty from the Institution who are Ph. D. Guides and students registered under them [2] [-]

3.19 No. of Ph.D. awarded by faculty from the Institution [NA]

3.20 No. of Research scholars receiving the Fellowships (Newly enrolled + existing ones)

JRF [ ] SRF [ ] Project Fellows [ ] Any other [ ]

3.21 No. of students Participated in NSS events:

University level [-] State level [54]

National level [-] International level [-]

Five programs were organized with the 54 students of NSS members

3.22 No. of students participated in NCC events:

University level	-	State level	-
National level	-	International level	-

3.23 No. of Awards won in NSS:

University level	-	State level	-
National level	-	International level	-

3.24 No. of Awards won in NCC:

University level	-	State level	-
National level	-	International level	-

3.25 No. of Extension activities organized

University forum		College forum	1		
NCC		NSS	3	Any other	3

3.26 Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility

- Awareness programme on a Donating Organs" at Rathinam Tech Zone on 08.03.2018
- Helmet Awareness Rally From Kathir College To Chinniyampalayam On 30.08.18
  Organized By Kathir College in Association with Dept. Tamilnadu Police
- Cleanliness awareness rally program organized by Airport Authority of India and KCE on 28.10.2018
- A Moral Awareness seminar program to protect the value of human life from conception to natural death. Conducted by Life for All
- An awareness program in blood stem cell donation. conducted by Datri Foundation
- Student Insurance where initiated.

Criterion – IV

4. Infrastructure and Learning Resources

4.1 Details of increase in infrastructure facilities:

Facilities	Existing	Newly created	Source of Fund	Total
Campus area a) Total Area b) Build up area	51030.85 Sqm Campus Area & 28084.99 Sqm	-	Management	-
Class rooms	39		Management	-
Laboratories (TNSDC lab resource establishment for two courses)	29	Rs.60217	TNSDC	Rs.60217
Seminar Halls	6		Management	-
No. of important equipment's purchased (≥ 1-0 lakh) during the current year.	NIL		-	-
Value of the equipment purchased during the year (Rs. in Lakhs)	NIL		-	-
Others (Establishment of ARDUINO lab)	Nil	Rs.8000	Pantech	Rs. 8000

4.2 Computerization of administration and library

- Computerized Library administration.
- River innovation software based students' academic management
- Biometric based attendance management system.
- NPTEL resources are managed by the library department.
- Using E-resources (Online journal E-Books)

4.3 Library services:

	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	19001	6904076			19001	6904076
Reference Books	9885	3598140	140	56921	10025	3655061
e-Books	DELNET resource		139	337641	139	337641
Journals	209	667213				
e-Journals	DELNET resource		DELNET resource	11500	-	11500
Digital Database						
CD & Video	1410	-			1410	-
Others (specify)	NPTEL	-				

4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Depart -ments	Other s
Existing	652	450	20Mbs	150	-	22	30	-
Added	-	-	-	-	-	-	-	-
Total	652	450	20Mbs	150	-	22	30	-

4.5 Computer, Internet access, training to teachers and students and any other programme for technology Upgradation (Networking, e-Governance etc.)

- Students make use of specific internet lab for training and self-preparations.
- OPAC (Online Public Access Catalogue) Student services in Library
- Software used for student's online academic management system.
- Awareness program for student and staff members on NPTEL courses.

4.6 Amount spent on maintenance in lakhs:

i) ICT	Rs. 50,460
ii) Campus Infrastructure and facilities	Rs. 23,85,417
iii) Equipment's	Rs.3,81,141
iv) Others	Rs.6,41,43,946
Total:	Rs. 6, 69,60,964

Criterion – V

5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

- Conducted Orientation program for First Year students
- Parent teacher meeting
- Alumni meeting
- Institution workshop/seminars/conferences and guest lecturers
- Add-on courses for placement
- Induction programs through IAS Academy
- Establishment of Technological labs
- Social responsibility programs through NSS cell.
- Placement through ON/OFF Campus interviews
- Internship and industrial visit.
- Guiding students to perform experiments on certain theoretical aspects.

5.2 Efforts made by the institution for tracking the progression

- Feedback from stake holders
- Self-appraisal
- Students and staff counselling
- Suggestion box and remedial measures

05.3 (a) Total Number of students

UG	PG	Ph. D.	Others
873	80	NIL	40

(b) No. of students outside the state: 18

(c) No. of international students: NA

Men	No	%
	736	77.2

Women	No	%
	217	22.8

Last Year						This Year					
General	SC	ST	OBC	Physically Challenged	Total	General	SC	ST	OBC	Physically Challenged	Total
0	204	1	798	-	1003	65	182	6	700	0	953

Demand ratio - Dropout % 1.5

Note: The actual strength is less than the sanctioned strength and hence demand ratio is not defined.

5.4 Details of student support mechanism for coaching for competitive examinations (If any)

- Awareness program through internal and external resource are organized on GATE Examination.
- Students were permitted to attend International Education program on higher studies and competitive examination classes.

No. of students beneficiaries 127

5.5 No. of students qualified in these examinations

NET	-	SET/SLET	-	GATE	-	CAT	-
IAS/IPS etc	-	State PSC	-	UPSC	-	Others	-

5.6 Details of student counselling and career guidance

- Academic and career counselling.
- Personal and psycho-social counselling.
- Alumni meeting for Industrial connect.
- Career oriented technical programs.
- Aptitude training through soft skill department.

No. of students benefitted 234

5.7 Details of campus placement

On campus			***Off Campus***
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
24	253	106	47

5.8 Details of gender sensitization programmes

- A program on "**Self Vigilance and self-defence for women** " was conducted on 10/8/18 in association with RM Foundation charitable trust and 180 students benefit out of it.

5.9 Students Activities

5.9.1 No. of students participated in Sports, Games and other events

State/ University level | 9 | National level | | International level | |

No. of students participated in cultural events

State/ University level | 10 | National level | | International level | |

5.9.2 No. of medals /awards won by students in Sports, Games and other events

Sports : State/ University level | 1 | National level | | International level | |

Cultural: State/ University level | 10 | National level | | International level | |

5.10 Scholarships and Financial Support

	Number of students	Amount
Financial support from institution	90	Rs.1.3 Cr
Financial support from government	609	Rs.3,544,385
Financial support from other sources	-	-
Number of students who received International/ National recognitions	-	-

5.11 Student organised / initiatives

Fairs : State/ University level | - | National level | - | International level | 1 |

Exhibition: State/ University level | 1 | National level | - | International level | - |

5.12 No. of social initiatives undertaken by the students | 3 |

5.13 Major grievances of students (if any) redressed: Nil

Criterion – VI

6. Governance, Leadership and Management

6.1 State the Vision and Mission of the institution

Vision

- To accomplish and maintain international eminence for fostering Research and Development.
- To be Institution for Higher Learning.
- To encourage Entrepreneurship for meeting the global demands.

Mission

- To attain leadership in planning and resource management.
- To inspire creativity and motivate innovative skills.
- To organize a pluralistic and professional environment that will stimulate scholars of the higher calibre and contribute immensely to national building

6.2 Does the Institution has a management Information System

- Kathir Computing facility department will provide support service for the complete academic information management system through software for all the departments.
- Fully computerized Library administration using bar code technology.
- River Innovation software for students' academic management.
- Electronic Entry and Exit management system.
- Circulation of books and non-book through ModernLIB software.
- OPAC, WEBOPAC (Book CD's and questions)
- Using E-Resources (Online Journals and E-Books
- NPTEL Resources.

6.3 Quality improvement strategies adopted by the institution for each of the following:

6.3.1 Curriculum Development

NA and we follow as per the norms of Anna University, Chennai.

6.3.2 Teaching and Learning

1. Revision Periodical/Class Test
2. In plant training
3. Industrial linkages
4. Special attention towards slow learners
5. Periodic assessments

6.3.3 Examination and Evaluation

- Our EMS (Examination Management System) cell will take care of all the examination and assessment as the regulation set by the Anna university.

6.3.4 Research and Development

- Two faculty members received guideship under Anna University, Chennai.
- Three faculty members were attended a "Certificate course on Effective Patent Drafting (PATDRAFT-2017)" Organized by CIPR of Anna University, Chennai.
- A one day workshop on "Intellectual Property Rights" was organized on 16/12/2017. Resource Dr.M.Kandababu, Director, CIPR, Anna University, Chennai.

6.3.5 Library, ICT and physical infrastructure / instrumentation

Infrastructure

- Students and faculty members are permitted to access e-journals on subject of Interest.
- Digital library, NPTEL CD's etc. are available and are used by the Students and faculty members.
- Established IIT Bombay remote centre for participating various FDP/Seminars/Workshops conducted by IIT Bombay and IIT Kharagpur.

Instrumentation

- Compression Test machine for concrete testing by few clients such as Indian railways (Southern)
- Power quality analyzer which are extended to be used by the energy management and associated companies.
- Embedded system lab with necessary hardware and software for electronic product developments from 8 bit processor to 32 bit processor.
- National Instruments Lab view lab for Testing, measurements and simulation.
- CNC Turning machine and CNC Hitec Milling machine

6.3.6 Human Resource Management

- Faculty recruitment is strictly following by the norms laid by AICTE, NewDelhi and Anna University, Chennai.
- Expert selection committee will scrutinize profiles and select the employee as per norms.
- Self appraisal reports to monitor the academic performance, status of faculty members and will be reviewed by HOD's, Principal and Management Representative.
- Faculty members were encouraged to update their knowledge/skill set through Industrial training programs/
- Tutor record will be maintained for every batch of students and appropriate counselling will be given on requirement.
- Suggestion box will be used by Students community .

6.3.7 Faculty and Staff recruitment

The eligibility condition for the faculty recruitment is strictly based on the AICTE and Anna University norms with respect to each deparment.

6.3.8 Industry Interaction / Collaboration

- Faculties are permitted to undergo Industrial training facilities.
- MoU's with many companies by each department
- Periodic industrial visit.
- Establishment of Industrial sponsored funded labs.
- Technical training programs are conducted by Industrial experts.
- Establishment of centre of excellence.
- Students Internship/placement from leading Industries.

6.3.9 Admission of Students

- UG Students are admitted based on the norms laid by Anna University, Chennai through TNEA (Tamilnadu Engineering Admission) and few through management quota.
- PG Students are admitted based on TANCET and also through management quota.

6.4 Welfare schemes for

Teaching	➢ Free Transportation ➢ Group Insurance, EPF ➢ On duty leave ➢ Maternity leaves ➢ Sponsorship for attending Seminars/workshops/conference support service for faculty perusing Ph.D.
Non teaching	➢ Free Transportation ➢ Group Insurance ➢ EPF ➢ Maternity leaves
Students	➢ Group Insurance ➢ Support service for publications ➢ Appreciation for rank holders, ➢ Placement assistance ➢ Technological Training and developments ➢ Industrial visit and Internship

6.5 Total corpus fund generated Rs.39493450

6.6 Whether annual financial audit has been done Yes √ No

6.7 Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	Yes	ISO	YES	IQAC
Administrative	Yes	ISO	YES	IQAC

6.8 Does the University/ Autonomous College declare results within 30 days?

NA

6.9 What efforts are made by the University/ Autonomous College for Examination Reforms?

NA

6.10 What efforts are made by the University to promote autonomy in the affiliated/constituent colleges?

NA

6.11 Activities and support from the Alumni Association

- Rs.540000 Corpus fund is generated.
- Alumni meet held every year.
- Receive comments and feedback form Alumni to improve academic conduction, better placement and Entrepreneurship developments.
- Placement support through Alumni network.

6.12 Activities and support from the Parent – Teacher Association

- Feedback received from the parents and appropriate actions will be taken.

6.13 Development programmes for support staff

- Support staff members were encouraged to register for higher studies.
- Permitting them to undergo in-house training and development programs to improve their capability and knowledge on technologies.
- Permitting the use of library and computer lab facilities

6.14 Initiatives taken by the institution to make the campus eco-friendly

- Energy consumption awareness program and action.
- Rain water harvesting systems.
- Use of renewable energy.
- Efforts for carbon neutrality.
- Solar panel installation with a capacity of 35 kW.

Criterion – VII

7. Innovations and Best Practices

7.1 Innovations introduced during this academic year which have created a positive impact on the Functioning of the institution. Give details.

- Technical club activities.
- Permitting students to undergo training programs on latest technologies through in-house and third party support.
- Student's involvement in social activities.
- Supporting faculty members for research and product developments.
- NPTEL awareness programs and support service for Certifications.
- Management scholarships to eligible students.
- More revision classes and assessments to improve students' academic performance.
- MoU signed with leading Industries.
- Industrial visit and Internship programs.
- Worked towards better placement for academically eligible students.

7.2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the Beginning of the year

- International Conference on Knowledge Collaboration in Engineering ICKCE-18 is held on 24/3/2018.
- IPR Cell is inaugurated on 16/12/2017 and a two day program is organized under state level.
- Two IQAC meeting are conducted with respective coordinators.
- Add-on programs were conducted based on industrial requirements.
- Students are placed in leading industries through ON and OFF campus placement drives.
- Further action plan is framed to improve the academic results.
- Internal academic audit is reviewed.
- Anna University, Chennai affiliation process is granted during the month of March, 2018.
- New labs where setup and equipments purchased.

7.3 Give two Best Practices of the institution *(please see the format in the NAAC Self-study Manuals)*

- Industrial based training and placement support.
- Innovation initiated towards students projects/products

Provide the details in annexure (annexure need to be numbered as i, ii, iii)

7.4 Contribution to environmental awareness / protection

- Roof top solar panel with a capacity of 35 kW
- Tree plantations.
- Helmet awareness program.

7.5 Whether environmental audit was conducted? Yes [ ] No [✓]

7.6 Any other relevant information the institution wishes to add. (for example SWOT Analysis)

- Management is providing scholarship to the academic merit oriented students.
- The institution is supporting students to avail Government scholarships.
- Faculty members are permitted to attend FDTP's.
- Periodical Industrial visit and Internship support is extended to students.
- Students and staffs were motivated to undergo certification program by NPTEL and the institution is the authorized SPOC centre.

8.**Plans of institution for next year**

- Improving Admissions.
- Have to attain good pass percentage.
- Placement support for all the academically eligible students.
- Encourage faculty members to register for Ph.D .
- Permitting faculty members for Industrial training.
- Enhancing research and product development culture among students and faculty members.
- Improving financial support through different funding agencies under various concerns.
- Streamline all academic procedures towards applying for Autonomy from **UGC** and stepping toward **NBA** Accreditation.
- Encourage faculty members to become University authorized Ph.D., supervisors and will work to accomplish Anna University recognized research centres.
- Guiding students to accomplish Anna University academic ranks.
- Organizing and participating in various National/International Conferences by both students and faculty members.
- Emphasizing Entrepreneurship development programs through EDC and IEDP cell among students community.
- Improving collaborations with Industries and Institutions.

Dr.D. ANANTHAKRISHNAN M.E.,Ph.D.,
Principal,
Kathir College of Engineering,
"Wisdom Tree"
Avinashi Road, Neelambur,
Coimbatore - 641062

Name Dr. M. KANNAN

Signature of the Coordinator, IQAC

Name

Signature of the Chairperson, IQAC

***

Kathir College of Engineering

NAAC Accredited / ISO 9001:2008 certified Institution
(Approved by AICTE /Affiliated to Anna University)
Neelambur, COIMBATORE – 62

ACADEMIC CALENDAR 2017 – 2018 (ODD SEMESTER)

(for II,III,IV Year B.E/B.Tech)

JULY 2017			
Date	**Day**	**Particulars**	**Days**
1	Sat		
2	*Sun*	*Holiday*	
3	Mon	**Re-opening for II,III and IV Year B.E/B.Tech**	01
4	Tue		02
5	Wed		03
6	*Thu*		04
7	Fri		*05*
8	*Sat*		
9	*Sun*	*Holiday*	
10	Mon		06
11	Tue		07
12	Wed		08
13	Thu		09
14	Fri	Completion of I Unit (10 working days)	10
15	*Sat*		
16	*Sun*	*Holiday*	
17	Mon		11
18	Tue		12
19	Wed		13
20	Thu		14
21	Fri	Class Committee Meeting - I	15
22	*Sat*		
23	*Sun*	*Holiday*	
24	Mon	***CIA Test - I***	16
25	Tue	***CIA Test - I***	17
26	Wed	***CIA Test - I***	18
27	Thu	***CIA Test - I***	19
28	Fri	***CIA Test - I***	20
29	*Sat*	***CIA Test - I***	
30	*Sun*	*Holiday*	
31	Mon	Completion of II Unit (10 working days)	22
Total No. of Working Days : 22			

Kathir College of Engineering

NAAC Accredited / ISO 9001:2008 certified Institution
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Neelambur, COIMBATORE – 62

ACADEMIC CALENDAR 2017 – 2018 (ODD SEMESTER)

(for II,III,IV Year B.E/B.Tech)

AUGUST 2017			
Date	**Day**	**Particulars**	**Days**
1	Tue		22
2	Wed		23
3	Thu		24
4	Fri		25
5	Sat		26
6	*Sun*	*Holiday*	
7	Mon		27
8	Tue		28
9	Wed		29
10	Thu		30
11	Fri	Completion of III Unit (10 working days)	31
12	Sat		32
13	*Sun*	*Holiday*	
14	*Mon*	*Krishna Jayanthi - Holiday*	
15	*Tue*	*Independence Day- Holiday*	
16	Wed		33
17	Thu		34
18	Fri		35
19	Sat	Class Committee Meeting - II	36
20	*Sun*	*Holiday*	
21	Mon		37
22	***Tue***	***CIA Test – II***	***38***
23	***Wed***	***CIA Test – II***	***39***
24	***Thu***	***CIA Test - II***	***40***
25	*Fri*	*Vinayakar Chathurthi - Holiday*	
26	*Sat*		
27	*Sun*	*Holiday*	
28	Mon		41
29	***Tue***	***CIA Test – II***	***42***
30	***Wed***	***CIA Test – II***	***43***
31	***Thu***	***CIA Test – II*** and Completion of Unit - IV	***44***
Total No. of Working Days : 44			

Kathir College of Engineering

NAAC Accredited / ISO 9001:2008 certified Institution
(Approved by AICTE /Affiliated to Anna University)
Neelambur, COIMBATORE – 62

ACADEMIC CALENDAR 2017 – 2018 (ODD SEMESTER)

(for II,III,IV Year B.E/B.Tech)

SEPTEMBER 2017			
Date	**Day**	**Particulars**	**Days**
1	Fri		45
2	Sat	*Bakrid - Holiday*	
3	*Sun*	*Holiday*	
4	Mon	**Completion of Record Work**	46
5	Tue		47
6	Wed		48
7	Thu		49
8	Fri		50
9	Sat	[redacted]	
10	*Sun*	*Holiday*	
11	Mon		51
12	Tue		52
13	Wed		53
14	Thu	Completion of V Unit (10 working days)	54
15	Fri	Class Committee Meeting - III	55
16	Sat		
17	*Sun*	*Holiday*	
18	Mon	***CIA Test – III***	56
19	Tue	***CIA Test – III***	57
20	Wed	***CIA Test - III***	58
21	Thu	***CIA Test – III***	59
22	Fri	***CIA Test – III***	60
23	Sat	***CIA Test - III***	61
24	*Sun*	*Holiday*	
25	Mon		62
26	Tue		63
27	Wed		64
28	Thu		65
29	Fri	*Ayutha Pooja - Holiday*	
30	Sat	*Vijaya Dasami - Holiday*	
Total No. of Working Days : 65			

Kathir College of Engineering

NAAC Accredited / ISO 9001:2008 certified Institution
(Approved by AICTE /Affiliated to Anna University)
Neelambur, COIMBATORE – 62

ACADEMIC CALENDAR 2017 – 2018 (ODD SEMESTER)

(for II,III,IV Year B.E/B.Tech)

OCTOBER 2017			
Date	**Day**	**Particulars**	**Days**
1	*Sun*	*Muharram - Holiday*	
2	Mon	*Gandhi Jayanthi - Holiday*	
3	Tue		66
4	Wed		67
5	***Thu***	***Commencement of University Practical Exams***	***68***
6	Fri		69
7	Sat		70
8	*Sun*	*Holiday*	
9	Mon		71
10	Tue		72
11	Wed		**73**
12	Thu		**74**
13	Fri	***End of Practical Exams - Tentative***	**75**
14	Sat		76
15	*Sun*	Holiday	
16	Mon		77
17	***Tue***	***Last Working Day - Tentative***	***78***
18	Wed	*Deepavali - Holiday*	
19	Thu		
20	Fri		
21	*Sat*		
22	*Sun*		
23	Mon		
24	Tue		
25	Wed		
26	Thu		
27	Fri		
28	*Sat*		
29	*Sun*		
30	Mon		
31	Tue		
Total No. of Working Days : 78			

14/06/17

Academic Co-ordinator

14/6/17

PRINCIPAL

Kathir College of Engineering

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(Approved by AICTE /Affiliated to Anna University)
COIMBATORE – 62

TENTATIVE ACADEMIC CALENDAR 2017 – 2018 (EVEN SEMESTER)

DECEMBER 2017			
Date	**Day**	**Particulars**	**Days**
1	Fri		
2	*Sat*		
3	*Sun*	*Holiday*	
4	Mon		
5	Tue		
6	Wed		
7	Thu		
8	Fri		
9	Sat		
10	*Sun*	*Holiday*	
11	Mon		
12	Tue		
13	Wed		
14	Thu		
15	Fri		
16	Sat		
17	*Sun*	*Holiday*	
18	Mon	**Re-opening for II,IV,VI Semester B.E/B.Tech**	01
19	Tue		02
20	Wed		03
21	Thu		04
22	Fri		05
23	Sat		06
24	*Sun*	*Holiday*	
25	Mon	*Christmas - Holiday*	
26	Tue		07
27	Wed		08
28	Thu		09
29	Fri	*Completion of Unit I*	10
30	Sat		11
31	Sun	*Holiday*	
Total No. of Working Days : 11			

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COIMBATORE – 62

TENTATIVE ACADEMIC CALENDAR 2017 – 2018 (EVEN SEMESTER)

JANUARY 2018			
Date	**Day**	**Particulars**	**Days**
1	*Mon*	*New Year - Holiday*	
2	Tue		12
3	Wed		13
4	Thu		14
5	Fri		15
6	Sat		16
7	*Sun*	*Holiday*	
8	Mon		17
9	Tue	CIA – I TEST	18
10	Wed	CIA – I TEST	19
11	Thu	CIA – I TEST	20
12	Fri		21
13	*Sat*	*Holiday*	
14	*Sun*	*Pongal - Holiday*	
15	*Mon*	*Thiruvalluvar Tinam - Holiday*	
16	*Tue*	*Uzhavar Tirunal - Holiday*	
17	Wed		22
18	*Thu*	*Completion of Unit II*	*23*
19	Fri		24
20	Sat		25
21	*Sun*	*Holiday*	
22	Mon		26
23	Tue		27
24	Wed		28
25	Thu		29
26	Fri	*Republic Day - Holiday*	
27	Sat	*Holiday*	
28	*Sun*	*Holiday*	
29	Mon		30
30	Tue		31
31	Wed		32
Total No. of Working Days : 32			

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COIMBATORE – 62

TENTATIVE ACADEMIC CALENDAR 2017 – 2018 (EVEN SEMESTER)

FEBRUARY 2018			
Date	Day	Particulars	Days
1	Thu	*Completion of Unit III*	33
2	Fri		34
3	Sat	Technical Symposium	35
4	*Sun*	*Holiday*	
5	Mon		36
6	Tue		37
7	Wed		38
8	Thu	CIA – II TEST	39
9	Fri	CIA – II TEST	40
10	Sat	CIA – II TEST	41
11	*Sun*	*Holiday*	
12	Mon		42
13	Tue		43
14	Wed		44
15	Thu		45
16	Fri		46
17	*Sat*	*Completion of Unit IV*	47
18	*Sun*	*Holiday*	
19	Mon		48
20	Tue		49
21	Wed		50
22	Thu		51
23	Fri		52
24	Sat	Sports day / College Day	53
25	*Sun*	*Holiday*	
26	Mon		54
27	Tue		55
28	Wed		56
Total No. of Working Days : 56			

ACADEMIC CALENDAR 2017 – 2018 (EVEN SEMESTER)

MARCH 2018			
Date	**Day**	**Particulars**	**Days**
1	Thu		57
2	Fri		58
3	*Sat*	*Completion of Unit V*	59
4	*Sun*	*Holiday*	
5	Mon		60
6	Tue		61
7	Wed		62
8	Thu		63
9	Fri		64
10	Sat		65
11	*Sun*	*Holiday*	
12	Mon		66
13	Tue		67
14	Wed		68
15	Thu		69
16	Fri		70
17	Sat	*Third Saturday - Holiday*	
18	*Sun*	*Telungu New Year - Holiday*	
19	Mon		71
20	Tue		72
21	Wed		73
22	Thu		74
23	*Fri*		75
24	Sat		76
25	*Sun*	*Holiday*	
26	Mon		*77*
27	Tue		78
28	Wed		79
29	*Thu*	*Mahavir Jayanti*	
30	*Fri*	*Good Friday*	
31	Sat	*Holiday*	
Total No. of Working Days : 79			

Kathir College of Engineering

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COIMBATORE – 62

ACADEMIC CALENDAR 2017 – 2018 (EVEN SEMESTER)

APRIL 2018			
Date	**Day**	**Particulars**	**Days**
1	*Sun*	*Holiday*	
2	*Mon*		80
3	*Tue*		81
4	*Wed*		82
5	Thu		83
6	Fri		84
7	Sat		85
8	*Sun*	*Holiday*	
9	*Mon*		86
10	Tue	***Last Working Day***	87
11	Wed		
12	Thu	***Commencement of Practical Examinations***	
13	*Fri*		
14	Sat	*Ambedkar Jayanti - Holiday*	
15	*Sun*	*Holiday*	
16	MON		
17	TUE		
18	WED		
19	THU		
20	FRI		
21	SAT		
22	*Sun*	*Holiday*	
23	Mon	***Commencement of End Semester Examinations***	
24	Tue		
25	Wed		
26	Thu		
27	Fri		
28	Sat		
29	Sun		
30	Mon		
Total No. of Working Days : 87			

Academic Co-ordinator

PRINCIPAL

Abbreviations:

CAS	-	Career Advanced Scheme
CAT	-	Common Admission Test
CBCS	-	Choice Based Credit System
CE	-	Centre for Excellence
COP	-	Career Oriented Programme
CPE	-	College with Potential for Excellence
DPE	-	Department with Potential for Excellence
GATE	-	Graduate Aptitude Test
NET	-	National Eligibility Test
PEI	-	Physical Education Institution
SAP	-	Special Assistance Programme
SF	-	Self Financing
SLET	-	State Level Eligibility Test
TEI	-	Teacher Education Institution
UPE	-	University with Potential Excellence
UPSC	-	Union Public Service Commission

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Yearly Status Report - 2018-2019

Part A	
Data of the Institution	
1. Name of the Institution	**KATHIR COLLEGE OF ENGINEERING**
Name of the head of the Institution	**Dr.P.Murthi**
Designation	**Principal**
Does the Institution function from own campus	**Yes**
Phone no/Alternate Phone no.	**04222203778**
Mobile no.	**8220772148**
Registered Email	**principal@kathir.ac.in**
Alternate Email	**kathirce@gmail.com**
Address	**Wisdom Tree, Avinashi Road,Neelambur**
City/Town	**Coimbatore**
State/UT	**Tamil Nadu**
Pincode	**641062**
2. Institutional Status	

Affiliated / Constituent	**Affiliated**
Type of Institution	**Co-education**
Location	**Rural**
Financial Status	**Self financed**
Name of the IQAC co-ordinator/Director	**Dr.B.Vaikundaselvan**
Phone no/Alternate Phone no.	**04222203778**
Mobile no.	**9843648317**
Registered Email	**iqac@kathir.ac.in**
Alternate Email	**kathirce@gmail.com**

3. Website Address

Web-link of the AQAR: (Previous Academic Year)	http://kathir.ac.in/uploads/AQAR_Link_Doc/1.pdf
4. Whether Academic Calendar prepared during the year	**Yes**
if yes,whether it is uploaded in the institutional website: Weblink :	http://www.kathir.ac.in/aqar.shtml

5. Accrediation Details

Cycle	Grade	CGPA	Year of Accrediation	Validity	
				Period From	Period To
1	**B**	**2.53**	**2016**	**24-May-2016**	**24-May-2021**

6. Date of Establishment of IQAC	**05-Jun-2018**

7. Internal Quality Assurance System

Quality initiatives by IQAC during the year for promoting quality culture		
Item /Title of the quality initiative by IQAC	Date & Duration	Number of participants/ beneficiaries
Orientation Program for CBCS	**05-Jun-2018 1**	**30**
IQAC Meeting 1	**14-Sep-2018 1**	**10**

IQAC Meeting	20-Feb-2019 1	11
Accreditation Awareness Program	08-Mar-2019 1	70
Discussion on the new format of NAAC	14-Mar-2019 1	35
Internal Audit	02-May-2019 1	35
Accreditation Awareness Program	09-May-2019 1	30
View File		

8. Provide the list of funds by Central/ State Government- UGC/CSIR/DST/DBT/ICMR/TEQIP/World Bank/CPE of UGC etc.

Institution/Department/Faculty	Scheme	Funding Agency	Year of award with duration	Amount
No Data Entered/Not Applicable!!!				
View File				

9. Whether composition of IQAC as per latest NAAC guidelines:	Yes
Upload latest notification of formation of IQAC	View File
10. Number of IQAC meetings held during the year :	2
The minutes of IQAC meeting and compliances to the decisions have been uploaded on the institutional website	Yes
Upload the minutes of meeting and action taken report	View File
11. Whether IQAC received funding from any of the funding agency to support its activities during the year?	No

12. Significant contributions made by IQAC during the current year(maximum five bullets)

Academic Audit

Motivation to students for participating in Innovative programs

Feedback System

Faculty Empowerment Programs

Research awareness Programs

View File

13. Plan of action chalked out by the IQAC in the beginning of the academic year towards Quality Enhancement and outcome achieved by the end of the academic year

Plan of Action	Achivements/Outcomes
Signing of MOU with industrial organisations	MOU's Signed
International Conference	Organized on 24.03.2018
Student Enrichment Activities	Technical symposium was organized
Academic Calendar	Prepared
Faculty Enrichment program	Conducted one program for each department
Certification Courses	Conducted
View File	

14. Whether AQAR was placed before statutory body ?	Yes

Name of Statutory Body	Meeting Date
Management Team	18-Jul-2019

15. Whether NAAC/or any other accredited body(s) visited IQAC or interacted with it to assess the functioning ?	No
16. Whether institutional data submitted to AISHE:	No
17. Does the Institution have Management Information System ?	Yes
If yes, give a brief descripiton and a list of modules currently operational (maximum 500 words)	The Institute has a MIS, Rever Innovations software. The modules currently in operation include the admission application management system, the student on boarding and information system, Learning Management System among others. The HR modules and Finance modules are currently in the process of implementation.

Part B

CRITERION I – CURRICULAR ASPECTS

1.1 – Curriculum Planning and Implementation

1.1.1 – Institution has the mechanism for well planned curriculum delivery and documentation. Explain in 500 words

The institution is affiliated to Anna University, Chennai. Accordingly, we follow the curriculum designed by Anna University, Chennai. Going beyond the University curriculum and based on the Program Advisory Council (PAC) recommendations, value added courses and content beyond syllabus are framed for which the institution designs the curriculum. In order to have an effective teaching, learning and evaluation process, Kathir College of Engineering (KCE) follows a systematic approach beginning with the preparation of the academic calendar. The Academic Calendar is prepared at the commencement of the semester and becomes the guiding document for scheduling teaching, learning and evaluation activities. It is prepared by every department for every programme before the semester starts. It schedules all the events planned by a department for a semester including the common events conducted by the institute. The calendar is circulated and uploaded in the website for easy reference to students and faculty. The Academic Schedule provided by the University is observed while preparing the Academic Calendar. In addition, the Assessment Schedule laid down by the University with schedule of internal tests, last instruction day, commencement of end semester theory and practical examinations conducted by the University provides input to the institution's academic calendar. The Course Plan document further drives the planning of curriculum delivery and documentation. It is a vital document that micro-manages the activities to be carried out with regard to the teaching-learning process. The Course File is prepared by concerned faculty members for all the courses before the start of the semester and it is approved by the respective Head of the Department. The Course File addresses the Course Planning and Delivery aspects. 1.Department Vision, Mission 2. Programme Outcomes (PO) 3. Programme Objectives 4. Course Syllabus 5. Course Objectives 6. Course Outcomes (CO) 7. Mapping of COs and POs 8. Identification of curriculum gap 9. Details of Content beyond syllabus 10. Lesson plan 11.Delivery methods / models planned and 12. Guest lectures, workshops planned. Course delivery : 1.Course Material 2. List of textbooks, reference books, journals and websites 3. EBooks, E-Materials, video (To be written in a DVD and attached) 4. Scope for self-learning 5. Old university question papers 6. Question bank (Unit I to V) 7.Slow learners coaching record Evaluation: The evaluation scheme considers among other inputs, if the semester is odd or even, public holidays, course plan and the schedule for weekly tests, internal tests and model examinations are prepared by the examination cell of the institution. These schedules are integrated into the Academic Calendar for holistic reference and execution. The evaluation is performed in accordance with the curriculum design. The evaluation pattern consists of continuous internal assessment and university examination with 20% and 80 % weightage respectively. The internal assessment element of 20 marks is an average of the three internal tests. The internal test question papers are prepared by the subject handling faculty members and reviewed by the HODs before sending it to the Examination Cell. The end semester examinations are conducted by Anna University, Chennai

1.1.2 – Certificate/ Diploma Courses introduced during the academic year

Certificate	Diploma Courses	Dates of Introduction	Duration	Focus on employ ability/entrepreneurship	Skill Development
Employment opportunities in government,	**Nil**	**05/03/2019**	**1**	**Employability**	**Employability Skills**

public and private					
Basics on 3d printing	Nil	02/07/2018	20	Employability	Design skills
Personality development	Nil	02/07/2018	20	Employability	Communication skills
CAE in Automotive Industries	Nil	02/07/2018	20	Employability	Design skills
Programming in C	Nil	06/09/2018	15	Employability	Programming skills
Programming in Python	Nil	11/10/2018	15	Employability	Programming skills
Application of Industrial Robotics	Nil	27/07/2018	2	Employability	Application Development skills
Control system in Industry field	Nil	06/09/2018	1	Employability	Hardware design skills
Amplifier used for Communication	Nil	11/10/2018	1	Employability	Hardware design skills
Hardware product design based Arduino and IoT	Nil	08/02/2019	2	Employability	Hardware design skills
Recent challenges in Mobile Computing	Nil	22/02/2019	2	Employability	Hardware design skills
Project to Product	Nil	01/03/2019	1	Entrepreneurship	Entrepreneurship skills design skills
Embedded Systems	Nil	08/03/2019	2	Employability	Hardware design skills

1.2 – Academic Flexibility

1.2.1 – New programmes/courses introduced during the academic year

Programme/Course	Programme Specialization	Dates of Introduction
No Data Entered/Not Applicable !!!		

View File

1.2.2 – Programmes in which Choice Based Credit System (CBCS)/Elective course system implemented at the affiliated Colleges (if applicable) during the academic year.

Name of programmes adopting CBCS	Programme Specialization	Date of implementation of CBCS/Elective Course System
BE	Computer Science and Engineering	02/07/2018
BE	Civil Engineering	02/07/2018
BE	Electrical Electronics Engineering	02/07/2018
BE	Electronics and Communication Engineering	02/07/2018
BE	Mechanical Engineering	02/07/2018
ME	Applied Electronics	02/07/2018
ME	Computer Science and Engineering	02/07/2018
ME	Manufacturing Engineering	02/07/2018
ME	Power Electronics and Drives	02/07/2018
MBA	Master of Business Administration	02/07/2018

1.2.3 – Students enrolled in Certificate/ Diploma Courses introduced during the year

	Certificate	Diploma Course
Number of Students	766	Nil

1.3 – Curriculum Enrichment

1.3.1 – Value-added courses imparting transferable and life skills offered during the year

Value Added Courses	Date of Introduction	Number of Students Enrolled
C	22/08/2018	75
Python	04/02/2019	75
Life skill for Engineers	22/08/2018	30
MATLAB for Mechanical Engineers	04/02/2019	30
Hands on training in TI-Tiva C series microcontroller	20/08/2018	30
Workshop on Arduino microcontroller	11/02/2019	45
STAAD PRO	10/09/2018	45
AUTOCAD	06/02/2019	50
Workshop on Yoga and Demonstrations of various Asanas	20/08/2018	40
Self Defense Course	06/09/2018	65

View File

1.3.2 – Field Projects / Internships under taken during the year

Project/Programme Title	Programme Specialization	No. of students enrolled for Field Projects / Internships
BE	Computer Science and Engineering	43
BE	Civil Engineering	25
BE	Electrical Electronics Engineering	4
BE	Electronics and Communication Engineering	27
BE	Mechanical Engineering	44
MBA	Master of Business Administration	32

View File

1.4 – Feedback System

1.4.1 – Whether structured feedback received from all the stakeholders.

Students	Yes
Teachers	Yes
Employers	Yes
Alumni	Yes
Parents	Yes

1.4.2 – How the feedback obtained is being analyzed and utilized for overall development of the institution? (maximum 500 words)

Feedback Obtained
• The institution collects structured feedback from all the stakeholders on the teaching learning processes, facilities in the institution, course outcome, programme outcome, outcome based education etc. • Feedback from students is obtained on teaching learning processes at the end of the course. The feedback is analysed and corrective actions are carried out to improve lecture delivery, conduction of labs, value added programmes, etc. • Every semester feedback is obtained from students about the facilities in the institution. The feedback is analysed and the required changes are made according to their needs. • Through online forms and in person feedback is obtained from employers about the program outcome and the progress of our alumni employed. • The alumni feedback on program outcome is obtained when alumni visit the institution, during alumni meet organised in the institution and also places where alumni meets held. • Parents meeting is convened once in every semester to get the feedback about the progress of their wards, improvement needed in the facilities. • The structured feedback received from the stakeholders, is consolidated by the Head of the departments and submitted to the Head of the Institution for further action.

CRITERION II – TEACHING- LEARNING AND EVALUATION

2.1 – Student Enrolment and Profile

2.1.1 – Demand Ratio during the year

Name of the Programme	Programme Specialization	Number of seats available	Number of Application received	Students Enrolled

MBA	MBA	60	49	45
ME	Power Electronics and Drives	18	8	5
ME	Manufacturing Engineering	18	25	11
ME	Computer Science Engineering	18	15	5
ME	Applied Electronics	18	10	2
BE	Mechanical Engineering	60	80	47
BE	Civil Engineering	60	20	14
BE	Electrical and Electronics Engineering	60	39	18
BE	Electronics and Communication Engineering	60	80	20
BE	Computer Science and Engineering	60	70	48

View File

2.2 – Catering to Student Diversity

2.2.1 – Student - Full time teacher ratio (current year data)

Year	Number of students enrolled in the institution (UG)	Number of students enrolled in the institution (PG)	Number of fulltime teachers available in the institution teaching only UG courses	Number of fulltime teachers available in the institution teaching only PG courses	Number of teachers teaching both UG and PG courses
2018	817	149	72	19	Nill

2.3 – Teaching - Learning Process

2.3.1 – Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc. (current year data)

Number of Teachers on Roll	Number of teachers using ICT (LMS, e-Resources)	ICT Tools and resources available	Number of ICT enabled Classrooms	Numberof smart classrooms	E-resources and techniques used
91	91	20	22	6	Nill

View File of ICT Tools and resources

View File of E-resources and techniques used

2.3.2 – Students mentoring system available in the institution? Give details. (maximum 500 words)

The College has a monitoring system comprising of mentors/ advisors for each student for academic, personal

and psycho-socio guidance. This enables the students to express/ share their academic and personal difficulties with their Advisor and Mentors. The college follows mentor mentee system for counselling, mentoring and to improve the academic performance of the students as well as to understand and solve personal issues of the students. Each class has a class advisor who also acts as a mentor for a group of students. Each mentor is allotted with 15 to 20 students to provide academic, personal and psycho-socio support and guidance. The mentor maintains all particulars of students in a progress card and the counselling records. Daily evening hours by each faculty stays after college hours for counselling the students which helps the faculty to have individual attention for the needy students. It helps the mentor to study how far a particular student has been successful in his/her academic career. Both the class advisor and mentor constantly update the progress of the student to their parents/ guardians. The mentors are guiding and supporting the students to enhance academic, co-curricular and extracurricular activities. It helps the students to clarify their doubts and to get know the available opportunities for their career development. In association with the mentees, the mentor assigns the target on co curricular, extracurricular and other activities at the beginning of the every academic year. The progress of the mentee on the targets is monitored and reviewed frequently to achieve the goals and the same is documented. Mentors encourage, create interest and guide the students to enroll for MOOC/ NPTEL courses and top contests in national/international level. The achievers are encouraged to attend extra classes to cope up with their peers. The progress of the students is periodically informed to their parents through phone call or SMS and parent meeting is arranged during the need of hour. The students, who are having personal problems, are guided to meet the special counsellor so as to resolve the concerns. Through this mentor-mentee system the institution assures a constructive professional relationship between students and the faculty.

Number of students enrolled in the institution	Number of fulltime teachers	Mentor : Mentee Ratio
966	91	1:11

2.4 – Teacher Profile and Quality

2.4.1 – Number of full time teachers appointed during the year

No. of sanctioned positions	No. of filled positions	Vacant positions	Positions filled during the current year	No. of faculty with Ph.D
91	68	23	23	4

2.4.2 – Honours and recognition received by teachers (received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the year)

Year of Award	Name of full time teachers receiving awards from state level, national level, international level	Designation	Name of the award, fellowship, received from Government or recognized bodies
2018	Dr T.K.P.Rajagopal	Associate Professor	Excellent Global Leadership Managerial Achievement Dedicated Innovative Academician Award
2019	Dr T.K.P.Rajagopal	Associate Professor	LIFE TIME ACHIEVER AWARD- 1st Global Outreach Research and Educational Summit Award 2019, Organized by The Global Outreach Research Education Association (GOREA), Jaipur, Rajasthan, India

View File

2.5 – Evaluation Process and Reforms

2.5.1 – Number of days from the date of semester-end/ year- end examination till the declaration of results during the year

Programme Name	Programme Code	Semester/ year	Last date of the last semester-end/ year-end examination	Date of declaration of results of semester-end/ year- end examination
MBA	Master of Business Administration	IV/II	21/05/2019	23/06/2019
ME	Power Electronics and Drives	IV/II	30/04/2019	23/06/2019
ME	Manufacturing Engineering	IV/II	30/04/2019	23/06/2019
ME	Computer Science Engineering	IV/II	30/04/2019	23/06/2019
ME	Applied Electronics	IV/II	30/04/2019	23/06/2019
BE	Mechanical Engineering	VIII/IV	29/04/2019	23/06/2019
BE	Electrical and Electronics Engineering	VIII/IV	29/04/2019	23/06/2019
BE	Electronics and Communication Engineering	VIII/IV	29/04/2019	23/06/2019
BE	Computer Science and Engineering	VIII/IV	29/04/2019	23/06/2019
BE	Civil Engineering	VIII/IV	29/04/2019	23/06/2019

View File

2.5.2 – Reforms initiated on Continuous Internal Evaluation(CIE) system at the institutional level (250 words)

•The CIE is conducted as per the guidelines of Anna University. In a semester three CIA tests are planned for a course and 20 of total internal marks are awarded through the same. •A question bank is prepared by every faculty for the respective courses and provided to the students. •The CIA test questions are framed by the course instructor with Part A (10 two mark questions) and Part B (2 fifteen mark question). •Every question is mapped to satisfy the course outcomes for every course. This is required to measure the attainment of course outcomes as per outcome based education. •Also every question is mapped with Blooms taxonomy levels. This will indicate the complexity level of the questions. •The marks scored by the students in the CIA tests are published to ensure transparency. •The course instructors prepare the scheme of evaluation for the courses they handle. •The students will also be provided with the scheme of evaluation to ensure transparency. •The internal marks computed based

on the CIA 1, 2, 3 are also published to ensure transparency.

2.5.3 – Academic calendar prepared and adhered for conduct of Examination and other related matters (250 words)

Institutional calendar has been prepared and aligned with University academic calendar. In addition to events proposed by the university in academic calendar, Institute has introduced many other events which are useful in overall development of the students. The Academic Calendar serves as an information source and planning document for students, faculty, staff and departments. The Academic Calendar includes Holidays, Start and end date of curricular sessions, Assessment Exams and tentative University exam dates Co-curricular and extracurricular activities. All courses are handled as per the schedule in the academic calendar. For each course, a course file is prepared by the subject handling Faculty in a given format. The course file consists of syllabus, detailed course information with course outcomes, Mapping of COs and POs, continuous assessment question papers and sample answer sheets.

2.6 – Student Performance and Learning Outcomes

2.6.1 – Program outcomes, program specific outcomes and course outcomes for all programs offered by the institution are stated and displayed in website of the institution (to provide the weblink)

http://www.kathir.ac.in/aqar.shtml

2.6.2 – Pass percentage of students

Programme Code	Programme Name	Programme Specialization	Number of students appeared in the final year examination	Number of students passed in final year examination	Pass Percentage
410	ME	Manufacturing Engineering	6	3	50
631	MBA	Master of Business Administration	30	24	80
114	BE	Mechanical Engineering	139	60	43
106	BE	Electrical and Electronics Engineering	22	9	41
105	BE	Electronics and Communication Engineering	47	19	40
104	BE	Computer Science and Engineering	32	18	56
103	BE	Civil Engineering	59	23	40

View File

2.7 – Student Satisfaction Survey

2.7.1 – Student Satisfaction Survey (SSS) on overall institutional performance (Institution may design the questionnaire) (results and details be provided as weblink)

http://kathir.ac.in/uploads/NAAC_Doc/SSS%202018-2019.pdf

CRITERION III – RESEARCH, INNOVATIONS AND EXTENSION

3.1 – Resource Mobilization for Research

3.1.1 – Research funds sanctioned and received from various agencies, industry and other organisations

Nature of the Project	Duration	Name of the funding agency	Total grant sanctioned	Amount received during the year
Industry sponsored Projects	730	V.K.T.Ginning mills	3	3
Interdisciplinary Projects	90	KCE	0.15	0.15
Minor Projects	1095	COSMOGEMS	5	5
Major Projects	1825	Deen Dayal Upadhyaya Grameen Kaushalya Yojana	500	248
Major Projects	1825	AICTE- PMKVY	45	13.04

View File

3.2 – Innovation Ecosystem

3.2.1 – Workshops/Seminars Conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices during the year

Title of workshop/seminar	Name of the Dept.	Date
Scope of IPR	Mechanical Engineering	13/06/2018
Role of Intellectual property in Entrepreneurship	Electronics and communication Engineering	09/10/2018
Research opportunities in DRDO	Mechanical Engineering	13/10/2018
Current Issues in Intellectual Property Rights in India	Computer science and Engineering	08/10/2018
One day workshop on patent proposal writing	MBA	05/04/2019
Intellectual Property Rights and Innovation	Electrical and Electronics Engineering	22/06/2018
One day workshop on Research proposals and Grants	Civil Engineering	16/08/2018

3.2.2 – Awards for Innovation won by Institution/Teachers/Research scholars/Students during the year

Title of the innovation	Name of Awardee	Awarding Agency	Date of award	Category
Educational	Kathir	The Society	25/06/2018	Excellent

and technical Institution Award	College of Engineering	of Innovative Educationalist Research Professional		Innovative Professional Institution Academic Development Achievement Award
Transferred ARC Plasma (TAP) Torch Techniques And Characterization	Dr. Kannan Nithin KV. Associate Professor Head	IEAE student Project Programme – 2018 (SPP)	12/06/2018	Nill
Hollow Cathode Plasma (HCP) Torch Techniques and Characterization	Dr. Kannan Nithin KV. Associate Professor Head	IEAE student Project Programme – 2018 (SPP)	02/05/2018	Nill
Fabrication and Characterization of Vapour Grown Carbon Fibers (VGCF)	Dr. V.S. Angulakshi, Associate Professor	IEAE student Project Programme – 2018 (SPP)	12/06/2018	Nill

View File

3.2.3 – No. of Incubation centre created, start-ups incubated on campus during the year

Incubation Center	Name	Sponsered By	Name of the Start-up	Nature of Start-up	Date of Commencement
No Data Entered/Not Applicable !!!					

View File

3.3 – Research Publications and Awards

3.3.1 – Incentive to the teachers who receive recognition/awards

State	National	International
No Data Entered/Not Applicable !!!		

3.3.2 – Ph. Ds awarded during the year (applicable for PG College, Research Center)

Name of the Department	Number of PhD's Awarded
No Data Entered/Not Applicable !!!	

3.3.3 – Research Publications in the Journals notified on UGC website during the year

Type	Department	Number of Publication	Average Impact Factor (if any)
International	Mechanical	8	4.69
International	EEE	5	2.87
International	CSE	21	Nill
National	Mathematics	4	Nill
National	Physics	4	Nill
International	ECE	5	1.25

View File

3.3.4 – Books and Chapters in edited Volumes / Books published, and papers in National/International Conference Proceedings per Teacher during the year

Department	Number of Publication
Electrical and Electronics Engineering	4
Mechanical Engineering	4
Computer Science and Engineering	14
Physics	8

View File

3.3.5 – Bibliometrics of the publications during the last Academic year based on average citation index in Scopus/ Web of Science or PubMed/ Indian Citation Index

Title of the Paper	Name of Author	Title of journal	Year of publication	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self citation
Mechanical Behavior of Human Hair and Coir Fiber Reinforced Hybrid Composites	Mr.M. Arunprakash	IJSART	2019	Nill	Nill	Nill
Comparative Wear Studies On Brass Coated Aluminium Composite And Uncoated Aluminium Composite	Mr.M. Arunprakash	IJSART	2018	Nill	Nill	Nill
Mechanical Behavior of Human Hair and Coir Fiber Reinforced Hybrid Composites	Mr.A.Vijayakumar	IJSART	2018	Nill	Nill	Nill
Application of Lean Tools to Improve Productivity in a Garment Ma	Dr. P.Ravi Kumar	IJSRD	2019	Nill	Nill	Nill

nufacturing Company						
Implementation of lean manufacturing in plastic moulding industry	Dr. P.Ravi Kumar	IJSRD	2018	Nill	Nill	Nill
Investigations on the effect of impregnated WS2 on corrosion of low alloy steel (paper need)	Dr. A.R.Suresh	Advanced Science, Engineering and Medicine of American Scientific Publishers	2019	Nill	Nill	Nill
Investigations on the effect of deep cryogenic treatment on machinability of Austempered Ductile Iron	Dr. A.R.Suresh	Taga Journal of Graphic Technology	2018	Nill	Nill	Nill
Studies on wear and corrosion resistance of A36 steel coated with tungsten carbide and cobalt	Dr. A.R.Suresh	Taga Journal of Graphic Technology	2018	Nill	Nill	Nill
Design And Analysis of Horizontal Open well Submersible Pump	Mr.M.Arunpranesh	IJSART	2019	Nill	Nill	Nill
Experimental Investigation on Bio-Oil	Mr.M.Arunpranesh	International Journal of Pure and	2019	Nill	Nill	Nill

produced from Rice Husk by Pyrolysis		Applied Mathematics				

View File

3.3.6 – h-Index of the Institutional Publications during the year. (based on Scopus/ Web of science)

Title of the Paper	Name of Author	Title of journal	Year of publication	h-index	Number of citations excluding self citation	Institutional affiliation as mentioned in the publication
An Optimal Low Power Digital Controller For Portable Solar Applications	N.Vijayalakshmi	JRSE	2018	1	1	Kathir College of Engineering
Reduced Ripple Buck-Boost Converter Design For Solar Portable Applications	N.Vijayalakshmi	TAGA JOURNAL	2018	1	Nill	Kathir College of Engineering
Real Time Energy And Power Measurement Using Arduino with TFT Display	N.Vijayalakshmi Dr.A.Rosi	IJRMMAE	2018	1	Nill	Kathir College of Engineering
Mobile healthcare using Internet of Things	Vani N Indumathi S	IJSRED	2019	Nill	Nill	Kathir College of Engineering
Vehcile Monitoring System with TFT Display	Dr.V.R Rajeshkumar B.Gowridevi	IJRMMAE	2018	Nill	Nill	Kathir College of Engineering
A hybrid dynamic load Balancing for Energy efficient	Mr.T.K.P.Rajagopal	TAGA JOURNAL	2018	Nill	Nill	Kathir College of Engineering

Of multi access in Heterogeneous wireless Networks						

View File

3.3.7 – Faculty participation in Seminars/Conferences and Symposia during the year :

Number of Faculty	International	National	State	Local
Attended/Seminars/Workshops	Nill	23	24	13
Presented papers	10	6	12	5
Resource persons	Nill	1	1	9

View File

3.4 – Extension Activities

3.4.1 – Number of extension and outreach programmes conducted in collaboration with industry, community and Non- Government Organisations through NSS/NCC/Red cross/Youth Red Cross (YRC) etc., during the year

Title of the activities	Organising unit/agency/ collaborating agency	Number of teachers participated in such activities	Number of students participated in such activities
Tamil Mandram Celebration	Kathir College of Engineering	5	500
Science Day Celebration	Kathir College of Engineering	2	110
First Aid Program	Indian Red Cross Society	7	55
Kathir’s Sports Day	Kathir College of Engineering	1	750
Kathir’s Diploma fest 2019	Kathir College of Engineering	2	250
Kathir’s Technical Symposium – Dhrona 2019	Kathir College of Engineering	5	400
Kathir NSS Camp in Vellanaipatti	NSS Unit of KCE along with KGM Hospital	2	55
Pongal Celebration	Kathir College of Engineering	5	500

View File

3.4.2 – Awards and recognition received for extension activities from Government and other recognized bodies during the year

Name of the activity	Award/Recognition	Awarding Bodies	Number of students Benefited
International Convention on	Global Excellent Administrative	Innovative scientific research	40

Innovative Scientific Research Strategies	Leadership Achievement Dedicated Innovative Academician Award	professional, Malaysia	
Skill Development	Best Leader for Skill Development Trainers	Society of Scientific Research in Association with Alumni Association of Indian Engineers	40

View File

3.4.3 – Students participating in extension activities with Government Organisations, Non-Government Organisations and programmes such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the year

Name of the scheme	Organising unit/Agency/collaborating agency	Name of the activity	Number of teachers participated in such activites	Number of students participated in such activites
General Issue	Tamilnadu Police Department	Helmet awareness rally	2	80
Swachh Bharat	GOVERNMENT OF INDIA	Swachhta Pakhwada-Cleaning of public park	2	28
General Issue	NSS, Youth Red Cross	Promotion of health and life	1	21
Bhetti Bhachao, Bhetti Padao	Coimbatore Medical College Hospital	Emphasising the importance of the girl child	1	26
General Issue	KCE NSS, Rathinam Tech zone	Awareness of donating organs	2	50
General Issue	KCE NSS, Airport authority of india	Cleanliness Drive-Swachhta Hi Sewa 2018 (SHS)	2	54
General Issue	KCE NSS, Life for all	Moral awareness program to protect the value of the human life from conception to natural death	2	50
General Issue	KCE NSS, Datri Foundation	An Awareness program in blood stem cell donation	2	50
General Issue	KCE NSS, Anna University	Healthy youth for healthy India	2	50

View File

3.5 – Collaborations

3.5.1 – Number of Collaborative activities for research, faculty exchange, student exchange during the year

Nature of activity	Participant	Source of financial support	Duration
Consultancy Project-High speed heating system based on Quartz heaters	Dr.P.Ravikumar Mr.A.Ashothaman	Orbit Controls and Services	365
Sponsored Project-Computerized Engine Analysis	Dr.A.R.Suresh	COSMOGEMS	1095

View File

3.5.2 – Linkages with institutions/industries for internship, on-the- job training, project work, sharing of research facilities etc. during the year

Nature of linkage	Title of the linkage	Name of the partnering institution/ industry /research lab with contact details	Duration From	Duration To	Participant
Internship	Idle Vehicle Detection and Traffic Symbol Analysis using Artificial Intelligence and IOT	Tekzie, Coimbatore	04/03/2019	31/03/2019	4
Internship	Payment Tracking System	Proplus Groups, Coimbatore	04/12/2018	31/12/2018	4
Internship	Implementing Traffic Accident Evaluation System using Matlab	AJ Tech Research Labs, Coimbatore	11/03/2019	22/03/2019	3
Internship	Automated Self Navigated Dustbin Dispensary System	AJ Tech Research Labs, Coimbatore	11/03/2019	22/03/2019	3
Internship	Online Job and Candidate Recommendation using Data	Tekzie, Coimbatore	04/03/2019	31/03/2019	3

	Mining				
Internship	Land Registry using Blockchain	Pantech ProEd Pvt. Ltd, Coimbatore	04/02/2019	18/02/2019	4
Internship	Detaching and Reproducting of Data in a Cloud for Excellent Performance and Security	Ascentz Technologies, Coimbatore	11/02/2019	25/02/2019	3
Internship	Basics of AutoCAD and QGIS	JS Geospatial Pvt. Limited, Coimbatore	10/12/2018	24/12/2018	10
Internship	Building drawings with AutoCAD Skill Development Program	Subramanian Associates,Coimbatore	12/12/2018	26/12/2018	10
On the Job Training	Skill Development Program	Gishnu Gears Coimbatore	03/12/2018	31/12/2018	10
View File					

3.5.3 – MoUs signed with institutions of national, international importance, other universities, industries, corporate houses etc. during the year

Organisation	Date of MoU signed	Purpose/Activities	Number of students/teachers participated under MoUs
JS Geospatial Pvt. Limited, Coimbatore	21/11/2018	Placement activities	24
Gishnu Gears Coimbatore.	03/12/2018	On the Job Training	34
NSV Engineering works, Bharathipuram, Coimbatore.	28/05/2019	On the Job Training	24
Golden Engineering works Muthalipalayam, Coimbatore.	03/12/2018	On the Job Training	28
Mech Tech Engineering centre, Coimbatore.	20/08/2018	On the Job Training	32
nsun Energy Systems Pvt Ltd, Erode	20/06/2018	To develop the skills of the students	52

View File

CRITERION IV – INFRASTRUCTURE AND LEARNING RESOURCES

4.1 – Physical Facilities

4.1.1 – Budget allocation, excluding salary for infrastructure augmentation during the year

Budget allocated for infrastructure augmentation	Budget utilized for infrastructure development
No Data Entered/Not Applicable !!!	

4.1.2 – Details of augmentation in infrastructure facilities during the year

Facilities	Existing or Newly Added
Video Centre	Existing
Seminar halls with ICT facilities	Existing
Classrooms with LCD facilities	Existing
Seminar Halls	Existing
Laboratories	Existing
Class rooms	Existing
Campus Area	Existing
Classrooms with Wi-Fi OR LAN	Existing

View File

4.2 – Library as a Learning Resource

4.2.1 – Library is automated {Integrated Library Management System (ILMS)}

Name of the ILMS software	Nature of automation (fully or patially)	Version	Year of automation
OPAC	Fully	Nill	2017

4.2.2 – Library Services

Library Service Type	Existing		Newly Added		Total	
e-Journals	Nill	11500	Nill	Nill	Nill	11500
Digital Database	Nill	Nill	Nill	Nill	Nill	Nill
CD & Video	1410	Nill	Nill	Nill	1410	Nill
Library Automation	Nill	Nill	Nill	Nill	Nill	Nill
Text Books	19001	6904076	Nill	Nill	19001	6904076
Reference Books	9885	3598140	140	56921	10025	3655061
e-Books	139	337641	Nill	Nill	139	337641
Journals	209	667213	Nill	Nill	209	667213

View File

4.2.3 – E-content developed by teachers such as: e-PG- Pathshala, CEC (under e-PG- Pathshala CEC (Under

Graduate) SWAYAM other MOOCs platform NPTEL/NMEICT/any other Government initiatives & institutional (Learning Management System (LMS) etc

Name of the Teacher	Name of the Module	Platform on which module is developed	Date of launching e-content
No Data Entered/Not Applicable !!!			

View File

4.3 – IT Infrastructure

4.3.1 – Technology Upgradation (overall)

Type	Total Computers	Computer Lab	Internet	Browsing centers	Computer Centers	Office	Departments	Available Bandwidth (MBPS/ GBPS)	Others
Existing	652	450	0	150	0	22	30	20	0
Added	0	0	0	0	0	0	0	0	0
Total	652	450	0	150	0	22	30	20	0

4.3.2 – Bandwidth available of internet connection in the Institution (Leased line)

20 MBPS/ GBPS

4.3.3 – Facility for e-content

Name of the e-content development facility	Provide the link of the videos and media centre and recording facility
No Data Entered/Not Applicable !!!	

4.4 – Maintenance of Campus Infrastructure

4.4.1 – Expenditure incurred on maintenance of physical facilities and academic support facilities, excluding salary component, during the year

Assigned Budget on academic facilities	Expenditure incurred on maintenance of academic facilities	Assigned budget on physical facilities	Expenditure incurredon maintenance of physical facilites
115	110	35	29

4.4.2 – Procedures and policies for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc. (maximum 500 words) (information to be available in institutional Website, provide link)

Institute makes budgetary arrangement under various heads for keeping up and using the campus infrastructure facilities. Institute improvement board of trustees referred sufficient funds for maintenance and repairing. The scheduled funds are used under the perception of different observing councils, for example, Purchase advisory group, Repair and maintenance board, Sports Committee, Library panel, Lab Maintenance Committee, Students Feedback council etc. of the college. To keep up and upkeep the infrastructure Institute facilities and equipments, following exercises are attempted by the college:- • There is Stock Maintenance Committee in each department, who keeps up the stock register by genuinely confirming the things round the year. • Department wise yearly stock confirmation is completed by concerned Head of the Department. • Regular maintenance of Computer Laboratory equipments are completed by Laboratory Assistant along with Laboratory attendant and they are controlled by Lab Maintenance Committee Convenor. • Overall development of campus is finished by Campus Discipline and Cleanliness Committee of the college. • Regular cleaning of water tanks, appropriate waste disposal, pest control, finishing

and maintenance of lawns is finished by Institute Fourth Class Employees • College campus maintenance is monitored through regular inspection. • Upkeep all facilities and neatness of environment in men's and women's hostel is kept up through Hostel monitoring committee • Outsourcing is done for maintenance and repairing of IT infrastructure such as computers, internet facilities including Wi-Fi and broadband. Updating of softwares is done by lab assistants. • Outsourcing is done for the maintenance of wooden, furniture, electrification, and plumbing. • Regular maintenance of the water cooler and water purifier is done by outsourcing agent. • The maintenance of the reading room and stock verification of library books is done regularly by library staff. • Outsourcing is accomplished for maintenance and repairing of IT infrastructure like PCs, internet facilities including Wi-Fi and broadband. Updating of softwares is finished by lab collaborator • The maintenance of the reading room and stock verification of library books is done consistently by library staff

http://kathir.ac.in/uploads/NAAC/5.pdf

CRITERION V – STUDENT SUPPORT AND PROGRESSION

5.1 – Student Support

5.1.1 – Scholarships and Financial Support

	Name/Title of the scheme	Number of students	Amount in Rupees
Financial Support from institution	Management Scholarship	6	600000
Financial Support from Other Sources			
a) National	Tamilnadu Government Scholarship	550	3300510
b)International	Nill	Nill	Nill

View File

5.1.2 – Number of capability enhancement and development schemes such as Soft skill development, Remedial coaching, Language lab, Bridge courses, Yoga, Meditation, Personal Counselling and Mentoring etc.,

Name of the capability enhancement scheme	Date of implemetation	Number of students enrolled	Agencies involved
Remedial Coaching class	22/08/2018	24	KCE Mech Faculty
Remedial Coaching for slow learners	01/08/2018	37	KCE ECE Faculty
Yoga	20/08/2018	40	Mr.Anjesh
Group discussion, Personality Improvement and Resume Writing Tips	06/05/2019	95	Kathir College of Engineering Placement Cell
Personal Counseling	23/04/2019	110	Respective Department Faculty of Kathir College of Engineering
Remedial Coaching	19/03/2019	44	KCE Civil Faculty
Remedial Coaching	22/10/2018	40	KCE Civil Faculty

Remedial Coaching	17/07/2018	40	KCE CSE Faculty
Remedial Coaching	29/01/2019	38	KCE CSE Faculty
Student Mentoring	02/07/2018	305	KCE Faculty
View File			

5.1.3 – Students benefited by guidance for competitive examinations and career counselling offered by the institution during the year

Year	Name of the scheme	Number of benefited students for competitive examination	Number of benefited students by career counseling activities	Number of students who have passedin the comp. exam	Number of studentsp placed
2018	Career Guidance Program	10	20	Nill	18
2019	Competitive Exam Coaching Classes	20	20	Nill	Nill
2019	How to Get Ready For TNPSC Exams	46	20	Nill	2
2018	Gate Coaching	70	Nill	Nill	24
2019	Career Guidance for Government exams	50	50	50	18
2019	Indian Army Short Service Commission - Guidance	Nill	100	Nill	Nill
2018	Career and Counselling	23	23	Nill	Nill
2019	TNPSC EXAM	18	18	Nill	Nill
View File					

5.1.4 – Institutional mechanism for transparency, timely redressal of student grievances, Prevention of sexual harassment and ragging cases during the year

Total grievances received	Number of grievances redressed	Avg. number of days for grievance redressal
2	2	3

5.2 – Student Progression

5.2.1 – Details of campus placement during the year

On campus			Off campus		
Nameof organizations	Number of students	Number of stduents placed	Nameof organizations	Number of students	Number of stduents placed

visited	participated		visited	participated	
Proplus Logics, C Cube, Info Test Lab, Singapore India Tecnologies, Vega Intellisoft, Aqua Plus, Balaji Enterprises, Pebbles, Go Speedy Go, Agiit, Smart Dv, Ss Technovation, Sri Krishna Automation, Aqua Pure plus	422	69	OASYS, TCS, WIPRO, I EXPLORE CORP, KLR TECHNOLOGIES	79	8

View File

5.2.2 – Student progression to higher education in percentage during the year

Year	Number of students enrolling into higher education	Programme graduated from	Depratment graduated from	Name of institution joined	Name of programme admitted to
2019	1	MBA	MBA	Dr NGP College of Arts Science, Coimbatore	M.Phil (PT)

View File

5.2.3 – Students qualifying in state/ national/ international level examinations during the year (eg:NET/SET/SLET/GATE/GMAT/CAT/GRE/TOFEL/Civil Services/State Government Services)

Items	Number of students selected/ qualifying
Any Other	1

View File

5.2.4 – Sports and cultural activities / competitions organised at the institution level during the year

Activity	Level	Number of Participants
Yoga	State	10
Boxing	State	10
Volley Ball	State	40
Kabadi	State	60
Sports	Intra College Level	60
Cultural Events	Intra College Level	40
Kabadi	Zonal	40

Volley ball	Zonal	20
Cricket	Zonal	40
Athletics	Zonal	10
View File		

5.3 – Student Participation and Activities

5.3.1 – Number of awards/medals for outstanding performance in sports/cultural activities at national/international level (award for a team event should be counted as one)

Year	Name of the award/medal	National/ Internaional	Number of awards for Sports	Number of awards for Cultural	Student ID number	Name of the student
2018	I Prize	National	Nill	1	Nill	N.Aathersh
2018	Gold	National	1	Nill	Nill	S Manikandan
2018	Gold	National	1	Nill	Nill	V. Aswin
2018	I Prize	National	1	Nill	Nill	P. Jeeva nantham
2019	III Prize	National	1	Nill	Nill	V. Aswin
2019	II Prize	National	1	Nill	Nill	P. Jeeva nantham
2019	III Prize	National	1	Nill	Nill	Team
2019	III Prize	National	1	Nill	Nill	Team
View File						

5.3.2 – Activity of Student Council & representation of students on academic & administrative bodies/committees of the institution (maximum 500 words)

College creates a platform for the active participation of the students in the various academic, non academic administrative bodies including other activities. This empowers the students in gaining leadership qualities. They gain knowledge about rules and regulations. The students fine tune their execution skills. They become aware of the social responsibilities and emotionally balanced in taking decisions. Youth Parliament and Department Association are the two major student councils functioning in the campus in addition to professional body chapters. The department association constitution: HOD as mentor, one faculty advisor who guides in organizing all the events. It also has one Faculty Advisor who guides in managing the funds. The student’s role in the association ranges from Secretary, Joint Secretary, Treasurer and Executive Members. The major activities of the association are arranging guest lectures, Workshops, Symposiums and Conferences. The students are involved in inviting participants from regional, state and Nationwide Colleges. The students through this association render voluntary services during the various college level competition and activities. They are also involved in maintaining the serenity and discipline in all these events. The students are involved in governing Hostel and mess also. They are involved as members of following academic and administrative bodies. 1. Class committee 2. IQAC 3. Department Association 4. Hostel and Mess Committee 5. Anti-Ragging Committee 6. Entrepreneurship Development cell 7. Training and placement cell 8. ISTE,IEEE,SAE IE(I) Students Chapters 9. Club Activities 10. Grievance

Redressal cell 11. Library advisory committee The students are encouraged to represent their points and these points are considered before taking any decision. Each department has Class Committee council which includes student members. These students represent all the students of each class and all their views and suggestions. They share their opinions about Faculty, subjects, Syllabus and other academic related activity. Each class has a representative chosen by the majority of the students in each section from first year to the final year of each department. The student council helps students share ideas, interests, concerns and grievances with mentors, HOD and Principal. The funding for all the activities of the students association is provided by the college management.

5.4 – Alumni Engagement

5.4.1 – Whether the institution has registered Alumni Association?

Yes

The main objectives of alumni association are 1. To promote and foster mutually beneficial interaction between Alumni and the Institute. 2. To encourage the Alumni to take abiding interest in the process and development of Institute. 3.To arrange and support in placement activities for the students of Institute 4. To encourage the students of the Institute and members of the Association for research development work in various fields like engineering, computer Industrialization etc. 5. To mentor the students of the Institute for higher education, development of character and being GOOD citizens. 6. To provide scholarships to deserving students of the Institute for the purpose of education and sports. 7. To encourage and guide the students of the Institute on self employment to become entrepreneurs. 8. To guide students of the Institute on various professional avenues available and support them through various activities such as expert advice, seminars, visit etc. 9. Promote the Industry Institute interaction to bridge the gap between industry requirements and education offered and enhance student’s employability. 10. To encourage and support students of the Institute in sports, cultural and extracurricular activities. 11. To organize debates on various social issues Sighting the above objectives of Alumni Association, our alumni contributes in many ways for the development and betterment of our Institute. Our students and Institute are benefited in various fields such as student placement, training, expert lectures, career guidance sessions, Industrial visits and mentoring. The alumni of Institute is guiding and nurturing our students to become engineering professionals. It is our plan to develop everlasting relations with our alumni which in turn will give rise to mutual benefits.

5.4.2 – No. of enrolled Alumni:

305

5.4.3 – Alumni contribution during the year (in Rupees) :

No Data Entered/Not Applicable !!!

5.4.4 – Meetings/activities organized by Alumni Association :

Alumni meet was organised on 13.10.2018

CRITERION VI – GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 – Institutional Vision and Leadership

6.1.1 – Mention two practices of decentralization and participative management during the last year (maximum 500 words)

The college provides the opportunity for all to participate in the decision-making process, the college administrative and academic structure is in a

manner to make the decision by participative arrangement. Principal is the administrative and academic Head the heads of the department are the key to the administrative and academic tasks of the same. The faculty meetings of the department are held periodically and the minutes are sent to the principal. The principal in consultation with all the heads of the department takes the final decision. The administrative and accounts related tasks are carried out by the Principal with the support of the office superintendent and the ministerial staff in the office. The college follows all such norms laid down by the Government of Tamilnadu and UGC in Academic and administrative aspects. The case study related to such Participative management is stated as follows: • The college prepares financial budget at the beginning of the year. This is prepared by the office administrative head and in consultation with all the heads of the departmental. Accordingly, it is verified by the college principal and is sent for sanction to the chairman. After approval necessary action is carried out. • The examinations are carried out periodically throughout the year for which there is separate examination cell. The professor level faculty member is in charge of examination cell, supported by clerical staff. The management authorities regularly undertake the review of functioning of the college in its Executive council meeting and working committee meeting. The Necessary guidance and directives are issued through these meetings. The budget is prepared prior to the commencement of the academic year and is approved by the management. So, there is a good support from the management relating to the implementation of the objectives specially designed to attain quality teaching and learning aspects of the college. The concentration is given on the regular lectures conducted by the staff, timely completion of the syllabus, guidance for better performance in the examination and providing best possible teaching learning environment. This is attained by regular meetings of department, of the staff member conducted by the principal from time to time. The staff receives motivation and support for all the activities from the management. The participation of students in Sports, NSS, NCC, extracurricular activities is encouraged in order to attain overall development of students. Thus, the college works with aim of attaining the academic excellence through quality education and inculcating all possible soft skills in the personality of the students. The college plans for all such implementations through all its academic calendars and the regular feedback from the students and the staff members also.

6.1.2 – Does the institution have a Management Information System (MIS)?

Yes

6.2 – Strategy Development and Deployment

6.2.1 – Quality improvement strategies adopted by the institution for each of the following (with in 100 words each):

Strategy Type	Details
Admission of Students	The admissions of the students are strictly followed as per rules and regulation based on the Government of Tamil Nadu and AICTE norms. • Admissions are done through regular counselling and management quota. • For management quota students an online entrance test will be conducted ensuring quality students joining the institution • To ensure publicity and transparency in the admission process, a separate Admissions Department exists, and they advertise in local National dailies, and in our Website

Industry Interaction / Collaboration	One of the strengths of the college is the range of tie-ups and linkages/networking with other organizations in order to effectively operationalise the curriculum. Exposure visits, study tours, extension work, student placements, student internships, partnership/sponsorship for events/programs, access to research facilities, access to/sharing of expertise, research collaborations, and cultural and educational exchange programs are the outcomes of these linkages.
Human Resource Management	Extensive use of participatory management/decentralized governance for capacity development and leadership among staff. Multiple opportunities for leadership for various assignments/tasks/responsibilities made available to staff and students. Top Management policy to have and sponsor Faculty development sessions in the college likewise, to arrange and sponsor staff development sessions for non-teaching staff, and those for support staff Faculty members are encouraged to attend seminars/conferences, present papers, avail of refresher courses so as to keep abreast of changing times/advancements in knowledge. Policy of drawing up plans for the year for each specialization and each committee so as to ensure the scheduling and conduction of co-curricular and extra-curricular activities and events in the college that facilitate faculty and student development.
Library, ICT and Physical Infrastructure / Instrumentation	All classrooms have ceiling mounted LCD projectors connected to computers, sound system, and pull-down screens. Laptops and projectors are also available on demand. Infrastructural facilities include use of microphone for large classes, LCD projectors in all classrooms, OHP on demand, Epidiascope, slides and slide projector, movie screening facilities, and up-to-date computer facilities that includes access to the Internet. Students and teachers use class mailing lists and class e-groups. Internet is free for staff and offered at concessional rates for the students. Staffrooms, cybercafé, library, and the conference room all have Internet

	access. All our teachers have undergone training in the basics of computer usage. Lecture-rooms and laboratories are equipped to facilitate the use of modern gadgets and instruments. Due to the ease of access to the facilities, staff and students make optimal use of the resources, thereby augmenting the teaching-learning process. We have a well-stocked library which is one of the main sources of knowledge for faculty and students of all the specialisations. The library replenishes its stock periodically and adds the latest books recommended by the faculty. The library also subscribes to relevant journals (both print and electronic) that enhance student access to relevant and current information. The faculty keeps copies of handouts for their respective subjects and other resource material in the library. Question papers of the past years are bound and can be used by students as a form of practice.
Research and Development	Top Management policy to have a Research Centre in the college with a specially appointed Research Director with outstanding qualifications. Engagement in research projects for the industry/government/international bodies/agencies. Publication of a national, peer-reviewed, ISSN-registered, research journal in Computer Science. Excellence standards for research in the master's and PhD programs. Strong encouragement to faculty to complete their PhDs. Strong encouragement for faculty to engage in minor or major research projects and obtain grants from the university or the UGC. Encouragement to faculty to participate in conferences and present their research work.
Examination and Evaluation	The evaluation is done by the specialization/designated committee and discussed with the principal and in the teachers' meeting. Importantly, an ongoing method of evaluation of all decisions, policies, activities, events, examinations provides the necessary feedback to the staff to effectively bring about positive changes in the functioning of the college.
Teaching and Learning	Work plans for each subject – the Teacher Diary as a monitoring mechanism

	plans for the year/term of each specialization and each committee, which are carefully executed, monitored, and evaluated. Feedback mechanisms such as oral and written feedback obtained from students periodically for each subject and overall, in order to ascertain the quality of curriculum delivery and incorporate workable suggestions of students. Mentoring system with a mentor assigned to each group of students. Conduction of faculty development sessions related to teaching-learning.
Curriculum Development	The curriculum delivery covers regular teaching-learning transactions in scheduled classes for theory and practicum subjects special learning opportunities through study tours, visits, sessions by resource persons, workshops/seminars/conferences organized by the college, student participation in other workshops/seminars/conferences/competitions, international exchange programs, internships holistic learning through arranging for picnics, personality development camps, extra-curricular activities, sports activities service and extension-related learning through rural/tribal camps, and organizing events for underprivileged children and street hawkers etc.

6.2.2 – Implementation of e-governance in areas of operations:

E-governace area	Details
Planning and Development	The college endeavours to ensure that students who would benefit from need-based scholarships are given maximum support to complete their course. In addition, we also award merit-based scholarships to deserving students, so that the development of their potential is further encouraged. The college recognizes the need for training and development of entrepreneurship skills in the students. Personality development programmes and camps are organised for graduating classes. These programme focus on promoting deeper awareness of self, personal values and leadership skills.
Administration	The college has established a good network, and the college administration and faculty continue to remain in touch with the alumnae. Alumnae placed in

	positions of authority, recommend the college to potential employers and also support campus interviews. The dates of application and examination are posted on the University website and applicants can also inquire in the college administrative office.
Finance and Accounts	The project coordinators are duly instructed by the college accounts staff regarding the systematic maintenance of project accounts and audit procedures. This has facilitated timely audit and submission of the utilization certificate. Staff at the university has also been very supportive.
Student Admission and Support	It is the policy of the institution that the information in the handbook and prospectus is adhered to strictly to ensure that a number of systems are in place and are working smoothly. The college calendar is additionally provided based on the plans of the academic year. The calendar is formulated in detail by the HODs and the committee conveners. This serves as a source of information for students in terms of various programmes held and the examination schedule. All efforts are made to adhere to the dates indicated in the calendar
Examination	The Examination Committee draws up a plan for the semester in compliance with university regulations and dates, and after obtaining consensus from the Principal, the HOSs, and the Academic Coordinators, posts the details of the plan on the teacher noticeboards and sends periodic reminders with regard to important deadlines. Performance of students on unit tests, assignments, projects, and the final examinations also provides valuable data to teachers on quality of student learning.

6.3 – Faculty Empowerment Strategies

6.3.1 – Teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the year

Year	Name of Teacher	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support
2019	Dr. P.Ravi Kumar	ISCO 2019(10.01.2019)	Karpagam College of Engineering	1000

View File

6.3.2 – Number of professional development / administrative training programmes organized by the College for teaching and non teaching staff during the year

Year	Title of the professional development programme organised for teaching staff	Title of the administrative training programme organised for non-teaching staff	From date	To Date	Number of participants (Teaching staff)	Number of participants (non-teaching staff)
2019	Nill	Workshop on MS Word	11/06/2019	11/06/2019	Nill	6
2018	Nill	FDP on Mat lab and its Applications	25/06/2019	29/06/2019	Nill	29

View File

6.3.3 – No. of teachers attending professional development programmes, viz., Orientation Programme, Refresher Course, Short Term Course, Faculty Development Programmes during the year

Title of the professional development programme	Number of teachers who attended	From Date	To date	Duration
Short Term Training(Problem Based Learning)	3	11/12/2019	15/12/2019	5
Effective Teaching Learning	23	29/06/2018	01/07/2018	3
Certified Cyber Security Professional	2	23/06/2018	24/06/2018	02
FDP(Problem Solving Python Programming)	2	01/06/2018	07/06/2018	6
Faculty Development Program on Research – Dept. of Commerce, Sri Saraswathi Thygaraja College	2	15/04/2019	16/04/2019	2
FDP(Electrical Machines-II)	2	11/12/2018	15/12/2018	5
Faculty Development Program-Strength of materials	4	03/12/2018	12/12/2018	9

View File

6.3.4 – Faculty and Staff recruitment (no. for permanent recruitment):

Teaching		Non-teaching	
Permanent	Full Time	Permanent	Full Time
Nill	23	Nill	Nill

6.3.5 – Welfare schemes for

Teaching	Non-teaching	Students
Appreciation for producing 100 results in theory subjects and 85 and above results in analytical subjects in end semester examinations in the subjects handled. • Monetary incentives for publication / presentation of papers in peer reviewed Journals and Conferences. • Granting permission for attending Conferences, Seminars, Workshops , Faculty Development Programme, etc.[50 of registration fee] • Permission to register for doing M.Phil/ Ph.D. programmes to enhance their qualifications. • Some other benefits such as Group Medical Insurance, Medical Leave Facility, On duty facility, Provident Fund, ESI, etc	Permission to do higher studies to enhance their qualifications. ESI and PF contribution by the Management Group Insurance Concessional Transport Facility Leave facility such as Casual Leave, Medical Leave and Maternity Leave Facility	The students scholarship schemes such as Yoga Single Parent Scholarship :Student with Single Parent No Parent Scholarship :Student with No Parent alive Deserving Student Scholarship Deserving Student who excel in Curricular, Co –curricular Extracurricular activities Scholarship for the deserving sports students Best Outgoing Student [BOG] Award for final year student with monetary benefit. Outstanding Student Award for II and III year student with monetary benefit. Remission of Travel and Registration fee for achievers in Co-Curricular activities. Support for getting Educational Bank Loan / Financial Assistance from Private Trust.

6.4 – Financial Management and Resource Mobilization

6.4.1 – Institution conducts internal and external financial audits regularly (with in 100 words each)

The institution has established a system to audit all the financial transactions by both internal auditors and auditors of external agency. The books of accounts and the supporting evidences are subjected to both internal and external audit. The internal audit practices to monitor financial management of the institution ensure sound financial health of the institution. The internal audit is carried out to take care of the requirements specified once in three months. External audit carried out ensures total compliance with statutory requirements and obligations. The external audit is done once in a year.

6.4.2 – Funds / Grants received from management, non-government bodies, individuals, philanthropies during the year(not covered in Criterion III)

Name of the non government funding agencies /individuals	Funds/ Grnats received in Rs.	Purpose

Orbit Controls and Services	650000	High Speed Heating System Based on Quartz Heaters

View File

6.4.3 – Total corpus fund generated

2451260

6.5 – Internal Quality Assurance System

6.5.1 – Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	Yes	External Experts from reputed Institutions	Yes	Internal Faculty Coordinators
Administrative	Yes	K.P.Vasanthakaumar Agency , Anna Nagar , Chennai	Yes	Accounts

6.5.2 – Activities and support from the Parent – Teacher Association (at least three)

1. During the meeting, the parents are informed about the Attendance of the ward, internal marks, dress code, code of conduct and the overall academic performance of the student. 2. Parents suggest the ways and means for the development of the college during parents meeting. 3. Educative programmes for parents are offered through these kind of gatherings. Parents are oriented on online fee payment system, usage of online education, handling of present day youth.

6.5.3 – Development programmes for support staff (at least three)

Permission to do higher studies to enhance their qualifications. Frequent training programmes are conducted to upgrade their skills. They are sent for Industrial training during vacation to improve their skills Programme targeting Ethics, Team Building, Leadership skills, etc is conducted once in a month

6.5.4 – Post Accreditation initiative(s) (mention at least three)

1. Effective implementation of Outcome Based Education (OBE) and Choice Based Credit System (CBCS) is in practice. 2. CBCS offers a range of choice for students to choose from Professional Core and Electives, Open Electives, Engineering and Basic Science, Humanities and Science courses and Employability enhancement courses. 3. Internships / Field visits and career-oriented training incorporated in the curriculum 4. To inculcate lifelong learning, the Institution motivates faculty members and students to complete one course per year in self-learning mode through online portals like NPTEL, SWAYAM, Udemy,etc

6.5.5 – Internal Quality Assurance System Details

a) Submission of Data for AISHE portal	No
b)Participation in NIRF	Yes
c)ISO certification	No
d)NBA or any other quality audit	Yes

6.5.6 – Number of Quality Initiatives undertaken during the year

Year	Name of quality initiative by IQAC	Date of conducting IQAC	Duration From	Duration To	Number of participants
2018	Orientation Program for CBCS	05/06/2018	05/06/2018	05/06/2018	30
2018	IQAC Meeting 1	14/09/2018	14/09/2018	14/09/2018	10
2019	IQAC Meeting 2	20/02/2019	20/02/2019	20/02/2019	11
2019	Accreditation Awareness Program	08/03/2019	08/03/2019	08/03/2019	70
2019	Discussion on the new format of NAAC	14/03/2019	14/03/2019	14/03/2019	35
2019	Internal Audit	02/05/2019	02/05/2019	02/05/2019	35
2019	Accreditation Awareness Program	09/05/2019	09/05/2019	09/05/2019	30

View File

CRITERION VII – INSTITUTIONAL VALUES AND BEST PRACTICES

7.1 – Institutional Values and Social Responsibilities

7.1.1 – Gender Equity (Number of gender equity promotion programmes organized by the institution during the year)

Title of the programme	Period from	Period To	Number of Participants	
			Female	Male
Women Empowerment Program	08/03/2019	08/03/2019	307	Nill

7.1.2 – Environmental Consciousness and Sustainability/Alternate Energy initiatives such as:

Percentage of power requirement of the University met by the renewable energy sources
Roof top solar panel with a capacity of 35 kW. 31.25 of power requirement of the college is met by the renewable energy sources

7.1.3 – Differently abled (Divyangjan) friendliness

Item facilities	Yes/No	Number of beneficiaries
Physical facilities	Yes	Nill
Provision for lift	No	Nill
Ramp/Rails	Yes	Nill
Braille Software/facilities	No	Nill

Rest Rooms	Yes	Nill
Scribes for examination	No	Nill
Special skill development for differently abled students	No	Nill
Any other similar facility	No	Nill

7.1.4 – Inclusion and Situatedness

Year	Number of initiatives to address locational advantages and disadvantages	Number of initiatives taken to engage with and contribute to local community	Date	Duration	Name of initiative	Issues addressed	Number of participating students and staff
2018	1	1	29/08/2018	1	Blood donation camp	Donated to a nearby hospital	20
2019	1	1	19/03/2019	1	Eye Camp	Eye check up for Senior citizens	25
2019	1	1	26/04/2019	1	Tree Plantation	Provided green cover	25

View File

7.1.5 – Human Values and Professional Ethics Code of conduct (handbooks) for various stakeholders

Title	Date of publication	Follow up(max 100 words)
Students Hand Book	22/05/2018	Separate code of conduct hand book is available for the students
Faculty Service Rules	05/06/2018	Staff Members follow the service rules and promotion policies of the Kathir College of Engineering.

7.1.6 – Activities conducted for promotion of universal Values and Ethics

Activity	Duration From	Duration To	Number of participants
Independence day	15/08/2018	15/08/2018	30
Pongal celebration	13/01/2019	13/01/2019	100
Republic day	26/01/2019	26/01/2019	40

Teachers day	05/09/2019	05/09/2019	95

View File

7.1.7 – Initiatives taken by the institution to make the campus eco-friendly (at least five)

• Installation of Solar Panels to explore renewable energy sources • Campus is free from polythene carry bags • New saplings are added to increase the green cover of the campus • Paperless office • Rain water harvesting • Minimizing Water Wastage

7.2 – Best Practices

7.2.1 – Describe at least two institutional best practices

Best Practice-I 1. Title of the practice: Enhancing the Employability Skills, Entrepreneurial skills of the students to get better placement opportunities. 2. Objectives of the Practice: To develop students in recruitment process tests through pre placement training on aptitude, verbal and reasoning etc. To provide career counselling and guidance to the students. To upskill students to accomplish their goals to pursue post-graduation or to become an entrepreneur. To give training to students by Entrepreneurship Development Cell of the College so as to create young entrepreneurs from the existing batch. To shape the students to leave a punch in the society in a well established way. To develop interpersonal skills, soft skills and technical skills of the students to face interviews and secure placements. To create awareness on latent technologies and latest technologies among students in order to make them industry-ready. To conduct workshops once in a trimester 'On emerging areas of Engineering' in order to expose the latest advancements in the field of Engineering and Technology. 3. The Context Ever changing technological advancements in engineering and technology necessitate students to expose them to latest software tools and gain knowledge on latest developments in the subject areas. Further exposure through short term 'internship' in core industries during their study strengthen the students to gain knowledge on industrial requirements and practices. 4. Practice College gives prerogative to enrich communication skills of students. Many 'personality development training programs' are conducted in the college by renowned trainers from in and around Coimbatore. The program includes 'Soft skills Enhancement' 'Life Skills Enhancement', 'Motivational Lectures by Leading Entrepreneurs', etc. Special session for Aptitude Skills and Verbal Reasoning are also held at frequent intervals. These placement enhancement precursors help the students to secure placement in reputed organizations in India as well as in Abroad. Trainings like this help the students not only to crack Competitive exams of TNPSC, Group I, Group II and UPSC but also to crack the Entrance exams like CAT, GRE, GMAT, TOEFL etc. Mock interview sessions by industrial experts are conducted to instill confidence among the students by providing necessary inputs to face the interviews. College upskill the students in computer 'programming' by inviting specialists from software Industries to conduct workshops in order to elevate the understanding level of students in computer 'programming'. Hands-on training on latest software tools such as MATLAB, PHYTHON, etc., has also been arranged for pre final and final years in the campus itself. Workshops by Eminent Academicians and Industry Experts on 'Cloud Computing, Robotics, PCB layout Designing, Solar Power Energy etc., have also been conducted from second year with the aim of placing the students Multi National Companies. 5. Evidence of success: By giving these development programs for the students, Aptitude, Attitude and Communication skills are gradually developed and this is the foremost evident of success. These 'Life Skills' programs help the students to identify their in-born skills like 'Critical Thinking and 'Decision Making, etc. Learning these skills carve a niche in the life of the students to perform judiciously when they are placed in an organization. Providing hands-on

experience in the college on latest software tools also eases their anxiety to work anywhere in any of the industry all over the world. 6. Problems Encountered and Resources Required: While conducting various training programs, personality development programs and workshops on emerging technologies, financial assistance is required. Arranging internships in industries to all students is a tough task to the administration. There is need to recruit more number of faculties and professional trainers to conduct these kind programs. Best Practice-II 1. Title of the Practice: Industry involvement in Teaching Learning Process Assessments. 2. Objectives of the Practice: • To make the students industry ready • To enhance the skills of students to solve real time industrial problems and involve in consultancy works 3. The Context: Industry experts have to be involved in designing the curriculum and syllabus for the students by incorporating latest industrial expectations. In addition, the curriculum and syllabus of the University has to bridge the gap between Institute and Industry. Industry Experts are evaluating the student projects and Industry trainings. 4. The Practice: All students are encouraged to attend inplant training, internship, industrial visit etc., so as to get exposure into real time setups of various industries. Assessment of students' performance (awarding marks) must be done either by internal faculty or industry experts. Institute – Industry collaborative programmes such as workshop, guest lecturers etc., are conducted in every department to uplift industrial knowledge among students. Doing academic projects in pre-final or final years in industries give a wider perspective about the Industries and placing himself or herself is not going to be a tough task for the student as well as for the College once they complete their studies. 5. Evidence of Success: Students are monitored and assessed by faculty. Paid Internships are arranged and Non-paid Internships are converted into full time placement offer for students. 6. Problems Encountered and Resources Required: Eminent persons do not find time to interact frequently with students on regular basis. In order to overcome this issue, Web conference and skype calls are arranged for better interaction with students.

Upload details of two best practices successfully implemented by the institution as per NAAC format in your institution website, provide the link

http://kathir.ac.in/uploads/NAAC_doc/Best%20Practices.pdf

7.3 – Institutional Distinctiveness

7.3.1 – Provide the details of the performance of the institution in one area distinctive to its vision, priority and thrust in not more than 500 words

Kathir College of Engineering knows that Quality of learning can never be isolated from Research activities at different levels. Hence, Laboratories are established by the management to support research activities of faculty members and students. Students are encouraged to involve in research activities such as 'Research Paper Presentation' in National conferences and International conferences all over India. Also, faculty members are encouraged to publish 'Research papers' in National and International Journals to carry out their research in different core areas. This student : faculty research culture kindles the interest of all other students to involve in research activities. Kathir College of Engineering aims to be an institution par excellence in research activities along with world class learning environment. To support the research activities, Kathir College of Engineering has : 1. KCE - IIT Bombay Remote centre for Applied Research and Workshop Interaction: IIT Bombay Remote Centre has been established in our College to conduct online 'workshops' / 'seminars' for faculty members of Engineering Colleges in and around Coimbatore. The facilities of the centre is also available for general public to conduct Web conferences. 2. KCARDS Centre for Embedded System Research and Development: KCARDS Lab is one of the state of art laboratories where in the students are exposed to carry out projects starting from the basic level to the

higher level in order to complete a product based project at the end of their course. 3. KCE - National Instruments centre for innovation using LabVIEW: National Instruments (NI) LabVIEW Academy has been set up in the campus with an investment of Rs 25 Lakhs. It houses the latest hardware and software necessary for training the students in the area of Automation. The students trained in this Centre can take up the CLAD exams and get the chance of placement in MNCs and Blue chip companies. 4. KCE - Texas Instruments Centre for Industrial Automation: This laboratory has been established in collaboration with Texas Instruments (TI) with the sole aim of providing an in-depth understanding of 'Analog Elections and its applications' for the students of EEE and ECE. Training programmes are organised now and then on 'Analog electronics' for both faculty members and students. 5. KCE - ICICI – Industry Academia Interaction Centre (MBA): An exclusive centre has been established in collaboration with ICICI bank to fulfil the requirements of Master of Business Administration students. The expertise available with ICICI Bank is used to teach the applications of ICICI Industrial software to the students of MBA programme at trimesters. 6. Nicolaus Research Centre for Internal Combustion Engine Test Rig 7. Kalam Interdepartmental Innovation Centre – A unique initiative to promote students from various departments to interact and innovate a complete product. All the events are conducted by Centre of Excellence and all these programmes are well received by Faculty members and Students. In addition, Centre of Excellence has been conducting 'Faculty Development Programs' to update and upgrade the faculty members on the latest trends and advancements in Engineering field.

Provide the weblink of the institution
http://kathir.ac.in/uploads/NAAC/6.pdf

8.Future Plans of Actions for Next Academic Year

1.Core Placement: Each Department's Training and Placement division will get connected to core companies so as to place their respective department students in Core Engineering fields. 2. Planned to give intensive training on 'Competitive Examinations' such as GATE, GMAT, GRE, UPSC, etc. for the pre-final and final year students. 3. To promote entrepreneurship among students, a series of activities such as 'Seminars, Guest Lectures will be conducted by "Entrepreneurship Development Cell" of the College. 4. Preparation of the Annual Quality Assurance Report (AQAR) as per guidelines and parameters of NAAC, to be submitted to NAAC for the academic year 2019- 2020. 5. Organizing International Conferences on 'Emerging Trends' in Engineering. 6. Encourage faculty members to submit 'Research Proposals' to the various funding agencies like DST, AICTE, UGC, DRDO, and ISRO etc. 7. Increasing the number of faculty members with Ph. D as well as encourage the existing faculty members to do Ph.D. 8. Strengthening of networking and computing facilities 9. B.E Mechanical Engineering, B.E Computer Science and B.E Electronics and Communication Engineering Programmes will be submitting their Self-Assessment Report (SAR) to get NBA Accreditation for the above said programmes.



Yearly Status Report - 2019-2020

Part A	
Data of the Institution	
1. Name of the Institution	KATHIR COLLEGE OF ENGINEERING
Name of the head of the Institution	Dr.A.R.Suresh
Designation	Principal
Does the Institution function from own campus	Yes
Phone no/Alternate Phone no.	04222203778
Mobile no.	9442765776
Registered Email	principal@kathir.ac.in
Alternate Email	kathirce@gmail.com
Address	Wisdom Tree, Avinashi Road, Neelambur
City/Town	Coimbatore
State/UT	Tamil Nadu
Pincode	641062
2. Institutional Status	

Affiliated / Constituent	**Affiliated**
Type of Institution	**Co-education**
Location	**Rural**
Financial Status	**Self financed**
Name of the IQAC co-ordinator/Director	**Dr.B.Vaikundaselvan**
Phone no/Alternate Phone no.	**04222203778**
Mobile no.	**9843648317**
Registered Email	**iqac@kathir.ac.in**
Alternate Email	**kathirce@gmail.com**

3. Website Address

Web-link of the AQAR: (Previous Academic Year)	http://kathir.ac.in/uploads/2019-2020/2018-2019.pdf
4. Whether Academic Calendar prepared during the year	**Yes**
if yes,whether it is uploaded in the institutional website: Weblink :	http://www.kathir.ac.in/aqar.shtml

5. Accrediation Details

Cycle	Grade	CGPA	Year of Accrediation	Validity	
				Period From	Period To
1	**B**	**2.53**	**2016**	**24-May-2016**	**24-May-2021**

6. Date of Establishment of IQAC	**04-Jun-2019**

7. Internal Quality Assurance System

Quality initiatives by IQAC during the year for promoting quality culture		
Item /Title of the quality initiative by IQAC	Date & Duration	Number of participants/ beneficiaries
Seminar on quality improvement in assessment methods	**11-Mar-2020 1**	**40**
Workshop on 360 degree	**02-Mar-2020**	**35**

feedback by AICTE	1	
Discussion on model curriculum by AICTE	02-Dec-2019 1	30
IQAC Meeting 2	17-Feb-2020 1	10
IQAC Meeting 1	12-Sep-2019 1	10
Awareness program on Outcome based education	18-Nov-2019 1	35
No Files Uploaded !!!		

8. Provide the list of funds by Central/ State Government- UGC/CSIR/DST/DBT/ICMR/TEQIP/World Bank/CPE of UGC etc.

Institution/Department/Faculty	Scheme	Funding Agency	Year of award with duration	Amount
KCE	PMKVY	AICTE	2018 1460	13
KCE	Deen Dayal Upadhyaya Grameen Kaushalya Yojana	Deen Dayal Upadhyaya Grameen Kaushalya Yojana	2018 1460	248
KCE	Cosmogems	Cosmogems	2018 3	3.5
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9. Whether composition of IQAC as per latest NAAC guidelines:	Yes
Upload latest notification of formation of IQAC	View File
10. Number of IQAC meetings held during the year :	2
The minutes of IQAC meeting and compliances to the decisions have been uploaded on the institutional website	Yes
Upload the minutes of meeting and action taken report	View File
11. Whether IQAC received funding from any of the funding agency to support its activities during the year?	No

12. Significant contributions made by IQAC during the current year(maximum five bullets)

Academic Audit

Blooms taxonomy in Assessment
Soft skill training to help improve placements
Usage of online tools to improve course delivery
Research awareness Program

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13. Plan of action chalked out by the IQAC in the beginning of the academic year towards Quality Enhancement and outcome achieved by the end of the academic year

Plan of Action	Achivements/Outcomes
Signing of MOU with industrial organisations	MOU’s Signed
International Conference	Organized on 09.03.2019
Student Enrichment Activities	Technical symposium was organized
Academic Calendar	Prepared
Faculty Enrichment program	Conducted
Certification Courses	Conducted
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14. Whether AQAR was placed before statutory body ?	Yes

Name of Statutory Body	Meeting Date
Management	10-Aug-2020

15. Whether NAAC/or any other accredited body(s) visited IQAC or interacted with it to assess the functioning ?	No
16. Whether institutional data submitted to AISHE:	No
17. Does the Institution have Management Information System ?	Yes
If yes, give a brief descripiton and a list of modules currently operational (maximum 500 words)	The Institute has a MIS, Rever Innovations software. The modules currently in operation include the admission application management system, the student on boarding and information system, Learning Management System among others. The HR modules and

	Finance modules are currently in the process of implementation.

Part B

CRITERION I – CURRICULAR ASPECTS

1.1 – Curriculum Planning and Implementation

1.1.1 – Institution has the mechanism for well planned curriculum delivery and documentation. Explain in 500 words

Kathir College of Engineering strictly adheres to the curriculum and syllabi prescribed by University. A Program Advisory Committee (PAC) for each department is constituted by the principal to provide guidance for planning curriculum delivery and documentation. This committee periodically conducts meeting to finalize the curriculum delivery methods to be followed by the departments. In order to follow a systematic approach to have an effective teaching, learning and evaluation process, the recommendations provided by the committee are as follows. • An academic calendar is prepared at the commencement of the semester and becomes the guiding document for scheduling teaching, learning and evaluation activities. It is prepared at the institution level and will be followed by every department before the semester starts. Schedules all the events planned by a department for a semester is included. The calendar is circulated and uploaded in the website for easy reference to students and faculty. The Academic Schedule provided by the University is observed while preparing the Academic Calendar. In addition, the assessment schedule laid down by the University with schedule of internal tests, last instruction day, commencement of end semester theory and practical examinations conducted by the University provides input to the institution’s academic calendar. • A detailed course plan document drives the planning of curriculum delivery and documentation of that subject. It is a vital document that micro-manages the activities to be carried out with regard to the teaching-learning process. • The Course File is prepared by the faculty members who are assigned the courses, before the start of the semester and it is approved by the respective Head of the Department. • The Course File which addresses the Course Planning and Delivery aspects, includes 1. Department Vision, Mission 2. Programme Outcomes (PO) 3. Programme Objectives 4. Course Syllabus 5. Course Objectives 6. Course Outcomes (CO) 7. Mapping of COs and POs 8. Identification of curriculum gap 9. Details of Content beyond syllabus 10. Lesson plan 11.Delivery methods / models planned and 12. Guest lectures, workshops planned. • Course delivery constitutes 1. Course Material 2. List of textbooks, reference books, journals and websites 3. EBooks, E-Materials, video 4. Scope for self-learning 5. Old university question paper 6. Question bank (Unit I to V) 7. Slow learners coaching record • Evaluation: The valuation scheme considers among other inputs, if the semester is odd or even, public holidays. The schedule for weekly tests, internal tests and model examinations are prepared by the examination cell of the institution. These schedules are integrated into the Academic Calendar for holistic reference and execution. The evaluation is performed in accordance with the curriculum design. The evaluation pattern consists of continuous internal assessment and university examination with 20% and 80 % weightage respectively. The internal assessment element of 20 marks is an average of three internal tests. The internal test question papers are prepared by the subject handling faculty members, indicating the CO and taxonomy level of the questions and reviewed by the HODs before sending it to the Examination Cell.

1.1.2 – Certificate/ Diploma Courses introduced during the academic year

Certificate	Diploma Courses	Dates of	Duration	Focus on employ	Skill

		Introduction		ability/entrepreneurship	Development
Digital Marketing	Nil	02/10/2019	12	Employability	Yes
Networking	Nil	23/11/2020	12	Employability	Yes
DBMS	Nil	02/11/2020	14	Employability	Yes
Embedded System Processor	Nil	19/11/2019	2	Employability	Embedded Systems hardware
Design of Embedded System issues	Nil	09/01/2020	2	Employability	Embedded Systems design
Opportunities for Entrepreneurs	Nil	30/01/2020	2	Entrepreneurship	Entrepreneurship skills
Advanced CNC Programming	Nil	02/09/2019	1	Employability	Programming Skills
ANSYS for Mechanical Engineers	Nil	02/09/2019	1	Employability	Design Skills
Life skill for Engineers	Nil	24/09/2019	1	Employability	Leadership skills

1.2 – Academic Flexibility

1.2.1 – New programmes/courses introduced during the academic year

Programme/Course	Programme Specialization	Dates of Introduction
No Data Entered/Not Applicable !!!		
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1.2.2 – Programmes in which Choice Based Credit System (CBCS)/Elective course system implemented at the affiliated Colleges (if applicable) during the academic year.

Name of programmes adopting CBCS	Programme Specialization	Date of implementation of CBCS/Elective Course System
BE	Computer Science and Engineering	01/07/2019
BE	Civil Engineering	01/07/2019
BE	Electrical Electronics Engineering	01/07/2019
BE	Electronics and Communication Engineering	01/07/2019
BE	Mechanical Engineering	01/07/2019
ME	Applied Electronics	01/07/2019
ME	Computer Science and Engineering	01/07/2019

ME	Manufacturing Engineering	01/07/2019
ME	Power Electronics and Drives	01/07/2019
MBA	Master of Business Administration	01/07/2019

1.2.3 – Students enrolled in Certificate/ Diploma Courses introduced during the year

	Certificate	Diploma Course
Number of Students	426	Nil

1.3 – Curriculum Enrichment

1.3.1 – Value-added courses imparting transferable and life skills offered during the year

Value Added Courses	Date of Introduction	Number of Students Enrolled
Digital Marketing	09/09/2019	24
Networking	10/02/2020	27
DBMS	02/01/2020	25
Auto CAD	06/08/2019	10
STAAD Pro	10/02/2020	15
Virtual Instrumentation using Labview	17/09/2019	30
VHDL using Xilinx	11/02/2020	45
Advances in 3D printing	20/01/2020	30
Non Destructive Testing	10/04/2020	30
Computational Fluid Dynamics	15/05/2020	30
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1.3.2 – Field Projects / Internships under taken during the year

Project/Programme Title	Programme Specialization	No. of students enrolled for Field Projects / Internships
BE	Mechanical Engineering	44
BE	Civil Engineering	20
BE	Electronics and Communication Engineering	2
BE	Electrical and Electronics Engineering	7
MBA	Master of Business Administration	91
BE	Computer Science Engineering	37
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1.4 – Feedback System

1.4.1 – Whether structured feedback received from all the stakeholders.

Students	Yes

Teachers	Yes
Employers	Yes
Alumni	Yes
Parents	Yes

1.4.2 – How the feedback obtained is being analyzed and utilized for overall development of the institution? (maximum 500 words)

Feedback Obtained
The various methodologies are adopted by the institution in order to enhance the teaching quality and the learning process. The structured feedback were obtained from the students, faculty members, the employers, alumni and the parents for further improvement of quality in the teaching learning process. Some of the feedback are collected directly and indirectly from the students are: • Feedback on the subject • Course end survey • Program Exit Survey • Alumni Survey • Feedback on the courses (through the class committee meeting). Some of the feedback are collected through online are: • Employers report about the student performance. • Industry peoples about the student knowledge. Employer's feedback is obtained by Training and Placement officer during campus placements regarding attitude and skills of the students. The feedback is analysed and utilized to improve the students' performance in the subsequent recruitments. Alumni Feedback from alumni obtained during alumni meeting are analysed and considered to prepare the students to meet the industry expectations. Parents Teachers meeting is conducted once in a semester. During the meeting the feedback is obtained regarding college facilities The rating criteria comprises of four parameters: 1. Excellent 2. Good 3. Satisfactory 4. Poor. Based on the feedback from the stakeholders the consolidated report will be prepared. The collective rating of student's response to all questions in feedback is calculated to 100. The action taken against the feedback collected are verified by the IQAC audit team and tracked for the closure of remedial actions suggested. Other Feedback Systems comprises: • Class Committee Meeting (CCM) The class committee members will meet three times in a semester, the date for the meeting will be decided by the IQAC team and the schedule will be published in the notice board of the department. During the meeting the chairperson of CCM will interact with the class committee members and collect the feedback for every subject. The report will be submitted to the HoD and the remedial action will be taken. • Mentor Mentee Meeting (MMM) The Mentor Mentee will meet once in a week. During the meeting the mentor will individually interact with their mentees. The discussion includes performance of the mentee in the university exam, Continuous Internal Assessment, Co- curricular and extracurricular activities. Mentor will suggest point to improve their performance in all aspects. Student's feedback about individual faculty member is analyzed by head of the department. Performance review meeting is conducted for the faculty who have secured less than class average. A Performance review is conducted by a senior team along Head of the Department to motivate the faculty members towards scoring higher student appraisal. Head of the Department along with overall lab incharge analyzed the feedback about lab incharge and lab assistants and motivate them to satisfy the student's requirements towards acquiring technical skills. Feedback on college facilities are obtained from the students are analyzed and the summary is sent to the Management Representative for further action.

CRITERION II – TEACHING- LEARNING AND EVALUATION

2.1 – Student Enrolment and Profile

2.1.1 – Demand Ratio during the year

Name of the	Programme	Number of seats	Number of	Students Enrolled

Programme	Specialization	available	Application received	
BE	Electronics and Communication Engineering	60	38	34
BE	Electrical Electronics Engineering	60	10	7
BE	Computer Science and Engineering	60	55	51
BE	Mechanical Engineering	120	14	11
BE	Civil Engineering	60	5	3
ME	Applied Electronics	18	Nill	Nill
ME	Computer Science and Engineering	18	10	6
ME	Manufacturing Engineering	18	7	4
ME	Power Electronics and Drives	18	10	5
MBA	Master of Business Administration	60	61	59

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2.2 – Catering to Student Diversity

2.2.1 – Student - Full time teacher ratio (current year data)

Year	Number of students enrolled in the institution (UG)	Number of students enrolled in the institution (PG)	Number of fulltime teachers available in the institution teaching only UG courses	Number of fulltime teachers available in the institution teaching only PG courses	Number of teachers teaching both UG and PG courses
2019	656	148	93	20	Nill

2.3 – Teaching - Learning Process

2.3.1 – Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc. (current year data)

Number of Teachers on Roll	Number of teachers using ICT (LMS, e-Resources)	ICT Tools and resources available	Number of ICT enabled Classrooms	Numberof smart classrooms	E-resources and techniques used
113	113	20	22	6	2

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2.3.2 – Students mentoring system available in the institution? Give details. (maximum 500 words)

Yes, Mentoring system is available in the Institution. The Institution has an effective monitoring system comprising of counsellors/ mentors/ advisors for each student for academic, personal, career and psycho-socio guidance. The mentoring system effectively addresses the concern of the student and enables the students to express/ share their academic and personal difficulties with their respective Advisor and Mentors. The college follows mentor mentee system for counselling, mentoring and to improve the academic performance of the students as well as to understand and solve personal issues of the students. Each class has a class advisor who also acts as a mentor for a group of students. Each mentor is allotted with 15 to 20 students to provide academic, personal and psycho-socio support and guidance. This ensures that every student is allotted a mentor. Students allocated to specific mentor will remain with him/her till the completion of the semester. Then for next semester, new mentors are appointed who are teaching the subjects to the respective class. The mentor maintains all particulars of students in the counselling records. It helps the mentor to evaluate the progress of the student during course of study. Both the class advisor and mentor constantly update the progress of the student to their parents/ guardians. Personal counselling is also given to the student to enhance academic, co-curricular and extracurricular activities. The mentor encourages the student to participate in various activities to enhance the overall development of the student. The counselling system also helps the students to clarify their doubts with the respective faculty and succeed in their examinations. The progress of the mentee is monitored and reviewed frequently to achieve the goals and the same is documented. Mentors encourage, create interest and guide the students to enroll for MOOC/ NPTEL courses and top contests in national/international level. The achievers are encouraged to attend extra classes to cope up with their peers. The progress of the students is periodically informed to their parents through phone call or SMS or through social media platforms and parent meeting is arranged during the need of hour. The mentor establishes the contact with the parents and appraise them about the development of their ward, periodically. Through this mentor-mentee system the institution assures a constructive professional relationship between students and the faculty. Apart from this every teacher is engaged in academic mentoring twice in a week during mandatory office hours which is scheduled after regular working hours of the college. The mentoring system helps the student to overcome any addictive behaviour and understand their areas of strength and weakness.

Number of students enrolled in the institution	Number of fulltime teachers	Mentor : Mentee Ratio
804	113	1:7

2.4 – Teacher Profile and Quality

2.4.1 – Number of full time teachers appointed during the year

No. of sanctioned positions	No. of filled positions	Vacant positions	Positions filled during the current year	No. of faculty with Ph.D
113	87	26	26	5

2.4.2 – Honours and recognition received by teachers (received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the year)

Year of Award	Name of full time teachers receiving awards from state level, national level, international level	Designation	Name of the award, fellowship, received from Government or recognized bodies
2019	K.V.Kannan Nithin	Professor	Best Academic Researcher Finalist
2019	V.S.Angulakshmi	Associate Professor	6th Academic Brilliance Award

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2.5 – Evaluation Process and Reforms

2.5.1 – Number of days from the date of semester-end/ year- end examination till the declaration of results during the year

Programme Name	Programme Code	Semester/ year	Last date of the last semester-end/ year-	Date of declaration of results of semester-

			end examination	end/ year- end examination
BE	114	VIII/IV	29/05/2020	17/08/2020
BE	103	VIII/IV	29/05/2020	17/08/2020
BE	106	VIII/IV	29/05/2020	17/08/2020
BE	105	VIII/IV	29/05/2020	17/08/2020
BE	104	VIII/IV	29/05/2020	17/08/2020
ME	405	IV/II	29/05/2020	17/08/2020
ME	401	IV/II	29/05/2020	17/08/2020
ME	415	IV/II	29/05/2020	17/08/2020
ME	410	IV/II	29/05/2020	17/08/2020
MBA	631	IV/II	29/05/2020	17/08/2020

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2.5.2 – Reforms initiated on Continuous Internal Evaluation(CIE) system at the institutional level (250 words)

1.The CIE questions are prepared by the subject handling faculty according to the level of understanding of the students. That is whether it is in the category of understanding, Remembering, Application etc 2. The CIE questions are also prepared for the specific portions covered for the particular period of assessment. 3. Once the questions are framed it is reviewed by the subject expert identified by the Head of the Department. 4. The questions are scrutinized in all the aspects and approved by both the subject expert and Head of the Department. 5. Two different set of question paper are prepared for each CIE and the particular question paper for the students is selected by the Exam cell coordinator for each department. 6. The evaluation of answer scripts is carried out by a different faculty having subject expertise and it is approved by a panel appointed by the Head of the department. 7. The evaluated answer scripts are distributed to the students and their grievance if any are addressed by the faculty. 8. All the marks are entered in the University portal periodically. 9. The answer scripts are stored in a strong room for feature auditing. 10. The students are given periodic coaching and encouragement to perform best in all CIE.

2.5.3 – Academic calendar prepared and adhered for conduct of Examination and other related matters (250 words)

An academic calendar is arranged each semester dependent on the University academic timetable, Principal conducts meetings with IQAC, HODs and Coordinators Exam cell, Intra collegiate Festival Committee and Sports Committee members. The main purpose of fixing these dates in advance is to enable the departments to plan for their own department programmes and events. This ensures that the curriculum is enriched, also helps the students to plan their academic and extracurricular activities. Based on academic calendar, timetable, course document, lecture notes, laboratory manuals are arranged. The students are persistently surveyed all lecture the semester and the assessment depends on the internal test, model and university examinations. Class tests and internal test empower the staff to recognize the high level and the lethargic students. Progressed students can select self-study courses, testing tasks and analyses moderate students are given remedial coaching

2.6 – Student Performance and Learning Outcomes

2.6.1 – Program outcomes, program specific outcomes and course outcomes for all programs offered by the institution are stated and displayed in website of the institution (to provide the weblink)

http://www.kathir.ac.in/aqar.shtml

2.6.2 – Pass percentage of students

Programme Code	Programme Name	Programme Specialization	Number of students appeared in the final year examination	Number of students passed in final year examination	Pass Percentage
405	ME	Computer Science and Engineering	3	3	100
415	ME	Power Electronics and Drives	1	1	100
104	BE	Computer Science and Engineering	37	35	94.59
103	BE	Civil Engineering	16	12	75
106	BE	Electronics and Communication Engineering	54	8	15
114	BE	Mechanical Engineering	72	61	84
631	MBA	Master of Business Administration	32	32	100
105	BE	Electrical and Electronics Engineering	12	7	58.3
410	ME	Manufacturing Engineering	8	8	100
401	ME	Applied Electronics	2	2	100

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2.7 – Student Satisfaction Survey

2.7.1 – Student Satisfaction Survey (SSS) on overall institutional performance (Institution may design the questionnaire) (results and details be provided as weblink)

http://kathir.ac.in/uploads/NAAC_Doc/SSS%202019-2020.pdf

CRITERION III – RESEARCH, INNOVATIONS AND EXTENSION

3.1 – Resource Mobilization for Research

3.1.1 – Research funds sanctioned and received from various agencies, industry and other organisations

Nature of the Project	Duration	Name of the funding agency	Total grant sanctioned	Amount received during the year

Interdisciplinary Projects	1095	Cosmogems	3.5	3.5
Minor Projects	1460	Deen Dayal Upadhyaya Grameen Kaushalya Yojana	500	248
Major Projects	1460	AICTE- PMKVY	45	13
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3.2 – Innovation Ecosystem

3.2.1 – Workshops/Seminars Conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices during the year

Title of workshop/seminar	Name of the Dept.	Date
One day workshop on Guidelines for Patent Submission	Civil Engineering	21/11/2019
How to apply Patent easily	Mechanical Engineering	10/04/2020
Research funding	Mechanical Engineering	15/05/2020
One day workshop on Intellectual Property Law	MBA	15/10/2019
One day workshop on patent proposal writing	Electrical and Electronics Engineering	10/02/2020
Workshop on Automotive Electronics	Electronics and Communication Engineering	11/02/2020
Two days workshop on patenting system in India, filing procedure and commercialization	Computer Science Engineering	03/02/2020

3.2.2 – Awards for Innovation won by Institution/Teachers/Research scholars/Students during the year

Title of the innovation	Name of Awardee	Awarding Agency	Date of award	Category
No Data Entered/Not Applicable !!!				
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3.2.3 – No. of Incubation centre created, start-ups incubated on campus during the year

Incubation Center	Name	Sponsered By	Name of the Start-up	Nature of Start-up	Date of Commencement
No Data Entered/Not Applicable !!!					
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3.3 – Research Publications and Awards

3.3.1 – Incentive to the teachers who receive recognition/awards

State	National	International
No Data Entered/Not Applicable !!!		

3.3.2 – Ph. Ds awarded during the year (applicable for PG College, Research Center)

Name of the Department	Number of PhD's Awarded
Mechanical Engineering	1

3.3.3 – Research Publications in the Journals notified on UGC website during the year

Type	Department	Number of Publication	Average Impact Factor (if any)
International	Computer Science Engineering	9	5.2
International	ECE	5	6.43
International	EEE	3	0.8
International	Physics	3	0.56
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3.3.4 – Books and Chapters in edited Volumes / Books published, and papers in National/International Conference Proceedings per Teacher during the year

Department	Number of Publication
EEE	3
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3.3.5 – Bibliometrics of the publications during the last Academic year based on average citation index in Scopus/ Web of Science or PubMed/ Indian Citation Index

Title of the Paper	Name of Author	Title of journal	Year of publication	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self citation
COMPUTATION OF SKYLINE FOR AMALGAMATED SERVICE SELECTION USING BOTTOM UP ALGORITHM	Mr.S.M.K.RAMAKRISHNAN	IRJGES	2019	Nill	Nill	Nill
SECURE TRANSMISSION AGAINST SOURCE FORGERY AND PACKET DROPPED ATTACKS	Ms.S.RAJAAMBIKA	IJICE	2019	Nill	Nill	Nill
CO-OPERATIVE VIDEO STREAMING WITH HYBRID VEHICLE M-RELAY NETWORK	Dr.P.BANUMATHI	IJRRSET	2019	Nill	Nill	Nill

USING H.264/SVC						
SECURE TRANSMISSION AGAINST SOURCE FORGERY AND PACKET DROPPED ATTACKS	Ms.T.SAKTHI SRTEE	IJICE	2019	Nill	Nill	Nill
CO-OPERATIVE VIDEO STREAMING WITH HYBRID VEHICLE M-RELAY NETWORK USING H.264/SVC	Dr.C.SURESHKUMAR	IJRRSET	2019	Nill	Nill	Nill
SECURE TRANSMISSION AGAINST SOURCE FORGERY AND PACKET DROPPED ATTACKS	Dr.A.N.NANDAKUMAR	IJICE	2019	Nill	Nill	Nill
COMPUTATION OF SKYLINE FOR AMALGAMATED SERVICE SELECTION USING BOTTOM UP ALGORITHM	Dr.T.JOHN PETER	IRJGES	2019	Nill	Nill	Nill
CO-OPERATIVE VIDEO STREAMING WITH HYBRID VEHICLE M-RELAY NETWORK USING H.264/SVC	Ms.M.KAVITHA	IJRRSET	2019	Nill	Nill	Nill
COMPUTATION OF SKYLINE FOR AMALGAMATED SERVICE	Ms.R.SAVITHA	IRJGES	2019	Nill	Nill	Nill

SELECTION USING BOTTOM UP ALGORITHM						

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3.3.6 – h-Index of the Institutional Publications during the year. (based on Scopus/ Web of science)

Title of the Paper	Name of Author	Title of journal	Year of publication	h-index	Number of citations excluding self citation	Institutional affiliation as mentioned in the publication
Newfangled Immaculate Trash Can Tracking System	Dr.M.Varatharaj Ms.S.Indhumathi	IJRASET	2020	Nill	Nill	Kathir College of Engineering
High Level Wing	Dr.M.Varatharaj	JES	2019	Nill	Nill	Kathir College of Engineering
Opulent Futuristic Smart Sensing Garden	Dr.M.Varatharaj Ms.N.Vani	IJCSE	2020	Nill	Nill	Kathir College of Engineering
IOT based Refuse Reuse Recycle for Zero Waste Management	Dr.M.Varatharaj	JETIR	2020	Nill	Nill	Kathir College of Engineering
Smart digital water flow surveillance system using IOT	Dr.M.Varatharaj	JETIR	2020	Nill	Nill	Kathir College of Engineering

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3.3.7 – Faculty participation in Seminars/Conferences and Symposia during the year :

Number of Faculty	International	National	State	Local
Attended/Seminars/Workshops	7	22	7	11
Presented papers	23	9	6	Nill
Resource persons	Nill	6	1	4

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3.4 – Extension Activities

3.4.1 – Number of extension and outreach programmes conducted in collaboration with industry, community and Non- Government Organisations through NSS/NCC/Red cross/Youth Red Cross (YRC) etc., during the year

Title of the activities	Organising unit/agency/ collaborating agency	Number of teachers participated in such activities	Number of students participated in such activities
KCE Pongal Celebration	KCE	6	500
Design thinking workshop	Tamilnadu Railways	1	100
Kalai Aruvi Science Competition	KCE	2	200
Motor Cycle Relay Rally	YRC with KCE	2	40
Kalakridhaa 2019	KCE	6	300
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3.4.2 – Awards and recognition received for extension activities from Government and other recognized bodies during the year

Name of the activity	Award/Recognition	Awarding Bodies	Number of students Benefited
Best Leader for Skill Development Trainers	Best Leader for Skill Development Trainers	Society of Scientific Research in Association with Alumni Association of Indian Engineers	40
No file uploaded.			

3.4.3 – Students participating in extension activities with Government Organisations, Non-Government Organisations and programmes such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the year

Name of the scheme	Organising unit/Agency/collaborating agency	Name of the activity	Number of teachers participated in such activites	Number of students participated in such activites
Road camp	KCE	Awareness camp for safe driving	2	65
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3.5 – Collaborations

3.5.1 – Number of Collaborative activities for research, faculty exchange, student exchange during the year

Nature of activity	Participant	Source of financial support	Duration
Sponsored Project-Computerized Engine Analysis	Dr.A.R.Suresh	COSMOGEMS	1095
Field Trip-Vidhya Tooling	Students	Kathir College of Engineering	1
Field Trip - Sathya Engg Works	Students	Kathir College of Engineering	1
Field Trip - SVK Industries	Students	Kathir College of Engineering	1

Field Trip - Sandfits Foundries	Students	Kathir College of Engineering	1
Field Trip - Conveyor Tech	Students	Kathir College of Engineering	1
Field Trip - Yathi Pumps	Students	Kathir College of Engineering	1
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3.5.2 – Linkages with institutions/industries for internship, on-the- job training, project work, sharing of research facilities etc. during the year

Nature of linkage	Title of the linkage	Name of the partnering institution/ industry /research lab with contact details	Duration From	Duration To	Participant
Internship	AUTOMATIC THEFT DETECTION AND WARNING SYSTEM UNDER VIDEO SURVEILLANCE SYSTEM	Proplus Groups, Coimbatore	02/01/2020	31/03/2020	3
Internship	FAKE PRODUCT REVIEW ANALYSIS	Tekzie, Coimbatore	02/01/2020	31/03/2020	3
Internship	ANDROID BASED E-COMPLAINT SYSTEM	AJ Tech Research Labs, Coimbatore	02/01/2020	31/03/2020	3
Internship	POINT OF INTEREST RECOMMENDATION ENGINE	Tekzie, Coimbatore	02/01/2020	31/03/2020	3
Internship	Basics of AutoCAD, QGIS and ARCGIS	Athira Geospatial Services Private Limited, Chennai	06/12/2019	05/01/2020	10
Internship	Building drawings with AutoCAD	Subramanian Associates, Coimbatore	08/12/2019	07/01/2020	10
Internship	Internship	SS Technovation	03/12/2019	31/12/2019	30
Internship	INNOVATIVE EARING AID FOR BLINDS USING PY	AJ Tech Research Labs, Coimbatore	02/01/2020	31/03/2020	04

	AUDIO MODULE				
Internship	PRODUCTIVE AND PROTECTED STANDARD FOR CLOUD-SUPPORTED ONLINE MEDICAL SERVICE	Proplus Groups, Coimbatore	02/01/2020	31/03/2020	3
Internship	AUTOMATIC THEFT DETECTION AND WARNING SYSTEM UNDER VIDEO SURVEILLANCE SYSTEM	Tekzie, Coimbatore	02/01/2020	31/03/2020	3

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3.5.3 – MoUs signed with institutions of national, international importance, other universities, industries, corporate houses etc. during the year

Organisation	Date of MoU signed	Purpose/Activities	Number of students/teachers participated under MoUs
Athira Geospatial Services Private Limited, Chennai	02/01/2019	Placement activities	14
Andal Engineering	03/12/2019	Seminar, internship, Placement	32
CADD Technology	05/02/2020	CAD training	42
Hitec Power, Coimbatore	03/07/2019	To develop the skills of the students	52
Lams Automation	13/04/2020	To develop the skills of the students in automation industry	47

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CRITERION IV – INFRASTRUCTURE AND LEARNING RESOURCES

4.1 – Physical Facilities

4.1.1 – Budget allocation, excluding salary for infrastructure augmentation during the year

Budget allocated for infrastructure augmentation	Budget utilized for infrastructure development
7.5	7.5

4.1.2 – Details of augmentation in infrastructure facilities during the year

Facilities	Existing or Newly Added
Campus Area	Existing
Class rooms	Existing

Laboratories	Existing
Seminar Halls	Existing
Classrooms with LCD facilities	Existing
Seminar halls with ICT facilities	Existing
Video Centre	Existing
Value of the equipment purchased during the year (rs. in lakhs)	Newly Added
Number of important equipments purchased (Greater than 1-0 lakh) during the current year	Newly Added
Classrooms with Wi-Fi OR LAN	Existing
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4.2 – Library as a Learning Resource

4.2.1 – Library is automated {Integrated Library Management System (ILMS)}

Name of the ILMS software	Nature of automation (fully or patially)	Version	Year of automation
OPAC	Fully	Nill	2017

4.2.2 – Library Services

Library Service Type	Existing		Newly Added		Total	
e-Journals	11500	Nill	Nill	Nill	11500	Nill
Digital Database	Nill	Nill	Nill	Nill	Nill	Nill
CD & Video	1410	Nill	Nill	Nill	1410	Nill
Library Automation	Nill	Nill	Nill	Nill	Nill	Nill
Text Books	19001	6904076	Nill	Nill	19001	6904076
Reference Books	10025	3655061	Nill	Nill	10025	3655061
e-Books	139	337641	Nill	Nill	139	337641
Journals	209	667213	Nill	Nill	209	667213
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4.2.3 – E-content developed by teachers such as: e-PG- Pathshala, CEC (under e-PG- Pathshala CEC (Under Graduate) SWAYAM other MOOCs platform NPTEL/NMEICT/any other Government initiatives & institutional (Learning Management System (LMS) etc

Name of the Teacher	Name of the Module	Platform on which module is developed	Date of launching e-content
No Data Entered/Not Applicable !!!			
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4.3 – IT Infrastructure

4.3.1 – Technology Upgradation (overall)

Type	Total Computers	Computer Lab	Internet	Browsing centers	Computer Centers	Office	Departments	Available Bandwidth (MBPS/ GBPS)	Others
Existing	652	450	0	150	0	22	30	30	0
Added	25	12	4	4	5	0	0	0	0
Total	677	462	4	154	5	22	30	30	0

4.3.2 – Bandwidth available of internet connection in the Institution (Leased line)

30 MBPS/ GBPS

4.3.3 – Facility for e-content

Name of the e-content development facility	Provide the link of the videos and media centre and recording facility
No Data Entered/Not Applicable !!!	

4.4 – Maintenance of Campus Infrastructure

4.4.1 – Expenditure incurred on maintenance of physical facilities and academic support facilities, excluding salary component, during the year

Assigned Budget on academic facilities	Expenditure incurred on maintenance of academic facilities	Assigned budget on physical facilities	Expenditure incurredon maintenance of physical facilites
150	141	20	16

4.4.2 – Procedures and policies for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc. (maximum 500 words) (information to be available in institutional Website, provide link)

Overall Infrastructure Management: The Institution has an Administrative Officer who oversees the maintenance of the buildings, class rooms and laboratories. A Team lead by the Maintenance Engineer (Civil) supports the Administrative Officer in the overall maintenance of the campus. Painting of the walls is done once in three years and also on requirement basis. The Maintenance Engineer (Civil) goes around the campus regularly, identify and sort out problems with the help of concerned people then and there for minor issues. Repair and Maintenance activities are carried out regularly. Stock verification of assets is done annually and worn out equipment's/components/machines are repaired/replaced. Wherever necessary the college has entered into AMC with various companies for maintaining the equipment and infrastructural facilities. The respective departments are made responsible for maintenance of equipment's and renewal of AMC. The equipment's which are not under AMC are serviced based on the request submitted by the concerned HOD, with the help of the company which has supplied the item or with the help of competent technicians/engineers. Electrical Maintenance: A separate Electrical Maintenance team headed by an electrical supervisor exists in the campus. Electrical maintenance covers all aspects of testing, monitoring, fixing and replacement of electrical component/system. The maintenance is carried out by an accredited electrical engineer who has knowledge about the National electric Code and native regulations. Laboratory Maintenance: The laboratories are under the control of the respective HoDs. Each lab has a lab incharge and a lab technician. Stock registers and maintenance registers are maintained in laboratories and are audited annually. Faults identified by the lab incharge / lab technicians are rectified by trained technicians after

obtaining approval from the HoD / Principal. Smart Board and System Maintenance: All class rooms are equipped with smart boards and a team of technicians ensure that the boards are working flawlessly. A Professor in charge for smart board, with the competent technical team, is responsible for servicing the smart boards annually. IT Infrastructure Maintenance: System Maintenance team comprising of overall Campus System Manager, System Administrator and a strong technical team maintain the systems in the campus. The periodical maintenance work is being followed as per the schedule below. In addition to this, back up of data and Hard disk clean up and defragmentation utilities are done regularly. Scrap systems are disposed off through buyback systems. Library Maintenance: The college Library is headed by the Librarian. The library resources are maintained by the library team. • Library follows the Government norms for weeding out the worn-out books • Stock verification of the library books is done annually. Sports complex: The Physical Director is incharge of the sports complex and gymnasiums inside the campus. The playground courts are kept tidy and maintained in a Fit for use condition always. Worn-out sports items are replaced annually. The overall maintenance of the Gym equipment's and sports items is the responsibility of the sports department.

http://kathir.ac.in/uploads/2019-2020/4.4.2.pdf

CRITERION V – STUDENT SUPPORT AND PROGRESSION

5.1 – Student Support

5.1.1 – Scholarships and Financial Support

	Name/Title of the scheme	Number of students	Amount in Rupees
Financial Support from institution	Nill	Nill	Nill
Financial Support from Other Sources			
a) National	TamilNadu Government Scholarship	401	2174175
b)International	Nill	Nill	Nill

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5.1.2 – Number of capability enhancement and development schemes such as Soft skill development, Remedial coaching, Language lab, Bridge courses, Yoga, Meditation, Personal Counselling and Mentoring etc.,

Name of the capability enhancement scheme	Date of implemetation	Number of students enrolled	Agencies involved
Personal counselling	16/03/2020	8	KCE Civil Faculty
Remedial coaching for slow learners	18/11/2019	15	KCE Civil Faculty
Remedial Coaching for slow learners	01/08/2019	37	KCE ECE Faculty
Essential Aspects for A Successful Career	16/05/2020	62	Mr.E.Allan Joshua, Content Writer, Zoho Corporation, Chennai
Internet of Things Technology and Its	22/08/2019	46	Mr.M.Mugilan, CTO/RD Head, Monc Technologies

Applications			
Emerging Technologies Innovation	14/09/2019	80	Wipro Limited, Bengaluru
Machine Learning	10/03/2020	40	BuzzTech Training Institute, Coimbatore
Industrial Automation and Robotics	26/06/2019	45	Mr.Rudhra Kumaran.G, Application Engineer, Axis Global Automation Pvt. Limited, Coimbatore
Leadership and Skill Management	03/09/2019	80	Mr.A.Aravindhan, Chair, Student Activities Committee, IEEE Computer Society India Council LKW REM Scholar, Tedx Speaker

View File

5.1.3 – Students benefited by guidance for competitive examinations and career counselling offered by the institution during the year

Year	Name of the scheme	Number of benefited students for competitive examination	Number of benefited students by career counseling activities	Number of students who have passedin the comp. exam	Number of studentsp placed
2019	Gate Coaching	60	Nill	Nill	Nill
2019	Career Guidance Program on Government Services Exams	5	10	Nill	5
2019	Career Guidance and Counselling	Nill	72	Nill	Nill
2020	GATE Forum	48	Nill	Nill	Nill
2020	Master's Education Abroad	Nill	38	Nill	Nill
2020	Overseas Education in Canada	Nill	25	Nill	Nill
2020	Career Guidance by Science and	134	Nill	Nill	Nill

	Humanities Department				
2019	A primer on opportunities in the banking sector	110	110	Nill	Nill

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5.1.4 – Institutional mechanism for transparency, timely redressal of student grievances, Prevention of sexual harassment and ragging cases during the year

Total grievances received	Number of grievances redressed	Avg. number of days for grievance redressal
1	1	4

5.2 – Student Progression

5.2.1 – Details of campus placement during the year

On campus			Off campus		
Nameof organizations visited	Number of students participated	Number of stduents placed	Nameof organizations visited	Number of students participated	Number of stduents placed
Ss Technovation,Sri Andal Engineering,Cadd Technology,Propluslogistics, SIG Technologies, Infotest Lab, C CUBE	94	39	Shri MS Co Pvt Ltd, Integral global Solutions,MS Associates,Just dial Limited,Maha Readymix,TCS,Cochin Shipyard,Jayem Automotive,Sakthi Ancillary,KLR Technologies, WIPRO, I EXPLORE CORP, OASYS	77	41

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5.2.2 – Student progression to higher education in percentage during the year

Year	Number of students enrolling into higher education	Programme graduated from	Depratment graduated from	Name of institution joined	Name of programme admitted to
2020	1	BE	CSE	Kathir College of Engineering	ME(CSE)
2020	1	BE	ECE	MIT	M.E.-Wireless Technologies
2020	1	BE	Mech	Dr.NGPIT	ME

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5.2.3 – Students qualifying in state/ national/ international level examinations during the year (eg:NET/SET/SLET/GATE/GMAT/CAT/GRE/TOFEL/Civil Services/State Government Services)

Items	Number of students selected/ qualifying
No Data Entered/Not Applicable !!!	
No file uploaded.	

5.2.4 – Sports and cultural activities / competitions organised at the institution level during the year

Activity	Level	Number of Participants
Sports	Intra college level	10
No file uploaded.		

5.3 – Student Participation and Activities

5.3.1 – Number of awards/medals for outstanding performance in sports/cultural activities at national/international level (award for a team event should be counted as one)

Year	Name of the award/medal	National/ Internaional	Number of awards for Sports	Number of awards for Cultural	Student ID number	Name of the student
No Data Entered/Not Applicable !!!						
No file uploaded.						

5.3.2 – Activity of Student Council & representation of students on academic & administrative bodies/committees of the institution (maximum 500 words)

Our pioneering Institute involves our students in all the activities of the College right from curricular to co-curricular and extra-curricular activities. Students are fine-tuned from first year through final year in lot of academic activities such as ‘Class Committee Meeting’, ‘Library Advisory Committee’, Grievance Redressal Cell, etc. Class committee meetings are conducted at regular intervals and the constitution of the class committee meeting consists of average, above average and below average students along with subject handling faculty members and Head of the department, hence, the students’ participation and suggestions are registered and rectified then and there. This is an ample example of students’ involvement in academic administration. In the same fashion, students take part in Library advisory committee meetings and share their valuable opinions in bringing reforms in library. In addition, they outline the books, journals (National and International), e-journals and magazines useful to their studies and research. During University examinations, the library hours are extended based on the suggestions of student members of library advisory committee. Further, Grievance redressal cell consists of student members in its cell in order to redress their grievances pertaining to academic and general. Correspondingly, in co-curricular activities, students are given opportunity to involve themselves in various portfolios such as President, Vice-President, Treasurer, Secretary and Member in ‘Department Associations’, ‘Entrepreneur Development Cell’, ISTE, IEEE, SAE IE (I) student chapters, ‘Hostel and Mess committee’, ‘Anti-Ragging Committee’, etc. Departmental associations are being run by the students of the concerned departments and they themselves arrange ‘Symposiums’, ‘Conferences’ and ‘Workshops’ on latest trends in Engineering and Technology once in a year with the guidance from the Head of the Department as well as from the faculty members. On the other hand, Entrepreneur development cell plays a key role in creating future entrepreneurs among the students of the College. ‘Guest Lectures’, ‘Seminars’ and ‘Workshops’ on Entrepreneurship are being arranged by the student members of EDC to encourage their peer group to have their ‘Start-

ups'. Members of various students' chapters, 'Anti-Ragging Committee', 'Hostel and Mess Committee' give a chance for the students to learn about the administrative problems and execute an appropriate solution for those difficulties. These managerial level activities bring out hidden leadership qualities of the students during their under graduation / post-graduation studies itself. Similarly, students from first through final year involve in extra-curricular activities such as 'Sports Club', 'Debate Club', 'Fine Arts Club', Photography Club', etc. It is mandatory that all students of the college should have been enrolled in any one of the clubs and must participate in all its activities in order to sharpen their skills in all arenas. These extra-curricular activities bring out the innate traits of the students. Another area, where students' participation is highly appreciable, is 'Training and Placement Cell'. All through the year several 'Personality Enhancement Programmes' are being conducted based on students requirements. Our students' involvement and participation in various administrative bodies show that how they are encouraged to be a part of decision making in all administrative levels.

5.4 – Alumni Engagement

5.4.1 – Whether the institution has registered Alumni Association?

Yes

The main objectives of alumni association are 1. To promote and foster mutually beneficial interaction between Alumni and the Institute. 2. To encourage the Alumni to take abiding interest in the process and development of Institute. 3.To arrange and support in placement activities for the students of Institute 4. To encourage the students of the Institute and members of the Association for research development work in various fields like engineering, computer Industrialization etc. 5. To mentor the students of the Institute for higher education, development of character and being GOOD citizens. 6. To provide scholarships to deserving students of the Institute for the purpose of education and sports. 7. To encourage and guide the students of the Institute on self employment to become entrepreneurs. 8. To guide students of the Institute on various professional avenues available and support them through various activities such as expert advice, seminars, visit etc. 9. Promote the Industry Institute interaction to bridge the gap between industry requirements and education offered and enhance student's employability. 10. To encourage and support students of the Institute in sports, cultural and extracurricular activities. 11. To organize debates on various social issues Sighting the above objectives of Alumni Association, our alumni contributes in many ways for the development and betterment of our Institute. Our students and Institute are benefited in various fields such as student placement, training, expert lectures, career guidance sessions, Industrial visits and mentoring. The alumni of Institute is guiding and nurturing our students to become engineering professionals. It is our plan to develop everlasting relations with our alumni which in turn will give rise to mutual benefits.

5.4.2 – No. of enrolled Alumni:

157

5.4.3 – Alumni contribution during the year (in Rupees) :

39250

5.4.4 – Meetings/activities organized by Alumni Association :

Alumni meeting was organized on 15.12.2019

CRITERION VI – GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 – Institutional Vision and Leadership

6.1.1 – Mention two practices of decentralization and participative management during the last year (maximum 500 words)

In the academic year 2019 – 2020, the process of strategy development was decentralised with regard to: 1) Admissions for the respective departments and 2) Training of students for placement of department students. Admissions for the respective departments The institute has taken note of the need for each department to plan, and organise the admissions strategy and training for placement strategy to better meet the needs of their prospective students and their current students and has accordingly decentralised the same. The COVID pandemic also necessitated such a decentralisation to better make use of each department's unique advantages, proximity to prospective students, and resources. The department level strategy for admissions and training for placement was supported at the institutional level by allocation of financial budgets, marketing collaterals, and other resources. The strategy meetings were conducted at the department level with the participation of all faculty members of the department. This approach enabled contribution by all faculty members. All faculty members weighed in with their experiences, insight and professional contacts. The department level admission strategy included mapping geographical areas for addressing prospective students at schools off-line and online through open sessions and at other forums of the school for meeting and interacting with them, and their teachers. The decisions about fee concessions for meritorious students, deserving students were also in the purview of the respective departments with due approvals from the institution's top management. Training of students for placement of department students The training needs of students of each department are unique. This need for a distinctive training strategy addresses the general aptitude and also the domain specific training needs. However, wherever possible the training needs were integrated across departments and addressed by an integrated training plan. The integrated training plan also brought the per- students-training-cost to a more affordable level. The training needs assessment also included identification of organisations for in-plant training. The training needs were assessed by a baseline test for general aptitude and for the technical domain preferred by the students along with inputs from the faculty mentors, class advisors, and the Head of Department. The above mentioned decentralisation saw increased participation from faculty members and also the involvement of student representatives. The top management institutional support was also encouraging.

6.1.2 – Does the institution have a Management Information System (MIS)?

Yes

6.2 – Strategy Development and Deployment

6.2.1 – Quality improvement strategies adopted by the institution for each of the following (with in 100 words each):

Strategy Type	Details
Curriculum Development	The Institute follows curriculum and syllabi framed by Anna University, Chennai. The Institution follows the academic calendar framed before the commencement of semester. The academic, co-curricular and extracurricular activities are regularly planned through the academic committee. The lesson plan is prepared before the commencement of classes and delivered

	using modern pedagogical tools. The curriculum delivery is done in the classrooms as per the Timetable. Learning opportunities beyond the syllabi are provided through study tours, industrial visits, special lectures by resource persons, workshops/seminars/conferences etc. Student participation in other workshop s/seminars/conferences/competitions, internships extra-curricular activities, sports activities is encouraged. Service and extension-related learning through camps and organizing events for social causes is also organized.
Teaching and Learning	The Institute follows the guidelines of the affiliating University, Anna University for academic schedule. To ensure the quality of teaching-learning, the Institute practices Outcome based education. The course plans are recorded before the commencement of classes. The completion of syllabus coverage is regularly monitored by Head of the Department The Institute encourages faculty members to attend faculty empowerment programs, periodically for the effective implementation of outcome-based education. Feedback mechanisms such as oral and written feedback are obtained from students periodically for each subject and overall, to ascertain the quality of curriculum delivery and incorporate workable suggestions of students. Mentoring system with a mentor assigned to each group of students. The teachers are encouraged to develop e-contents and usage of ICT tools for effective teaching learning process.
Examination and Evaluation	The Institution follows a strict evaluation process as given by the guidelines of Anna University. The evaluation is done periodically in line with the academic calendar of Anna University ensuring transparency in the process of scheduling and conducting the Internal Assessment tests. The schedule of tests is informed to the students well in advance and the evaluated scripts are displayed to the students after the exams are over. The Grievances during the tests are resolved in time bound manner and malpractice during the exams is

	prohibited. The slow learners are counselled and motivated by the faculty and HoD to achieve success in their exams by improving their learning ability.
Research and Development	The Institute motivates the faculty and students to submit project proposals and publish research articles in highly reputed Journals and Conferences. The Institute also supports the faculty to carry out consultancy projects, collaborative research projects. Centres for research and Centres for excellence are also established to inculcate research practices among the students and faculty. Strong encouragement to faculty to complete their PhD is given by the Institution. The faculty are motivated to engage in minor or major research projects and obtain grants from the university or the UGC and encouragement for the faculty to participate in conferences and present their research work is also provided.
Library, ICT and Physical Infrastructure / Instrumentation	The library holds a good stock of textbooks, reference books including the books mentioned in the prescribed syllabi of the affiliating university. Our library has the facility of e-journals like Springer and Delnet are accessible for the students and the faculty members that help them to update their knowledge in the field of their study. The library houses a digital library section, where e-books and resources like NPTEL videos etc are made available. A minimum of 50 students make use of facilities available in the digital library. The classrooms have ceiling mounted LCD projectors connected to computers, sound system, and pull-down screens. Internet accessibility is provided for staff and students.
Human Resource Management	The Institute has well defined organizational hierarchy with participative management to provide effective governance and leadership. Extensive use of participatory management/decentralized governance for capacity development and leadership among staff is practiced. Multiple opportunities for leadership for various assignments/tasks/responsibilities are made available to staff and students.

	Faculty members are encouraged to attend seminars/conferences, present papers, avail of refresher courses to keep abreast of changing times/advancements. Further the Institute provide operational autonomy to the Departments in academic pursuit and decision-making process. The Institute has well-structured Performance Appraisal system for teaching and non-teaching staff. The Institute also has an efficient Financial Management system through regular audits.
Industry Interaction / Collaboration	The strength of the Institution includes the range of tie-ups and linkages/networking with other organizations to effectively operationalise the curriculum. The Institute has signed functional MoU’s with various industries covering different departments. Exposure visits, study tours, extension work, student placements, student internships, partnership/sponsorship for events/programs, access to research facilities, access to/sharing of expertise, research collaborations, and cultural and educational exchange programs are the outcomes of these linkages.
Admission of Students	The admissions of the students are strictly followed as per rules and regulation based on the Government of Tamil Nadu and AICTE norms for admissions in UG and PG programmes. Admissions are done through regular counselling and management quota. To ensure publicity and transparency in the admission process, a separate Admissions Department exists, and they advertise in local National dailies, and in our Website.

6.2.2 – Implementation of e-governance in areas of operations:

E-governace area	Details
Planning and Development	Rever Innovations software is used for planning various academic activities at the Institution. Google sheet and MS Office is used for Official documents, Data Storage of academic and administrative nature.
Administration	Rever Innovations software is used for Management Information System at the Institution.

Finance and Accounts	Finance and accounts uses Tally and MS Excel for carrying out accounting activities.
Student Admission and Support	Rever Innovations software is used for for managing the student's details and their fees details.
Examination	Various activities pertaining to examinations are carried out through Anna University web portal coe1.annauniv.edu. Periodic entries for Internal marks and attendance are carried out in this portal by the faculty and results are published in this website. The students are provided with individual login id and can check their assessment entries and University examination results through this website

6.3 – Faculty Empowerment Strategies

6.3.1 – Teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the year

Year	Name of Teacher	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support
2019	Dr. Suresh. A.R	International Conference on Advances in Material Science and Nanotechnology-ICMN 2K19	Stella Marys College of Engineering Azhikal	500
2019	Dr. Rajan. K	International Conference on Recent Developments-Mechanical Engineering ICRDME 2019	SA Engineering College	1000
2019	Dr. P.Ravi Kumar	ISCO 2019	Karpagam College of Engineering	1000

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6.3.2 – Number of professional development / administrative training programmes organized by the College for teaching and non teaching staff during the year

Year	Title of the professional development programme organised for teaching staff	Title of the administrative training programme organised for non-teaching staff	From date	To Date	Number of participants (Teaching staff)	Number of participants (non-teaching staff)
2019	Guest	Nill		Nill	20	Nill

	lecture on the title “Advances in Robotics, Mr.Sampath , Senior Manager, Hirotech Automation		22/08/2019			
2019	Nill	Two days Hands on Training Programme onWelding, Machining, Engine Assembling	09/12/2019	Nill	Nill	7
2020	Nill	One day Hands on Training Programme onRefrigration and Air conditioning service	22/01/2020	Nill	Nill	9

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6.3.3 – No. of teachers attending professional development programmes, viz., Orientation Programme, Refresher Course, Short Term Course, Faculty Development Programmes during the year

Title of the professional development programme	Number of teachers who attended	From Date	To date	Duration
Short Term Training Program on PEDAGOGY ON EMOTIONAL INTELLIGENCE SKILLS FOR CAREER GROWTH AND SUCCESS	2	01/07/2019	06/07/2019	6
One Week Faculty Development Program on Latex and Xfix	5	15/07/2019	19/07/2019	5
One day Workshop on clean technologies	19	17/08/2019	17/08/2019	1
Short term Course On 2D	17	29/06/2019	01/07/2019	3

and 3D drawing in Autocad in Udemy				
FDP on Behaviour of Structural Systems	3	22/05/2020	24/05/2020	3
FDP(Augmented Reality/Virtual Reality)	2	27/05/2019	29/05/2019	3
FDP(Theory of Computation)	3	10/06/2019	12/06/2019	3

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6.3.4 – Faculty and Staff recruitment (no. for permanent recruitment):

Teaching		Non-teaching	
Permanent	Full Time	Permanent	Full Time
Nill	26	Nill	Nill

6.3.5 – Welfare schemes for

Teaching	Non-teaching	Students
Appreciation for producing 100 results in theory subjects and 85 and above results in analytical subjects in end semester examinations in the subjects handled. • Monetary incentives for publication / presentation of papers in peer reviewed Journals and Conferences. • Granting permission for attending Conferences, Seminars, Workshops , Faculty Development Programme, etc.[50 of registration fee] • Permission to register for doing M.Phil/ Ph.D. programmes to enhance their qualifications. • Some other benefits such as Group Medical Insurance, Medical Leave Facility, On duty facility, Provident Fund, ESI, etc	Permission to do higher studies to enhance their qualifications. ESI and PF contribution by the Management Group Insurance Concessional Transport Facility Leave facility such as Casual Leave, Medical Leave and Maternity Leave Facility	The students scholarship schemes such as Yoga Single Parent Scholarship :Student with Single Parent No Parent Scholarship :Student with No Parent alive Deserving Student Scholarship Deserving Student who excel in Curricular, Co –curricular Extracurricular activities Scholarship for the deserving sports students Best Outgoing Student [BOG] Award for final year student with monetary benefit. Outstanding Student Award for II and III year student with monetary benefit. Remission of Travel and Registration fee for achievers in CoCurricular activities. Support for getting Educational Bank Loan / Financial Assistance from Private Trust.

6.4 – Financial Management and Resource Mobilization

6.4.1 – Institution conducts internal and external financial audits regularly (with in 100 words each)

The institute regularly follows Internal external financial audit system.

Internal auditing is a continuous process in addition to the external auditors to verify the entire income, expenditure and the capital expenditure of the institute each year. Internal Auditors team has been appointed and the team checks and verifies all vouchers of the transactions that are carried out in quarterly basis. Likewise an external audit is also carried out on an elaborate way. The institutional accounts are audited regularly by both Internal and external audits. Minor errors of omissions and commissions when pointed out by the audit team are immediately corrected and precautionary steps are taken to avoid such errors in future.

6.4.2 – Funds / Grants received from management, non-government bodies, individuals, philanthropies during the year(not covered in Criterion III)

Name of the non government funding agencies /individuals	Funds/ Grnats received in Rs.	Purpose
No Data Entered/Not Applicable !!!		

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6.4.3 – Total corpus fund generated

95678

6.5 – Internal Quality Assurance System

6.5.1 – Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	Yes	External Experts from reputed Institutions	Yes	Internal Faculty Coordinators
Administrative	Yes	K.P.Vasanthakumar Agency, Anna Nagar, Chennai	Yes	Accounts

6.5.2 – Activities and support from the Parent – Teacher Association (at least three)

1. During the meeting, the parents are informed about the Attendance of the ward, internal marks, dress code, code of conduct and the overall academic performance of the student. 2. Parents suggest the ways and means for the development of the college during parents meeting. 3. Educative programmes for parents are offered through these kind of gatherings. Parents are oriented on online fee payment system, usage of online education, handling of present day youth.

6.5.3 – Development programmes for support staff (at least three)

Permission to do higher studies to enhance their qualifications. Frequent training programmes are conducted to upgrade their skills. They are sent for Industrial training during vacation to improve their skills Programme targeting Ethics, Team Building, Leadership skills, etc is conducted once in a month

6.5.4 – Post Accreditation initiative(s) (mention at least three)

1. Effective implementation of Outcome Based Education (OBE) and Choice Based Credit System (CBCS) is in practice. 2. CBCS offers a range of choice for students to choose from Professional Core and Electives, Open Electives, Engineering and Basic Science, Humanities and Science courses and Employability enhancement courses. 3. Internships / Field visits and career-oriented training

incorporated in the curriculum 4. To inculcate lifelong learning, the Institution motivates faculty members and students to complete one course per year in self-learning mode through online portals like NPTEL, SWAYAM, Udemy,etc

6.5.5 – Internal Quality Assurance System Details

a) Submission of Data for AISHE portal	No
b)Participation in NIRF	Yes
c)ISO certification	No
d)NBA or any other quality audit	Yes

6.5.6 – Number of Quality Initiatives undertaken during the year

Year	Name of quality initiative by IQAC	Date of conducting IQAC	Duration From	Duration To	Number of participants
2019	Awareness program on Outcome based education	18/11/2019	18/11/2019	18/11/2019	35
2019	IQAC Meeting 1	12/09/2019	12/09/2019	12/09/2019	10
2020	IQAC Meeting 2	17/02/2020	17/02/2020	17/02/2020	10
2019	Discussion on model curriculum by AICTE	02/12/2019	02/12/2019	02/12/2019	30
2020	Workshop on 360 degree feedback by AICTE	02/03/2020	02/03/2020	02/03/2020	35
2020	Seminar on quality improvement in assessment methods	11/03/2020	11/03/2020	11/03/2020	40

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CRITERION VII – INSTITUTIONAL VALUES AND BEST PRACTICES

7.1 – Institutional Values and Social Responsibilities

7.1.1 – Gender Equity (Number of gender equity promotion programmes organized by the institution during the year)

Title of the programme	Period from	Period To	Number of Participants	
			Female	Male
Women Empowerment Program	08/03/2020	08/03/2020	255	Nill

7.1.2 – Environmental Consciousness and Sustainability/Alternate Energy initiatives such as:

Percentage of power requirement of the University met by the renewable energy sources
Roof top solar panel with a capacity of 35 kW. 31.25 percentage of power requirement of the college is met by the renewable energy sources

7.1.3 – Differently abled (Divyangjan) friendliness

Item facilities	Yes/No	Number of beneficiaries
Physical facilities	Yes	Nill
Provision for lift	No	Nill
Ramp/Rails	Yes	Nill
Braille Software/facilities	No	Nill
Rest Rooms	Yes	Nill
Scribes for examination	No	Nill
Special skill development for differently abled students	No	Nill
Any other similar facility	No	Nill

7.1.4 – Inclusion and Situatedness

Year	Number of initiatives to address locational advantages and disadvantages	Number of initiatives taken to engage with and contribute to local community	Date	Duration	Name of initiative	Issues addressed	Number of participating students and staff
2020	1	1	10/01/2020	1	Blood donation camp	Donated the blood to a hospital	25
2020	1	1	06/03/2020	1	Tree Plantation	Provided green cover	30

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7.1.5 – Human Values and Professional Ethics Code of conduct (handbooks) for various stakeholders

Title	Date of publication	Follow up(max 100 words)
Students Hand Book	20/05/2019	Separate code of conduct hand book is available for the students
Faculty Service Rules	03/06/2019	Staff Members follow the service rules and promotion policies of the Kathir College of Engineering.

7.1.6 – Activities conducted for promotion of universal Values and Ethics

Activity	Duration From	Duration To	Number of participants
Independence Day	15/08/2019	15/08/2019	30
Pongal celebration	13/01/2020	13/01/2020	100
Republic day	26/01/2020	26/01/2020	40

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7.1.7 – Initiatives taken by the institution to make the campus eco-friendly (at least five)

Installation of Solar Panels to explore renewable energy sources
Campus is free from polythene carry bags
New saplings are added to increase the green cover of the campus
Paperless office
Rain water harvesting
Minimizing Water Wastage

7.2 – Best Practices

7.2.1 – Describe at least two institutional best practices

Best Practice-1: TITLE: Improving academic performance for moderate students Objective of the Practice: • To impart normal learning practice for moderate students • To accomplish anticipated academic performance • To empower the moderate students to finish the degree within the specified time • To empower the moderate students to meet all requirements for placement drives The Context In consistently around 30 of students were discovered to be qualified in higher secondary education with below half in their total. This influences their academic performance which affects college and individual department academic objectives. Subsequently, in every department, the students with below 60 marks in higher secondary education are distinguished as moderate students. To empower the moderate students to adapt to the Anna University courses and to perform better, the Institution have started extraordinary training class for moderate students The Practice: • Mentoring and checking the moderate students subject wise and ability of the concepts is talked about in the class. • Guiding Special Coaching classes for moderate students between 3 p.m. to 4 p.m. week days and at 11 a.m. to 12.30 pm on Saturdays to improve their presentation. • Guiding intermittent tests during 3.00 p.m. to 4.00 p.m. on week days • Tasks are given on themes, which are repeated regularly in university examination. • Preparing on repeated and most expected university questions. • Instruction given well in advance about the portion for internal examinations. • Appropriating and talking about answers with moderate students after completing the internal examinations. • Pointing on academic and personal matters Evidence of Success: • Our students have exposed improvement in their academic performance • students have effectively finished their courses in the specified time. It can be seen that there is an improvement of 25 of students have finished their program during the academic year 2018-19. • The students have educated time management to finish their course. • The achievement rate in the final exam has been improved after the conduct of moderate students class • It is perceived that there is significant progress in the pass percentage moderate students Best Practice-2: TITLE: Placement training programs and training for competitive examinations Objectives of the practice: • To inspire most extreme number of students to enroll in training and placement cell • To prepare the students to get complete the placement test and evaluation • To build the quantity of students placed during every year • To prepare the

students to meet competitive assessments positively The context: The opportunities set by the companies continue to change step by step. The present innovation world is extremely unstable. This is demonstrated in the field of IT where greater part of our college placements occur. To address the issue of un-employability, high unstable of innovation we need to give more attention on eternal upgradation of skills. The training program that we plan and convey centers around relational skills, aptitude, soft skills, center competency, programming basics, progressed programming and so on. The adequacy of the training program estimated utilizing different outsider appraisals. We have planned our placement program as given below, so all hard soft skills preparing are planned judiciously on each of the four years of the training. I year – Communication Skill development II year - Placement training on soft and hard skills III year – Boot camps IV year – Placement The practice: The department of training and placement designs and implements training programs, appraisals, and other support accomplishments. Here is the list of activities that we convey to our students. Here is the list of programs that we deliver to our students. • Soft-skills training program • Infosys campus connect program • Aptitude training program • Boot camp on Phython Programming • Top Coders event • InfyTQ certification training program • The department-specific technical training program • Wipro TalentNext J2EE training program (JAVA, DS and Oracle) Evidence of Success We can see revolution in the students' expertise level post-execution of these practices. We had the option to see improvement on • Improvement of practical thinking ability • Quicker critical thinking capacity • Improvement on the certainty level • Continuous learning and practice • Development on the self-confidence level • Number of students placed in the reputed organization has shown progress

Upload details of two best practices successfully implemented by the institution as per NAAC format in your institution website, provide the link

http://kathir.ac.in/uploads/2019-2020/7.2%20Best%20Practices.pdf

7.3 – Institutional Distinctiveness

7.3.1 – Provide the details of the performance of the institution in one area distinctive to its vision, priority and thrust in not more than 500 words

Kathir College of Engineering knows that Quality of learning can never be isolated from Research activities at different levels. Hence, Laboratories are established by the management to support research activities of faculty members and students. Students are encouraged to involve in research activities such as 'Research Paper Presentation' in National conferences and International conferences all over India. Also, faculty members are encouraged to publish 'Research papers' in National and International Journals to carry out their research in different core areas. This student faculty research culture kindles the interest of all other students to involve in research activities. Kathir College of Engineering aims to be an institution par excellence in research activities along with world class learning environment. To support the research activities, Kathir College of Engineering has: 1. KCE - IIT Bombay Remote centre for Applied Research and Workshop Interaction: IIT Bombay Remote Centre has been established in our College to conduct online 'workshops' / 'seminars' for faculty members of Engineering Colleges in and around Coimbatore. The facilities of the centre are also available for general public to conduct Web conferences. 2. KCARDS Centre for Embedded System Research and Development: KCARDS Lab is one of the state of art laboratories where in the students are exposed to carry out projects starting from the basic level to the higher level in order to complete a product based project at the end of their course. 3. KCE - National Instruments centre for innovation using LabVIEW: National Instruments (NI) LabVIEW Academy has been set up in the campus with an investment of Rs 25 Lakhs. It houses the latest hardware and software necessary

for training the students in the area of Automation. The students trained in this Centre can take up the CLAD exams and get the chance of placement in MNCs and Blue chip companies. 4. KCE - Texas Instruments Centre for Industrial Automation: This laboratory has been established in collaboration with Texas Instruments (TI) with the sole aim of providing an in-depth understanding of 'Analog Elections and its applications' for the students of EEE and ECE. Training programmes are organised now and then on 'Analog electronics' for both faculty members and students.

Provide the weblink of the institution

http://kathir.ac.in/uploads/2019-2020/sss.pdf

8.Future Plans of Actions for Next Academic Year

1. Seek Online International Engagements at both the Faculty and Student Level which does not require travel. 2. Build collaborations with Bodies/Organizations in Government/Private Sector. 3. Consider UGC sponsored Centres or Programs that can be implemented. 4. Introduce Online/Offline Add-on Certificate Courses. 5. Introduce Online/Offline Skill-based/Value-Added Courses. 6. Organize Online/Offline Faculty Development Programs. 7. Organize International and National Webinars/Conferences/Symposia. 8. Develop Entrepreneurship Programs. 9. Organize Pre-Placement Talks, Workshops, Fellowship and Internship Programs. 10. Organize Job Talks and Workshops with Academic and Research institutions. 11. To initiate the procedure for academic autonomy. 12. Applying for 2nd cycle of NAAC. 13. Applying for NBA. 14. To develop networking with international universities. 15. To encourage students to opt for summer training programs in international universities. 16. To increase the number of students undergoing industrial training/internship. 17. To increase research publications indexed journals

YEARLY STATUS REPORT - 2020-2021

Part A	
Data of the Institution	
1.Name of the Institution	**Kathir College of Engineering**
• Name of the Head of the institution	**Dr. R. Udaiyakumar**
• Designation	**Principal**
• Does the institution function from its own campus?	**Yes**
• Phone no./Alternate phone no.	**04222203778**
• Mobile no	**9626273374**
• Registered e-mail	**principal@kathir.ac.in**
• Alternate e-mail	**iqac@kathir.ac.in**
• Address	**Wisdom Tree, Avinashi Rd, Near Bye Pass, Neelambur**
• City/Town	**Coimbatore**
• State/UT	**Tamilnadu**
• Pin Code	**641062**
2.Institutional status	
• Affiliated /Constituent	**Affiliated**
• Type of Institution	**Co-education**
• Location	**Rural**

• Financial Status	Self-financing
• Name of the Affiliating University	Anna University
• Name of the IQAC Coordinator	Dr.B.Prabakaran
• Phone No.	04222203778
• Alternate phone No.	04222203787
• Mobile	9894158701
• IQAC e-mail address	iqac@kathir.ac.in
• Alternate Email address	eeehod@kathir.ac.in
3.Website address (Web link of the AQAR (Previous Academic Year)	http://kathir.ac.in/wp-content/uploads/2021/12/AQAR2019-2020-1.pdf
4.Whether Academic Calendar prepared during the year?	Yes
• if yes, whether it is uploaded in the Institutional website Web link:	http://kathir.ac.in/wp-content/uploads/2022/files/academiccalender_2020_21_odd_&_even.pdf

5.Accreditation Details

Cycle	Grade	CGPA	Year of Accreditation	Validity from	Validity to
Cycle 1	B	2.59	2016	25/05/2016	24/05/2021

6.Date of Establishment of IQAC	25/04/2016

7.Provide the list of funds by Central / State Government UGC/CSIR/DBT/ICMR/TEQIP/World Bank/CPE of UGC etc.,

Institutional/Department /Faculty	Scheme	Funding Agency	Year of award with duration	Amount
Nil	Nil	Nil	Nil	Nil

8.Whether composition of IQAC as per latest NAAC guidelines	Yes
• Upload latest notification of formation of IQAC	View File

9.No. of IQAC meetings held during the year	**2**	
• Were the minutes of IQAC meeting(s) and compliance to the decisions have been uploaded on the institutional website?	**Yes**	
• If No, please upload the minutes of the meeting(s) and Action Taken Report	No File Uploaded	
10.Whether IQAC received funding from any of the funding agency to support its activities during the year?	**No**	
• If yes, mention the amount		

11.Significant contributions made by IQAC during the current year (maximum five bullets)

Seamless Teaching Learning activities through Tech Enabled Learning (Theory : through online assessment platforms & Practical: through Virtual Labs)

MoUs with Industries to reduce Industry – Institution gap and enhance Industry driven education ecosystem

New program - B.Tech - Artificial Intelligence and Data Science, was introduced.

Conducted more events and special programs

Orientation Program for students as per AICTE guidelines

12.Plan of action chalked out by the IQAC in the beginning of the Academic year towards Quality Enhancement and the outcome achieved by the end of the Academic year

Plan of Action	Achievements/Outcomes
Tech Enabled Teaching Learning Process	Improved academic performance
MoUs with Industries	Faculty interaction with Industry experts and identifying emerging areas
MHRD – AISHE	AISHE details are being prepared
AICTE-CII Survey details	Submitted in AICTE web-portal
AICTE – EoA process	Obtained EoA for 20-21
Number of staff meetings per department – planned – 1 meeting per week	Achieved and MoM are prepared and recorded
IQAC Meetings	Conducted two meetings
AQAR report preparation and submission	Submitted
NAAC reaccreditation process (2nd cycle)	in the process
It has been planned to use ICT tools by all faculty for teaching learning process	All faculty members used ICT tools for teaching learning process
Adding new programs	B.Tech Artificial Intelligence and Data Science program is introduced
Conduct of events through Department Association	Seminars by industry experts and from other institutions were organized
Planned for the faculty members to file Patents	Some Faculty members filed patents
Planned for the faculty members to write Books/Chapters	Some Faculty members wrote books
Planned for conducting more events	Thiruvalluvar Vizha, Python Boot camp,Engineering graphics boot camp, Top codersevent, Engineering Mathematics-1 boot camp, Python programming contest for first year Engineering

	students,Programming and design contest for higher semester engineering students, Current Banking Trends in Agricultural Credit Webinar, Being Fit Webinar, Learn French Webinar, Cloud Computing Webinar, Writing in Style Webinar, Weave Your Story Webinar, Impact of Behavioural Finance on Capital Allocation Webinar, Trends & Opportunities in Electronics Field Webinar, Healthy Sustainable Practices for Women's Health Webinar, Department Association Functions, Pongal Celebration, E-Box Football Tournament, Music band competition were conducted
Planned for conducting special programs	Top coders and Top designers contest were conducted

13.Whether the AQAR was placed before statutory body?	Yes

- Name of the statutory body

Name	Date of meeting(s)
Governing council	11/11/2021

14.Whether institutional data submitted to AISHE

Year	Date of Submission
Nil	Nil

Extended Profile

1.Programme

1.1 357

Number of courses offered by the institution across all programs during the year

File Description	Documents
Data Template	View File

2.Student

2.1 **516**

Number of students during the year

File Description	Documents
Institutional Data in Prescribed Format	View File

2.2 **207**

Number of seats earmarked for reserved category as per GOI/ State Govt. rule during the year

File Description	Documents
Data Template	View File

2.3 **196**

Number of outgoing/ final year students during the year

File Description	Documents
Data Template	View File

3.Academic

3.1 **90**

Number of full time teachers during the year

File Description	Documents
Data Template	View File

3.2 **90**

Number of sanctioned posts during the year

Extended Profile

1.Programme

1.1 Number of courses offered by the institution across all programs during the year	**357**

File Description	Documents
Data Template	View File

2.Student

2.1 Number of students during the year	**516**

File Description	Documents
Institutional Data in Prescribed Format	View File

2.2 Number of seats earmarked for reserved category as per GOI/ State Govt. rule during the year	**207**

File Description	Documents
Data Template	View File

2.3 Number of outgoing/ final year students during the year	**196**

File Description	Documents
Data Template	View File

3.Academic

3.1 Number of full time teachers during the year	**90**

File Description	Documents
Data Template	View File

3.2 Number of sanctioned posts during the year	**90**

File Description	Documents
Data Template	View File

4.Institution	
4.1 Total number of Classrooms and Seminar halls	**34**
4.2 Total expenditure excluding salary during the year (INR in lakhs)	**218.7**
4.3 Total number of computers on campus for academic purposes	**376**

Part B

CURRICULAR ASPECTS

1.1 - Curricular Planning and Implementation

1.1.1 - The Institution ensures effective curriculum delivery through a well planned and documented process

- **Kathir College of Engineering is affiliated to Anna University, Chennai. Our institution follows the curriculum prescribed by Anna University, and adopts a systematic approach to ensure effective teaching, learning and evaluation process.**
- **The Academic Calendar is prepared by the institution before the commencement of the semester as per the schedule recommended by the University and becomes the guiding document for scheduling teaching, learning and evaluation activities. Further every department prepares its own academic calendar to facilitate addition of value added courses. This information is communicated to the students and faculty members prior to the commencement of the semester.**
- **Contents of the academic calendar includes,**
  - **commencement of classes**
  - **internal assessment test schedules**

    - co-curricular and extra-curricular events
    - last instruction day
    - practical and theory exam schedules
    - list of holidays
- Individual class time tables are prepared and circulated to the students, before the commencement of classes.
- To upskill the students, KCE has signed an MoU with E-box learning services. E-box is an AI driven Technology Enabled Active Learning platform.
- The online classes are conducted with the help of e-box platform which ensures upskilling of students along with their regular classes. Also, the assignments and continuous internal assessment test papers are collected through the platform.
- To ensure effective curriculum delivery, course plans are prepared for the respective courses to attain the course objectives, course and programme outcomes.
- To record the course design, delivery, evaluation, attainment of the outcomes and remedial measures taken, a course file is prepared for all the courses.

The Course File includes

1. Individual Faculty Time Table

2. Syllabus Copy

3. Approved Course Plan (with details of Text & Reference Books, Scheme of Evaluation of Internal Marks)

4. Monthly Test 1 Details

? Question Paper & Answer Key

? Sample Answer Scripts

? Mark Sheet with identification of weaker students

? Action taken for improvement of weaker students

5. Monthly Test 2 Details

? Question Paper & Answer Key

? Sample Answer Scripts

? Mark Sheet with identification of weaker students-coaching class

? Action taken for improvement of weaker students

6. Monthly Test 3 Details

? Question Paper & Answer Key

? Sample Answer Scripts

? Mark Sheet with identification of weaker students

? Action taken for improvement of weaker students

7. Assignment Sheets : Question paper, Samples

8. Tutorial Sheets : Question paper, Samples

9. Details of Technical Quiz / Seminars / Any other Components conducted: Question paper, Samples

10. Record of Class Work with Internal Mark Evaluation

11. Topics covered beyond the syllabi with material

12. End Semester Question Paper & Answer Key

13. Course End survey

14. CO-PO Attainment with Excel sheet

The evaluation is done as per the university regulation and the pattern consists of continuous internal assessment and university examination with 20% and 80 % weightage respectively. The internal assessment comprises of an average of three internal tests. The internal test questions are prepared by the concerned faculty member and reviewed by the HODs before sending it to the Exam Cell. The end semester examinations are conducted by the Anna University, Chennai.

File Description	Documents
Upload relevant supporting document	View File
Link for Additional information	http://kathir.ac.in/wp-content/uploads/2022/files/Academic-calendar.pdf

1.1.2 - The institution adheres to the academic calendar including for the conduct of Continuous Internal Evaluation (CIE)

- **The Academic Calendar is prepared by the institution before the commencement of the semester as per the schedule recommended by the University and becomes the guiding document for scheduling teaching, learning and evaluation activities. Further every department prepares its own academic calendar to facilitate addition of value added courses. This information is communicated to the students and faculty members prior to the commencement of the semester.**
- **Contents of the academic calendar includes,**
  - **commencement of classes**
  - **internal assessment test schedules**
  - **co-curricular and extra-curricular events**
  - **last instruction day**
  - **practical and theory exam schedules**
  - **list of holidays**

The Time table is prepared on par with the academic calendar and displayed in the department notice board and circulated to the students. The institution completes the curricular activities as per calendar. The institution adheres strictly to the academic calendar and revisions are made as per the notifications issued by the AICTE and affiliating university, if any.

The evaluation is done as per the university regulation and the pattern consists of continuous internal assessment and university examination with 20% and 80 % weightage respectively. The internal assessment comprises of an average of three internal tests. The internal test questions are prepared by the concerned faculty member and reviewed by the HODs before sending it to the Exam Cell. The end semester examinations are conducted by the Anna University, Chennai.

File Description	Documents
Upload relevant supporting document	View File
Link for Additional information	http://kathir.ac.in/wp-content/uploads/2022/files/1.1.2_CIA_screenshots.pdf

1.1.3 - Teachers of the Institution participate in following activities related to curriculum development and assessment of the affiliating University and/are represented on the following academic bodies during the year. Academic council/BoS of Affiliating University Setting of question papers for UG/PG programs Design and Development of Curriculum for Add on/ certificate/ Diploma Courses Assessment /evaluation process of the affiliating University

B. Any 3 of the above

File Description	Documents
Details of participation of teachers in various bodies/activities provided as a response to the metric	View File
Any additional information	View File

1.2 - Academic Flexibility

1.2.1 - Number of Programmes in which Choice Based Credit System (CBCS)/ elective course system has been implemented

1.2.1.1 - Number of Programmes in which CBCS/ Elective course system implemented

10

File Description	Documents
Any additional information	View File
Minutes of relevant Academic Council/ BOS meetings	View File
Institutional data in prescribed format (Data Template)	View File

1.2.2 - Number of Add on /Certificate programs offered during the year

1.2.2.1 - How many Add on /Certificate programs are added during the year. Data requirement for year: (As per Data Template)

18

File Description	Documents
Any additional information	View File
Brochure or any other document relating to Add on /Certificate programs	View File
List of Add on /Certificate programs (Data Template)	View File

1.2.3 - Number of students enrolled in Certificate/ Add-on programs as against the total number of students during the year

469

File Description	Documents
Any additional information	View File
Details of the students enrolled in Subjects related to certificate/Add-on programs	View File

1.3 - Curriculum Enrichment

1.3.1 - Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum

The curriculum of Anna University efficiently incorporates cross-cutting themes such as gender, environment and sustainability, human values, and ethical standards, resulting in a strong value-based holistic development of students.

Throughout the year, many events are scheduled as part of the curriculum to aid in this quest.

1. **Gender Sensitivity**

Gender-related courses are an integral ingredient of many programmes. Students are educated and encouraged to strive toward gender justice from a cross-cultural standpoint. A Counselling Cell provides free counselling services. Gender awareness camps are organised in rural regions, covering topics like as equal

liberation, human rights, child rights, gender justice, and gender equality. Mandatory core courses, as well as a diverse variety of community projects such as health and hygiene camps, provide exposure to real-world problems. KCE offers gender-sensitive seminars, guest lectures, exhibits on a yearly basis.

1. Environment and Sustainability

Water quality, air quality, education and healthcare, agricultural and dairy practises, innovation, and human values are all part of KCE's strong community-oriented work culture.

KCE provides university recommended UG/PG programmes in water, sanitation and wastewater treatment, alternative fuels, environmental and green technology, which results in vocational and skill development education. All UG programmes contain a required core course in environmental studies. Camps for environmental workshops, presentations, company visits, and field trips are all planned. Research in inter-disciplinary topics centred on renewable energy, environmental pollution, and health care challenges are valued highly at KCE.

1. Human Values and Professional Ethics

The curriculum of Anna University comprises of Human Values and Professional Ethics as an elective course for all UG programmes and the students are encouraged to choose the same.

The course comprises of,

- Understanding Human Values
- Ethics in Engineering
- Engineering as Social Experimentation
- Safety, Responsibilities and Rights
- Global Issues

File Description	Documents
Any additional information	View File
Upload the list and description of courses which address the Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum.	View File

1.3.2 - Number of courses that include experiential learning through project work/field work/internship during the year

19

File Description	Documents
Any additional information	View File
Programme / Curriculum/ Syllabus of the courses	View File
Minutes of the Boards of Studies/ Academic Council meetings with approvals for these courses	View File
MoU's with relevant organizations for these courses, if any	View File
Institutional Data in Prescribed Format	View File

1.3.3 - Number of students undertaking project work/field work/ internships

307

File Description	Documents
Any additional information	View File
List of programmes and number of students undertaking project work/field work/ /internships (Data Template)	View File

1.4 - Feedback System

1.4.1 - Institution obtains feedback on the syllabus and its transaction at the institution **A. All of the above**

from the following stakeholders Students Teachers Employers Alumni

File Description	Documents
URL for stakeholder feedback report	http://kathir.ac.in/feedback-2/
Action taken report of the Institution on feedback report as stated in the minutes of the Governing Council, Syndicate, Board of Management	View File
Any additional information	View File

1.4.2 - Feedback process of the Institution may be classified as follows

A. Feedback collected, analyzed and action taken and feedback available on website

File Description	Documents
Upload any additional information	View File
URL for feedback report	http://kathir.ac.in/wp-content/uploads/2022/files/1.4 Action-taken.pdf

TEACHING-LEARNING AND EVALUATION

2.1 - Student Enrollment and Profile

2.1.1 - Enrolment Number Number of students admitted during the year

2.1.1.1 - Number of students admitted during the year

62

File Description	Documents
Any additional information	View File
Institutional data in prescribed format	View File

2.1.2 - Number of seats filled against seats reserved for various categories (SC, ST, OBC, Divyangjan, etc. as per applicable reservation policy during the year (exclusive of supernumerary seats)

2.1.2.1 - Number of actual students admitted from the reserved categories during the year

30

File Description	Documents
Any additional information	View File
Number of seats filled against seats reserved (Data Template)	View File

2.2 - Catering to Student Diversity

2.2.1 - The institution assesses the learning levels of the students and organizes special Programmes for advanced learners and slow learners

The affiliating university announces the conduct of three continuous assessment test for each semester. The internal assessment marks are calculated based on the above three tests. This is forwarded to the university. The university conducts the end semester examination and the marks obtained by the students are taken as external assessment marks. The total of both internal and external assessment marks is declared as result by the university.

This forms the basis for the assessment of learning levels of the students. Based on the university marks the students are categorized as advanced and slow learners.

Special curriculum related programs are arranged for the slow learners. This would help them to improve their pace of learning and help achieve academic standard. As for advanced learners, special programs are conducted for them to improve their skills and help them achieve academic excellence.

A comprehensive schedule is prepared in advance for the advanced and slow learners. Based on the schedule, the programs are conducted for the respective category of students. An assessment is planned in each program for slow learners. The students are given the assessment and outcome is mapped with their improvement in performance.

The Advanced learners are provided with seminars on latest topics, workshops with hands on sessions/mini projects, and competitions. They are made to participate in such events and their outcomes are mapped with respective skills.

File Description	Documents
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/2.2.1.pdf
Upload any additional information	View File

2.2.2 - Student- Full time teacher ratio (Data for the latest completed academic year)

Number of Students	Number of Teachers
516	90

File Description	Documents
Any additional information	View File

2.3 - Teaching- Learning Process

2.3.1 - Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences

Kathir college of engineering offers the students an ambience of Academic excellence. The students are exposed to various types of learning methods. This academic year, our institution has subscribed to an academic platform called Ebox. This platform is an AI driven technology enabled platform. It automates the assessment of learning ability of the student. The above technology platform enables the student to participate/interact with the faculty members, thus ensuring participative learning. Further, the components included in the practice sessions of the topics helps them experience the learning while helping them solve the problems in the topics of the respective subjects. However, the students are also provided with real time experience by facilitating industrial visits to enable them to gain hands on experience relevant to their topics of study.

In addition to this, they are also allowed to undergo internship in companies which gives them required live practice sessions. Students are made to work along with their peers in the industry which helps them acquire real time exposure and hone their skills. Students are encouraged to do their projects in industry which provides them an opportunity to obtain expert project inputs. This project experience provides them with problem solving skills. Overall the various learning methodologies help the students in enhancing their learning experiences.

File Description	Documents
Upload any additional information	View File
Link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/2.3.1.pdf

2.3.2 - Teachers use ICT enabled tools for effective teaching-learning process. Write description in maximum of 200 words

In order to be industry ready, students must acquire and master the most up-to-date technology today. As a result, teachers are merging technology with conventional teaching methods to keep them engaged in lifelong learning. In order to assist, enhance, and optimise the delivery of education, KCE employ information and communication technology (ICT) in education.

KCE uses the following ICT Tools to provide skilling and assessment to the learners.

1. **Projectors are available in different classrooms/labs/seminar halls**
2. **Desktop and Laptops- Arranged at Computer Lab and Faculty cabins all over the campus.**
3. **Printers are installed at Labs, HOD Cabins and all prominent places.**
4. **Photocopier machines - Multifunction printers are available at all prominent places**
5. **Scanners & Multifunction printers**
6. **Seminar Rooms- Three seminar halls are equipped with all digital facilities.**
7. **Smart Board- Installed in the campus.**
8. **Auditorium- It is digitally equipped with mike, projector, cameras and computer system.**
9. **Online Classes through E-Box, Zoom, Google Meet, Microsoft Team, Google Classroom**
10. **Digital Library resources**

Use of ICT by Faculty

1. **PowerPoint Presentations: Faculty members are encouraged to use LCDs and projectors to provide power-point presentations in their classes. They may also create successful presentations with the use of a digital library, internet**

search engines, and websites.
2. Virtual labs: Faculty members conduct simulation based experiments through remote access.
3. Industry Connect: Guest lectures, professional discussions, and other contests are often conducted for students in the seminar and conference rooms, which are technologically equipped.
4. Online Quiz/Competitions
5. Video Conferencing
6. E-Box Platform: E-Box is a Learning and Assessment auto-evaluation engine created to revolutionize engineering education through Technology Enabled Active Learning across different spheres of education, learning & technology training. E-Box provides a wide range of teaching aid to help students to apply their learning through problem-solving exercises and many interesting modules on knowledge harvesting
7. Workshops

File Description	Documents
Upload any additional information	View File
Provide link for webpage describing the ICT enabled tools for effective teaching-learning process	View File

2.3.3 - Ratio of mentor to students for academic and other related issues (Data for the latest completed academic year)

2.3.3.1 - Number of mentors

41

File Description	Documents
Upload, number of students enrolled and full time teachers on roll	View File
Circulars pertaining to assigning mentors to mentees	View File
Mentor/mentee ratio	View File

2.4 - Teacher Profile and Quality

2.4.1 - Number of full time teachers against sanctioned posts during the year

90

File Description	Documents
Full time teachers and sanctioned posts for year (Data Template)	View File
Any additional information	View File
List of the faculty members authenticated by the Head of HEI	View File

2.4.2 - Number of full time teachers with Ph. D. / D.M. / M.Ch. /D.N.B Superspeciality / D.Sc. / D.Litt. during the year (consider only highest degree for count)

2.4.2.1 - Number of full time teachers with Ph. D. / D.M. / M.Ch. /D.N.C Superspeciality / D.Sc. / D.Litt. during the year

24

File Description	Documents
Any additional information	View File
List of number of full time teachers with Ph. D. / D.M. / M.Ch./ D.N.B Super specialty / D.Sc. / D.Litt. and number of full time teachers for year (Data Template)	View File

2.4.3 - Number of years of teaching experience of full time teachers in the same institution (Data for the latest completed academic year)

2.4.3.1 - Total experience of full-time teachers

345

File Description	Documents
Any additional information	View File
List of Teachers including their PAN, designation, dept. and experience details(Data Template)	View File

2.5 - Evaluation Process and Reforms

2.5.1 - Mechanism of internal assessment is transparent and robust in terms of frequency and

mode. Write description within 200 words.

The effective and seamless administration of examinations, as well as the timely announcement of results, can only be achieved with the collaboration of all stakeholders, including KCE teaching, non-teaching, and administrative employees. They are required to be knowledgeable of the numerous procedures and timelines that must be followed. Invigilators are requested to acquaint with the following procedures:

END SEMESTER EXAMINATION

1. **The invigilator is not permitted to carry a cell phone or other reading material. The invigilator is required to remain watchful and to make several passes through the test hall.**
2. **The invigilator is required to be diplomatic while dealing with difficult situations and to maintain tranquility in the test hall. In the event of a difficulty, he or she may bring it to the attention of the chief superindent (CS).**
3. **Any conflicts of interest in performing a specific examination function should be disclosed to the Controller of Examinations well in advance. This is critical to maintaining openness in the Examination system and avoiding unwanted complications/allegations and litigation after the Examination.**
4. **Only teaching personnel will be assigned to serve as invigilators.**
5. **Generally, scheduled forenoon session Examinations begins at 10.00 AM and afternoon session examinations begins at 2.30 PM. At least 30 minutes before the commencement of the examination, the invigilator should arrive at the venue, i.e. 9:30 a.m. for the morning session and 2:00 p.m. for the afternoon session.**
6. **Any changes to the invigilation duty shall be communicated to the CS one day before the date of duty assignment, with alternate arrangements established in the event of absence.**
7. **Before entering the Exam Halls, invigilators should double-check the material presented for accuracy in the count of answer scripts, questions, and other associated material.**
8. **Students are permitted inside the test venue after correctly validating their Hall Ticket and ID card and reporting any discrepancies to the CS.**
9. **The students are allowed to leave their luggage, wallets, books, computers, and other belongings in the designated area before proceeding to their assigned hall.**

10. The attendance and other procedures are completed Within the first half-hour of the examination. The invigilator must visit each student and double-check the information on the signature sheet and answer booklets, as well as sign the answer booklet and signature sheet.
11. When an invigilator suspects a candidate of engaging in malpractice during the exam, the invigilator must confiscate the material(s) utilised for the malpractice and bring it to the notice of the CS.
12. If any student uses unfair methods or misconduct at any time, the occurrence should be informed to the CS in writing, and the student shall be handed over along with the answer booklet, question paper, and any banned material, if any.
13. Except for the faculty involved in the examinations, no one else is permitted to enter the examination hall during the examination.

INTERNAL EXAMINATION

1. At the end of each unit of study, all teachers conduct unit examinations. The teachers ensure that the pattern of the questions varies among units.
2. The university regulations governing course-specific examination patterns are given to students. The university circulars in this respect are distributed to faculty members and administrative personnel on a regular basis, and they are also placed on notice boards for students.
3. Every year, an examination committee is formed to organise internal and external examination activities and to disseminate examination-related information to students, professors, and administrative personnel.
4. Changes in schedules, patterns, and procedures, if any, are immediately communicated to learners via notice boards and classroom briefings by the relevant subject instructors.
5. The internal examination timetable is posted on the notice board in advance. Each semester, three internal examinations are held.
6. Post evaluation answer booklets are shared with the students to enhance the transparency policy of the institution.
7. Students are further encouraged to actively discuss with the concern faculty member with regards to any grievance in their evaluation.

Mechanism of internal assessment

1. The schedule of Continuous Internal Assessment (CIA) and Model Examinations, as well as assignments, is provided at the start of each session.
2. The course instructor will provide the question bank for the respective courses in advance.
3. Course instructor maintains a course file, which includes records of attendance in internal examinations, question papers, valued sample answer sheets, and summary of mark statements for academic audit.

Model Examination

1. Valuation is done by the respective course instructor within two days of Examination.
2. Answer sheets are shown to all the students and answers are also discussed with the students. After satisfaction, students sign the answer sheets and return the same to maintain the database.

Practical Examination

1. Evaluation is done with transparency based on different parameters like Practical Records, Performance and Viva-Voce.

Assignments

1. Assignments are provided in every course to enhance the learning process.

Internal Assessment Marks

1. Internal Assessment Marks which comprises of CIA-1, CIA-2, CIA-3/model examination and Assignments and model exam marks are conveyed to students.

File Description	Documents
Any additional information	View File
Link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/2.5.1.pdf

2.5.2 - Mechanism to deal with internal examination related grievances is transparent, time- bound and efficient

A transparent, time-bound and efficient method is being followed at KCE in terms of dealing with internal examination related grievances.

College Level

1. **If a student is unable to attend for an examination due to medical or other legitimate reasons, an examination is held for that student in accordance with the rules, provided he or she makes an application with all required documentation.**
2. **If a student receives less than a passing grade in a subject and wishes to improve, he or she may take the improvement test.**
3. **Students' concerns about evaluation are addressed by displaying their performance on the answer sheet.**
4. **In the presence of the student, the faculty assesses the student's answer sheet once more. Faculty members correct any errors in the total of marks or in the evaluation of answer booklets that students have noticed.**
5. **Any student who is dissatisfied with the assessment and award of grades should contact the concerned HOD, who can intervene and seek the advice of another course teacher.**
6. **The Institute uses an open assessment approach in which student performance is posted on the notice board and parents are notified.**

University level

1. **In terms of assessment, if a student receives a lower grade than predicted, he or she can request a revaluation of his or her answer script by paying the required fee.**
2. **In the event that a student has a grievance about an evaluation, the university will give a photocopy of the answer sheet.**

File Description	Documents
Any additional information	View File
Link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/2.5.2.pdf

2.6 - Student Performance and Learning Outcomes

2.6.1 - Programme and course outcomes for all Programmes offered by the institution are stated and displayed on website and communicated to teachers and students.

Programme Outcomes (POs), Programme Specific Outcomes (PSOs), and Course Outcomes (COs) are framed by the department delivering the concerned programme after extensive consultation with all faculty and stakeholders, in strict conformity with the objectives of Outcome Based Education (OBE).

Following the establishment of unanimity, the information is extensively disseminated and promoted via different methods, such as display and/or communication, as described below.

- **Website**
- **Curriculum /regulations books**
- **Class rooms**
- **Department Notice Boards**
- **Laboratories**
- **Student Induction Programs**
- **Meetings/ Interactions with employers**
- **Parent meet**
- **Faculty meetings**
- **Alumni meetings**
- **Library**

The HODs create awareness of POs, PSOs, and COs when speaking to the learners.

Faculty members, mentors, course coordinators, and programme coordinators also provide information to students, raise awareness, and highlight the role of meeting the objectives.

Specified skill criteria and accomplishments to be met by students at the micro level and at the conclusion of the programme are known as programme specific outcomes (PSOs). The PSOs, which are normally 2 - 3 in number, are prepared by the programme coordinators in cooperation with the course coordinators. The Head of Department and subject specialists from each department will debate it and approve it after it has been approved by the Programme Advisory Committee of the department.

Programme Outcomes (POs) are declarations that summarise the professional accomplishments that the programme aspires for and that students are expected to achieve at the end of the programme. POs include a wide range of interconnected information, talents, and personality attributes that students must acquire before

graduating.

Course outcomes (COs) are explicit statements that indicate the important and enduring discipline knowledge, talents that students should have, and level of learning that is expected upon course completion. They are stated and expressed explicitly. The Course Outcomes are developed by the course coordinator in collaboration with faculty members who teach the same course. The Module coordinator will double-check it. Finally, they are considered and authorised in the relevant department's meeting.

The COs, POs and PSOs are published on the college website. Awareness of POs, PSOs, and COs is intentionally encouraged in all interactions with learners.

File Description	Documents
Upload any additional information	View File
Paste link for Additional information	http://kathir.ac.in/wp-content/uploads/2022/files/CO_PO_PSO_PEO.pdf
Upload COs for all Programmes (exemplars from Glossary)	View File

2.6.2 - Attainment of Programme outcomes and course outcomes are evaluated by the institution.

The program outcomes and Program Specific outcomes are assessed with the help of course outcomes of the relevant courses through direct and indirect methods. Direct methods are provided through direct examinations or observations of student knowledge or skills against measurable course outcomes. The knowledge and skills described by the course outcomes are mapped to specific problems on University Examination, internal exams and home assignment. Finally, program outcomes are assessed and Program Assessment Committee concludes the PO attainment level. At the end of each semester, university conducts examinations based on the result published by university the course outcomes are measured. Assignments are given at the end of each module. The assignments are provided to students and they refer the text books and good reference books to find out the answers and understand the

expected outcome of the given problem. Three internal tests are conducted per semester for the following purposes: To ensure that students have achieved desired level of competencies at module level. To evaluate, whether corresponding COs are achieved or not. According to the performance of the student in answering each question, mapping is carried out with the respective COs for assessing the attainment level of the specific CO of the Course.

File Description	Documents
Upload any additional information	View File
Paste link for Additional information	https://kathir.ac.in/wp-content/uploads/2022/files/2.6.2_CO-PO-Mapping.pdf

2.6.3 - Pass percentage of Students during the year

2.6.3.1 - Total number of final year students who passed the university examination during the year

196

File Description	Documents
Upload list of Programmes and number of students passed and appeared in the final year examination (Data Template)	View File
Upload any additional information	View File
Paste link for the annual report	http://kathir.ac.in/wp-content/uploads/2022/files/IQAC_AnnualReport_20-21.pdf

2.7 - Student Satisfaction Survey

2.7.1 - Student Satisfaction Survey (SSS) on overall institutional performance (Institution may design its own questionnaire) (results and details need to be provided as a weblink)

http://kathir.ac.in/wp-content/uploads/2022/files/2.7.1_Student_survey.pdf

RESEARCH, INNOVATIONS AND EXTENSION

3.1 - Resource Mobilization for Research

3.1.1 - Grants received from Government and non-governmental agencies for research

projects / endowments in the institution during the year (INR in Lakhs)

3.1.1.1 - Total Grants from Government and non-governmental agencies for research projects / endowments in the institution during the year (INR in Lakhs)

2

File Description	Documents
Any additional information	View File
e-copies of the grant award letters for sponsored research projects /endowments	View File
List of endowments / projects with details of grants(Data Template)	View File

3.1.2 - Number of teachers recognized as research guides (latest completed academic year)

3.1.2.1 - Number of teachers recognized as research guides

3

File Description	Documents
Any additional information	View File
Institutional data in prescribed format	View File

3.1.3 - Number of departments having Research projects funded by government and non government agencies during the year

3.1.3.1 - Number of departments having Research projects funded by government and non-government agencies during the year

2

File Description	Documents
List of research projects and funding details (Data Template)	View File
Any additional information	View File
Supporting document from Funding Agency	View File
Paste link to funding agency website	Nil

3.2 - Innovation Ecosystem

3.2.1 - Institution has created an ecosystem for innovations and has initiatives for creation and transfer of knowledge

The Institute has taken numerous initiatives for innovations, creation and transfer of knowledge. The Institute has created Centre's of Excellence for the promotion of research and transfer of knowledge to the students.

Our institution has created an eco-system to help students develop deep learning, acquire Higher order skills, innovate and develop new products.

1. **Centres of Excellence(COE)**

The Centres of Excellence are set up in collaboration with

- **Amphisoft Technologies Private Limited**
  - **for Artificial Intelligence and Data Science skill development,**
- **KCARDS**
  - **for Embedded system Research and development,**
- **National Instruments**
  - **for innovations using Lab view,**
- **Texas instruments**
  - **For industrial automation,**
- **Kalam interdepartmental innovation centre.**
  - **Inter disciplinary product innovation.**

Start up eco system

Kathir college of engineering has created an eco system to help students to venture into product development and commercialization. KCE has signed an MOU with amphisoft technologies to provide necessary expertise to incubate startups and promote Entrepreneurship skills in students at a young age.

The Startup studios at the Institution include

1. **ASICplay – a cloud based IC design learning platform**
2. **TrustGreenz – an agricultural based start-up;**

3. Freshstory – An Artificial intelligence based business development start up;
4. Fibres & Fabrics – A data automation engine for logistic management in Textile industry
5. Ariel bots – a robotics based start-up for harvesting automation in Tea industry.

The selection process for incubation training includes technical and aptitude test, followed by interview by industry experts.

Tech enabled learning platform

The Institution has a distinct advantage of implementing an Artificial Intelligence blended teaching-learning process and a digitally enabled campus through Ebox – a learning portal.

The Ebox platform is designed based on the blooms taxonomy which is the primary learning requirement for outcome based education. The contents of the practice session in Ebox portal is created by the faculty members of each department of our institution to enhance the learning, exploring, analyzing, designing skills of the students and an assessment based on these skills. The portal is enabled 24/7 and the students can practice at their convenience.

The platform also has the capacity to learn the problem solving skills of the students and provides longitudinal digital profile(LDP).

This LDP enables the faculty members to assess, support and equip the students to overcome their skill gaps. It also helps in preparing the students to be competent enough to be successful in campus placements.

File Description	Documents
Upload any additional information	View File
Paste link for additional information	http://kathir.ac.in/centre-of-excellence/, https://kathir.ac.in/wp-content/uploads/2022/files/INNOVATION-ECOSYSTEM.pdf

3.2.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the year

3.2.2.1 - Total number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship year wise during the year

7

File Description	Documents
Report of the event	View File
Any additional information	View File
List of workshops/seminars during last 5 years (Data Template)	View File

3.3 - Research Publications and Awards

3.3.1 - Number of Ph.Ds registered per eligible teacher during the year

3.3.1.1 - How many Ph.Ds registered per eligible teacher within the year

2

File Description	Documents
URL to the research page on HEI website	http://kathir.ac.in/research-collaboration/
List of PhD scholars and their details like name of the guide , title of thesis, year of award etc (Data Template)	View File
Any additional information	View File

3.3.2 - Number of research papers per teachers in the Journals notified on UGC website during the year

3.3.2.1 - Number of research papers in the Journals notified on UGC website during the year

17

File Description	Documents
Any additional information	View File
List of research papers by title, author, department, name and year of publication (Data Template)	View File

3.3.3 - Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during the year

3.3.3.1 - Total number of books and chapters in edited volumes/books published and papers in national/ international conference proceedings year wise during year

6

File Description	Documents
Any additional information	View File
List books and chapters edited volumes/ books published (Data Template)	View File

3.4 - Extension Activities

3.4.1 - Extension activities are carried out in the neighborhood community, sensitizing students to social issues, for their holistic development, and impact thereof during the year

Extension activities for social impact

Kathir college of engineering encourages active participation of students in programs involving social issues.

- **NSS, YRC**

Our students actively participated in community service activities through National Service Schemes conducted by Kathir College of Engineering. NSS volunteers have addressed various social issues which include

- **Cleanliness,**
- **Blood donation,**
- **Tree plantation,**
- **Yoga**

- meditation

- Sensitization programs of social issues for students
  - Environmental awareness
  - Women empowerment
  - National integrity
  - Financial literacy
  - Language workshop(French)
  - Literary festival

The Institution also organized ‘Thiruvalluvar Vizha’honouring great tamil poet Thiruvalluvar and conducted many events for nearby school students. The theme of the competitions was related to social issues. The best presentations were awarded in a separate function in the presence of renowned Tamil poets and speakers. The students were exposed to the noble preaching of the renowned poet and actively participated in the function.

- Community sensitization programs
  - Road safety week,
  - Voter awareness programs
- Personality development

The Institute also actively involves the students in various club activities thereby contributing to their overall holistic development. The club activities enable the students to overcome their inhibitions and actively contribute to the society and environment.

These activities have profound positive impact on the students, and it also helps in developing relationship of students with community, leadership skills and overall confidence of students.

- Fitness workshop
- Workshop on Writing in style

File Description	Documents
Paste link for additional information	Nil
Upload any additional information	View File

3.4.2 - Number of awards and recognitions received for extension activities from government / government recognized bodies during the year

3.4.2.1 - Total number of awards and recognition received for extension activities from Government/ Government recognized bodies year wise during the year

1

File Description	Documents
Any additional information	View File
Number of awards for extension activities in last 5 year (Data Template)	View File
e-copy of the award letters	View File

3.4.3 - Number of extension and outreach programs conducted by the institution through NSS/NCC/Red cross/YRC etc., (including the programmes such as Swachh Bharat, AIDS awareness, Gender issues etc. and/or those organized in collaboration with industry, community and NGOs) during the year

3.4.3.1 - Number of extension and outreach Programs conducted in collaboration with industry, community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., during the year

16

File Description	Documents
Reports of the event organized	View File
Any additional information	View File
Number of extension and outreach Programmes conducted with industry, community etc for the during the year (Data Template)	View File

3.4.4 - Number of students participating in extension activities at 3.4.3. above during year

3.4.4.1 - Total number of Students participating in extension activities conducted in collaboration with industry, community and Non- Government Organizations such as Swachh Bharat, AIDs awareness, Gender issue etc. year wise during year

450

File Description	Documents
Report of the event	View File
Any additional information	View File
Number of students participating in extension activities with Govt. or NGO etc (Data Template)	View File

3.5 - Collaboration

3.5.1 - Number of Collaborative activities for research, Faculty exchange, Student exchange/ internship during the year

3.5.1.1 - Number of Collaborative activities for research, Faculty exchange, Student exchange/ internship year wise during the year

81

File Description	Documents
e-copies of related Document	View File
Any additional information	View File
Details of Collaborative activities with institutions/industries for research, Faculty	View File

3.5.2 - Number of functional MoUs with institutions, other universities, industries, corporate houses etc. during the year

3.5.2.1 - Number of functional MoUs with Institutions of national, international importance, other universities, industries, corporate houses etc. year wise during the year

10

File Description	Documents
e-Copies of the MoUs with institution./ industry/corporate houses	View File
Any additional information	View File
Details of functional MoUs with institutions of national, international importance, other universities etc during the year	View File

INFRASTRUCTURE AND LEARNING RESOURCES

4.1 - Physical Facilities

4.1.1 - The Institution has adequate infrastructure and physical facilities for teaching- learning. viz., classrooms, laboratories, computing equipment etc.

KCE has a well-developed green campus of 7.5 acres; it is equipped with modern facilities and learning resources to achieve academic excellence according to its vision and strategic objectives. The college has adequate number of class rooms and laboratories as per norms to continue the academic activity. Following facilities are available in our campus.

Class Rooms:

KCE has 34spacious and well ventilated classrooms, each equipped with required number of desks, benches, and black- boards. Five classrooms have been earmarked and equipped with smart boards and ten classrooms are equipped with LCD projectors.These ICT facilities shall enhance students interactive learning and knowledge acquisition.

Laboratories and Workshops:

Twenty six well equipped laboratories and one workshop cater to the students practical learning. These laboratories help the students acquire hands on experience thereby enhancing their knowledge and skill. The experiments are designed to be conducted using latest equipments and the experimental results are analyzed using computers. In addition to this the computer centers are also equipped with latest versions of softwares and simulation tools.

Library:

A library is the heart of an academic institution. Our institution encourages all students and staff members to make the best use of the library that has been carefully built up since the inception of the college. The library is housed in a spacious area of 625 sq.m., fully computerized and air-conditioned with Reference Section, Magazine Section and Stack Area. Presently there are 29,000 books and reference volumes and numerous magazines in all relevant streams of engineering and management, stacked for the benefit of staff and students.

Digital Library:

Our library houses a set of computers equipped with e-book, e-contents, e-journals, e-magazines to enable students to acquire wide scope of knowledge.

Seminar Halls:

KCE has a fully furnished auditorium and it can accommodate 600 students. KCE also has two seminar halls with capacity of 150 and 100 students, respectively.

Renewable Power Source:

As one of the green campus initiative our institution has installed solar plants at various locations in the campus. KCE has an installed capacity of 30 kW renewable solar power source which ensures a regular and reliable power supply. In addition, KCE has a diesel generator set power back up for the campus as well as for both hostels with a capacity of 80 KVA.

Safety and Surveillance:

For safety and surveillance purpose, KCE has installed 50 CCTV cameras with recording facilities in the campus. Apart from surveillance, the institution has employed sufficient number of security personnel to maintain campus safety and discipline.

File Description	Documents
Upload any additional information	View File
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/4.1.1.pdf

4.1.2 - The Institution has adequate facilities for cultural activities, sports, games (indoor, outdoor), gymnasium, yoga centre etc.

Kathir College of Engineering inculcates holistic personality development of students, by providing them necessary facilities apart from academics.

Cultural activities:

The students of our institution are encouraged to actively

participate in cultural events on and off the campus. This enables them to hone the organizational skills and special talents.

Cultural activities such as vocal singing, solo dance and group dance are performed by students during intra-department competitions. A devoted 'Fine Arts' club is functional in the college so as to bring out the hidden talents of the students. In addition, students are motivated to participate in other college cultural festivities to have an all-round development. Several students across departments take part in cultural events and bag prizes and bring laurels to the college.

Annual cultural festival:

An annual cultural event has been conducted every year to bring out and display the fine arts skill of the students. The event is planned, organized and conducted by the students. The event provides the platform to recognize and appreciate the cultural diversity of our institution.

Students are encouraged to actively participate in indoor games. Sports activities such as Volley ball, Shuttle Badminton and Basketball are being carried out in the sports arena by students after curriculum hours as well as on sports periods. For the lovers of football, an exclusive ground is dedicated and District-wise, Intra-College level, Regional and State-wise tournaments are organized at regular intervals.

Sports and Games:

Physical facilities:

- **Indoor games includes**
  - **Carom**
  - **Chess**
  - **Table Tennis**
- **Outdoor games includes**

- **Volley ball**
- **Cricket**
- **Shuttle Badminton**
- **Basketball**
- **Football**

Annual sports festival:

KCE conducts sports day every year. It is a platform where the students exhibit their sports skills. This also enables them to compete in inter college events.

Fitness center:

Gymnasium:

Round the clock fully-furnished inbuilt gymnasium is also available in the campus for the physical well-being of Day-scholar and Hostel students.

Yoga center:

The mental fitness of the faculty and students are taken care of by providing Yoga and meditation sessions in periodic intervals. External yoga experts are invited to conduct the sessions.

File Description	Documents
Upload any additional information	View File
Paste link for additional information	https://kathir.ac.in/wp-content/uploads/2022/files/4.1.2.pdf

4.1.3 - Number of classrooms and seminar halls with ICT- enabled facilities such as smart class, LMS, etc.

18

File Description	Documents
Upload any additional information	View File
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/4.1.3_ICT_facilities.pdf
Upload Number of classrooms and seminar halls with ICT enabled facilities (Data Template)	View File

4.1.4 - Expenditure, excluding salary for infrastructure augmentation during the year (INR in Lakhs)

4.1.4.1 - Expenditure for infrastructure augmentation, excluding salary during the year (INR in lakhs)

218.7

File Description	Documents
Upload any additional information	View File
Upload audited utilization statements	View File
Upload Details of budget allocation, excluding salary during the year (Data Template	View File

4.2 - Library as a Learning Resource

4.2.1 - Library is automated using Integrated Library Management System (ILMS)

- **Name of ILMS software: MODERNLIB**
- **Nature of automation: Full**
- **Version: Perpetual**
- **Year of Automation: 2008**

KCE library holds the rich collection of more than 29,000 text as well as reference books in the domain of Electronics and Communication Engineering, Computer Science and Engineering, Mechanical Engineering, Civil Engineering, Electrical and Electronics Engineering, Applied Sciences, General Management, etc. It has subscribed to 52 print journals of 'National' as well as 'International' repute, magazines, newspaper and periodicals.

It has subscribed to the E-Resources such as 'DELNET' under which campus wide access to more than 8500 e-books, 9000 e-Journals, 1000 NPTEL & multimedia videos are available for the students use.

File Description	Documents
Upload any additional information	View File
Paste link for Additional Information	https://kathir.ac.in/wp-content/uploads/2022/files/4.2.1.pdf

4.2.2 - The institution has subscription for the following e-resources e-journals e-ShodhSindhu Shodhganga Membership e-books Databases Remote access toe-resources

A. Any 4 or more of the above

File Description	Documents
Upload any additional information	View File
Details of subscriptions like e-journals,e-ShodhSindhu, Shodhganga Membership etc (Data Template)	View File

4.2.3 - Expenditure for purchase of books/e-books and subscription to journals/e- journals during the year (INR in Lakhs)

4.2.3.1 - Annual expenditure of purchase of books/e-books and subscription to journals/e-journals during the year (INR in Lakhs)

2.34

File Description	Documents
Any additional information	View File
Audited statements of accounts	View File
Details of annual expenditure for purchase of books/e-books and journals/e- journals during the year (Data Template)	View File

4.2.4 - Number per day usage of library by teachers and students (foot falls and login data for online access) (Data for the latest completed academic year)

4.2.4.1 - Number of teachers and students using library per day over last one year

517

File Description	Documents
Any additional information	View File
Details of library usage by teachers and students	View File

4.3 - IT Infrastructure

4.3.1 - Institution frequently updates its IT facilities including Wi-Fi

Computer labs are well-equipped with branded computer systems adequately supported by 60 Mbps leased lines for internet connectivity with a wide range of licensed system software and application software.

The institute has 376 computers with the following configurations:

- **Lenovo Thinkcenter M80 Core 2 Duo Processor**
- **Lenovo Thinkcenter M72e i3 Processor**
- **Lenovo Thinkcenter M80 i5 Processor**
- **Lenovo Thinkcenter M72e Dual Core Processor**
- **Dell Vostro 230 Slim Core 2 Duo Processor**
- **Zenta Intel Core i5 Processor.**

The entire campus is connected with LAN. Computer labs and departments are well connected to the internet in order to help students and faculty to carry out their theoretical and practical work. Technicians are available to assist the students to acquire knowledge.

LAN facility: 3-Layer Switching (Core, Distributed and Access) model is implemented to connect all the computers to the network. Core layer switches in the buildings are connected with Optical Fiber Ring Network. This core switching is further extended to Distributed Switching for departments.

Wi-Fi facility: The system administration team extends the complete support to the students by setting and installing

(KAWIFI) Wi-Fi zones at various locations such as Library, Hostels, Department corridors and at the Green lawn area. Staff and Students can access this facility on their Laptops and mobile phones by registering with system administration team.

Intercom Facility: The campus is well connected with a well planned Telecom Network with intercom facilities provided at important locations in the administrative office, library, departments, laboratories and hostels, etc.

CCTV Facility: The entire campus is under the surveillance of Closed Circuit Television facility to monitor the safety, discipline and activities of the students.

File Description	Documents
Upload any additional information	View File
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/wifiphoto.pdf

4.3.2 - Number of Computers

376

File Description	Documents
Upload any additional information	View File
List of Computers	View File

4.3.3 - Bandwidth of internet connection in the Institution

B. 30 - 50MBPS

File Description	Documents
Upload any additional Information	View File
Details of available bandwidth of internet connection in the Institution	View File

4.4 - Maintenance of Campus Infrastructure

4.4.1 - Expenditure incurred on maintenance of infrastructure (physical and academic support facilities) excluding salary component during the year (INR in Lakhs)

4.4.1.1 - Expenditure incurred on maintenance of infrastructure (physical facilities and academic support facilities) excluding salary component during the year (INR in lakhs)

60.5

File Description	Documents
Upload any additional information	View File
Audited statements of accounts	View File
Details about assigned budget and expenditure on physical facilities and academic support facilities (Data Templates)	View File

4.4.2 - There are established systems and procedures for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc.

Laboratory:

Stock registers

Record of equipment’s is maintained in Stock Register.

Maintenance of equipment

Laboratories are regularly maintained. Equipment’s are maintained properly, calibrated and serviced periodically.

Repair and service

Major breakdown maintenance if required, is carried out by external agencies.

Maintenance of Library Facilities:

- **The books and journals are maintained.**

- Book binding is carried out on regular basis for damaged books to avoid further damage.
- Stock verification is done as a part of regular monitoring and control. Pest control is done on regular basis for maintaining books safe from termites.
- Procurement of new books & renew of journals and recommendation for additional books.
- Updating and maintaining of all library records. Addressing issues and grievances of users.
- Update and upgrade the library contents, periodically as per updates in curriculum.

Computers:

- The institute has an adequate number of computers with internet connections and utility softwares.
- Computer systems, UPS, Softwares and Servers are maintained by system admin and Lab-In Charges.
- The computing infrastructure is maintained by the system admin team under the supervision of Dept. of Computer Science and Engineering.

Classrooms, Conference Hall:

- Classrooms, Conference Hall and Auditorium are provided with enough seating capacity and LCD projectors.
- Cleanliness of class rooms and Conference Hall is maintained on a daily basis. Working condition of audio system, LCD projectors etc. is done on regular basis.

Sport complex:

- Physical Director of the institute looks after the sports facilities and the activities.
- The sports equipments are issued to the students as per the schedule of the events.
- Preventive maintenance measures are taken periodically.

- **Physical director is responsible for keeping the record of utilization of sport Facilities, activities held, awards for the students etc.**

File Description	Documents
Upload any additional information	View File
Paste link for additional information	Nil

STUDENT SUPPORT AND PROGRESSION

5.1 - Student Support

5.1.1 - Number of students benefited by scholarships and free ships provided by the Government during the year

5.1.1.1 - Number of students benefited by scholarships and free ships provided by the Government during the year

516

File Description	Documents
Upload self attested letter with the list of students sanctioned scholarship	View File
Upload any additional information	View File
Number of students benefited by scholarships and free ships provided by the Government during the year (Data Template)	View File

5.1.2 - Number of students benefitted by scholarships, free ships etc. provided by the institution / non- government agencies during the year

5.1.2.1 - Total number of students benefited by scholarships, free ships, etc provided by the institution / non- government agencies during the year

456

File Description	Documents
Upload any additional information	View File
Number of students benefited by scholarships and free ships institution / non- government agencies in last 5 years (Date Template)	View File

5.1.3 - Capacity building and skills enhancement initiatives taken by the institution include the following: Soft skills Language and communication skills Life skills (Yoga, physical fitness, health and hygiene) ICT/computing skills

A. All of the above

File Description	Documents
Link to Institutional website	http://kathir.ac.in/gallery/
Any additional information	View File
Details of capability building and skills enhancement initiatives (Data Template)	View File

5.1.4 - Number of students benefitted by guidance for competitive examinations and career counseling offered by the institution during the year

120

5.1.4.1 - Number of students benefitted by guidance for competitive examinations and career counseling offered by the institution during the year

45

File Description	Documents
Any additional information	View File
Number of students benefited by guidance for competitive examinations and career counseling during the year (Data Template)	View File

5.1.5 - The Institution has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases Implementation of guidelines of statutory/regulatory bodies Organization wide awareness and undertakings on policies with zero tolerance Mechanisms for submission of online/offline students' grievances Timely redressal of the grievances through appropriate committees

A. All of the above

File Description	Documents
Minutes of the meetings of student redressal committee, prevention of sexual harassment committee and Anti Ragging committee	View File
Upload any additional information	View File
Details of student grievances including sexual harassment and ragging cases	View File

5.2 - Student Progression

5.2.1 - Number of placement of outgoing students during the year

5.2.1.1 - Number of outgoing students placed during the year

77

File Description	Documents
Self-attested list of students placed	View File
Upload any additional information	View File
Details of student placement during the year (Data Template)	View File

5.2.2 - Number of students progressing to higher education during the year

5.2.2.1 - Number of outgoing student progression to higher education

3

File Description	Documents
Upload supporting data for student/alumni	View File
Any additional information	View File
Details of student progression to higher education	View File

5.2.3 - Number of students qualifying in state/national/ international level examinations during the year (eg: JAM/CLAT/GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/State government examinations)

5.2.3.1 - Number of students qualifying in state/ national/ international level examinations (eg: JAM/CLAT/NET/ SLET/ GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/ State government examinations) during the year

0

File Description	Documents
Upload supporting data for the same	View File
Any additional information	View File
Number of students qualifying in state/ national/ international level examinations during the year (Data Template)	View File

5.3 - Student Participation and Activities

5.3.1 - Number of awards/medals for outstanding performance in sports/cultural activities at university/state/national / international level (award for a team event should be counted as one) during the year

5.3.1.1 - Number of awards/medals for outstanding performance in sports/cultural activities at university/state/ national / international level (award for a team event should be counted as one) during the year.

1

File Description	Documents
e-copies of award letters and certificates	View File
Any additional information	View File
Number of awards/medals for outstanding performance in sports/cultural activities at university/state/national/international level (During the year) (Data Template)	View File

5.3.2 - Institution facilitates students' representation and engagement in various administrative, co-curricular and extracurricular activities (student council/ students representation on various bodies as per established processes and norms)

- **Class committee:**

The class committee comprises of a chairperson who is not associated with the class, faculty advisor, faculty members handling subjects and three students of the concerned class. This committee addresses issues raised by the students regarding the courses of the current semester.

- **Student Council**

The student council enables the students to be an integral part of the decision making process in academic, non-academic and administrative bodies of our institution. The activities of the student council help to impart a sense of ownership and responsibility among the students, and improve their leadership qualities. By understanding the nuances in institutional operations, the students become aware of the social responsibilities and emotionally balanced in taking decisions. The student council composition includes 3 students from each year totaling 12 students and a president, vice president, secretary, treasurer and executive members are nominated out of these students.

- **Sports Council:**

This committee comprises of principal as the chairperson and the physical director as the member secretary. It also includes student members from each class of every department. The role of this committee is to plan the sports activities in the campus.

The sports committee extends financial support to the deserving students to participate in state and national level sports meets.

- **Hostel and Mess Committee:**

The students who are in hostels, will also be a part of the Hostel and Mess committee. This helps them to communicate with the management regarding the facilities required in the hostel.

- **Anti-Ragging Committee:**

The Anti- Ragging committee Constitutes

- **Chairperson**
- **Six Board Members**
- **Six members in Squad (Faculty Members)**

Any student who has a grievance, including abuse, may bring it to the attention of the Chairperson or any of the Committee Members from different departments, who will take appropriate action and resolution.

- **Creating awareness among the students about ragging**
- **Display of anti-ragging warning posts at vital places**
- **Dissemination of Guidelines given by Government of Tamilnadu and supreme court**
- **Regular surprise Inspections**

- **Entrepreneurship Development cell**

- **Entrepreneurship Development Cell (EDC) educates and trains the students who prefer to do business on their own and motivate them to start their own firm.**
- **It trains the students to prepare project reports, to obtain information on technologies and to understand business ethics and start-up procedures**
- **EDC organizes Entrepreneurship awareness camps, Entrepreneurship development programs in the college for the benefit of the students**
- **The cell organizes seminars and workshops periodically. The alumni, who are successful entrepreneurs, are invited as**

resource persons.

- Department Association

The structure of the Department Association is as follows. Students are the main driving force of the association and they hold the positions ranging from Secretary, Joint Secretary, Treasurer and Executive Members. The Head of the Department guides the students as mentors and one another faculty guides the students in managing the association funds. Students actively organize informative Guest lectures, Workshops, Symposiums, National and International Conferences. By participating in the association activities students imbibe the best practices in event management, financial management.

- Training and placement cell

Students coordinators are nominated to the Placement and training committee which will be presided by the Placement officer of our institution.

This committee plans, prepares and monitors the training schedules of the students. The attendance and performance of the students are analysed with the assistance of departments. They also arrange on and off campus placement drives. They collect feedback about the performance of the students from the employers.

Club Activities

Fine arts club

Youth Red cross club

Photography club

Tamil Mandram

The above clubs are meant for overall intellectual development of the students.

10. Grievance Redressal committee

The committee is constituted.

The committee takes action appropriately on thecomplaints received from the students.

File Description	Documents
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/5.3.2.pdf
Upload any additional information	View File

5.3.3 - Number of sports and cultural events/competitions in which students of the Institution participated during the year (organized by the institution/other institutions)

5.3.3.1 - Number of sports and cultural events/competitions in which students of the Institution participated during the year

09

File Description	Documents
Report of the event	View File
Upload any additional information	View File
Number of sports and cultural events/competitions in which students of the Institution participated during the year (organized by the institution/other institutions (Data Template)	View File

5.4 - Alumni Engagement

5.4.1 - There is a registered Alumni Association that contributes significantly to the development of the institution through financial and/or other support services

Yes. An Alumni Association is registered on our campus. Alumni Engagement is an integral part of student support services. The primary objectives of Alumni association are

- To enable interaction between the institution and alumni which promotes mutual understanding and mutual information sharing. WhatsApp groups and other social media are utilized regularly to be in touch with alumni.

- To obtain feedback regarding recent technologies and opportunities, are often collected from alumni. Willing alumni are allowed to make specific contributions to the institute, enabling them to be a part in the process of growth and development of the institution.

- To utilize referral programs in alumni's current organization to drive placement for students with appropriate skills as per the requirement.
- Alumni who are associated with research establishments, interact with students with research inclination. This helps them to understand and pursue research in upcoming areas.

- To organize mentorship programs for creating awareness among the students regarding competitive examination and other recruitment exams conducted by state and central government.

- To provide scholarships for students who have exemplary academic records or have an outstanding sports profile.

- Seminars, workshops and conferences are held in association with the alumni network. This promotes mutual learning and also helps students to learn state of the art technologies.

- To promote multidisciplinary learning by organizing extracurricular activities such as sports events which provide life skills to our students.

- Industry and academia interaction is encouraged through online webinars in association with the alumni network, to enhance practical skills of the students, in turn improving their employability.

- **Annual contests and activities are organized for alumni and their family members to maintain an everlasting relationship with the institute.**

- **To build on these main objectives of the alumni association, we at our institute meticulously organize alumni related events and contests to maintain a cordial relationship with our alumni. This relationship fosters an environment where the institute, the students and our alumni, all benefit mutually.**

File Description	Documents
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/5.4.1.pdf
Upload any additional information	View File

5.4.2 - Alumni contribution during the year (INR in Lakhs) **C. 3 Lakhs - 4Lakhs**

File Description	Documents
Upload any additional information	View File

GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 - Institutional Vision and Leadership

6.1.1 - The governance of the institution is reflective of and in tune with the vision and mission of the institution

Vision:

Strive to promote Excellence in Engineering Education and Research by developing our students as Real-Time Problem solvers thereby contributing to the societal needs

Mission:

- **Providing stake holders an academic ambience to acquire Higher Order Thinking Skills to be technically competent**
- **Imparting required skills in niche areas through our Industry driven Centres of Excellence.**
- **Nurturing critical and creative thinking skills to innovate**

new ideas for solving societal problems and become successful entrepreneurs

Nature of governance

Kathir College of Engineering believes in decentralizing the governance and it's perspective plan aims towards reaching the following metrics based on 6 E's for effective implementation and monitoring are detailed and aligned with Mission statements:

Mission 1:

- **Excelling in Teaching Learning Process**
- **Empowering students in PRIDE (Projects, Research, Innovation, Design & Entrepreneurship) activities**

Mission 2:

- **Enhancing research capacities and Outcomes**
- **Enabling Inclusive and sustainable growth**

Mission 3

- **Extending collaborations and capacity building efforts**
- **Expanding opportunities for societal services**

Perspective Plans

- **Autonomous status**
- **Starting an in-house incubator with atleast 10 start-up firms**
- **Enhancing Research Capabilities and Outcomes**
- **Strengthening collaboration with Industry in Research, Consultancy, Training & Internships**
- **UG in Emerging Areas & PG in Niche Areas**
- **To improve Core Placements**
- **Enhanced Community Engagement**
- **Faculty Competency Building in areas of New Age Technologies & Research**
- **50% of Faculty Members with Doctoral Degree**

Participation of the teachers in the decision making bodies of the institution

Following committees are formed for better governance with faculty members as members:

Planning and Evaluation Committee, Grievance Redressal Committee, Examination Committee, Library Committee, Student Welfare Committee, NSS, YOGA Committee, IQAC-Academic Audit Committee, Timetable Committee, Alumni Association, Discipline Committee, Research Cell & Extension Services Committee, Women Empowerment Committee, Institutional Industry Collaboration Committee and Anti Ragging Committee

File Description	Documents
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/6.1.1.pdf
Upload any additional information	View File

6.1.2 - The effective leadership is visible in various institutional practices such as decentralization and participative management.

1. **Placements and Admissions for the respective departments:**

- **With a view to strengthen the admission and placement process, the leadership team of the institute has decentralized and empowered each department to participate for the betterment of the students.**
- **Each department will have an admission and placement coordinator who will represent the needs of the department to the central coordination cell.**
- **The departmental admission and placement committee shall include senior faculty members as coordinator.**
- **This practice has helped to build a eco system of leadership at the department level. The departments are able to strategize, implement and successfully achieve the desired outcome.**
- **The strategy meetings were conducted at the department level with the participation of all faculty members of the department. This approach enabled contribution by all faculty members. All faculty members weighed in with their experiences, insight and professional contacts.**
- **The decisions about fee concessions for meritorious students, deserving students were also in the purview of the respective departments with due approvals from the institution’s top management.**

- **The department level placement committees are empowered to liaise with the industry contacts to arrange internships and placements for students. They are allowed to visit the industries anytime they are required to. The HOD shall encourage faculty members and students to actively engage in such activities.**

File Description	Documents
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/Committee_list_2020-2021.pdf
Upload any additional information	View File

6.2 - Strategy Development and Deployment

6.2.1 - The institutional Strategic/ perspective plan is effectively deployed

Introduction

A strategic planning framework should be in place for every organisation to grow and thrive. Strategic planning is the process through which an organisation defines its strategy, or direction, and decides how to allocate resources to execute that goal. It might also include control measures for directing the strategy's execution. The strategy plan is formulated through workshop

Kathir College of Engineering will maintain its quality and uniqueness by adhering to a strategy plan based on the following sub-areas:

- **Teaching and Learning Process**
- **Outcome Based Education**
- **Research and Development**
- **Startup Studios**
- **Self learning and Personality Development**

Due to COVID pandemic there has been a necessity for transition from traditional teaching to online teaching. E-BOX Edu-Tech platform was used to implement Blended Learning methods. Students were given username and password to use the platform to attend the classes and do practice questions and problems.

The online mode of teaching and practice sessions were much useful and effective to implement outcome based education. The student skills were tested using the online platform and practice sessions. It was achieved by creating questions with the six levels of Revised Blooms Taxonomy. The students were well motivated to attend the practice sessions.

Five Year Strategic Plan 2021-2026

The action plans in the previously listed sub areas are suitably linked to the following tasks in order for KCE to achieve the given milestones.

- **Outcome Based Teaching and Learning Process**
- **Empowering the students to becoming Entrepreneurs**
- **Developing Research and Development**
- **Industry Collaborated Research Opportunities**

- **Maintaining Substantial Growth in Pride Activities**

Planned Milestones

- **Strengthening Industrial Connect relationships to create research and internship opportunities**
- **Establishing start up studios to make the students as Entrepreneurs**
- **Tech Enabled Learning and Skilling**
- **Building faculty competencies to provide outcome based education**
- **Attaining NBA accreditation and Autonomous Status**

File Description	Documents
Strategic Plan and deployment documents on the website	View File
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/6.2.1_SPDD.pdf
Upload any additional information	View File

6.2.2 - The functioning of the institutional bodies is effective and efficient as visible from policies, administrative setup, appointment and service rules, procedures, etc.

Kathir college of engineering has an elaborate hierarchical structure to effectively administer the institution. The details of the structure have been illustrated through an organogram.

Policies

The broad policies of the institute are framed by the leadership of the institute. The policies are in tune with the vision and mission of the institute. The subordinate bodies strategize and implement the policies to achieve the desired outcome.

Administrative setup

The principal of the institution is the head of the administrative setup. The leadership has provided necessary procedures to carry out the administrative work.

- **The HODs are provided necessary instructions by the head of the institution for executing the administrative functions of their respective departments**
- **The personnel heading the infrastructure and maintenance body, under the guidance of the principal, carries out the daily, weekly and monthly routines with regard to maintenance of the campus.**
- **The administration of Hostel for men and women students are supervised by the wardens under the guidance of the head of the institution.**
- **IQAC cell is empowered through the guidelines provided by the principal.**
- **Administration of library, placement, exam cell, R&D cell, sports, welfare committees, transport are conducted as per norms suggested by the leadership.**

Appointment and service rules, procedures

The appointment of teaching and non-teaching staff, service rules and procedures are followed by the guidelines provided by the leadership team.

File Description	Documents
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/KCE-HR%20Policy.pdf
Link to Organogram of the institution webpage	http://kathir.ac.in/organogram/
Upload any additional information	View File

6.2.3 - Implementation of e-governance in areas of operation Administration Finance and Accounts Student Admission and Support Examination

A. All of the above

File Description	Documents
ERP (Enterprise Resource Planning)Document	View File
Screen shots of user inter faces	View File
Any additional information	View File
Details of implementation of e-governance in areas of operation, Administration etc(Data Template)	View File

6.3 - Faculty Empowerment Strategies

6.3.1 - The institution has effective welfare measures for teaching and non- teaching staff

At Kathir College of Engineering, welfare of the members of faculty is given foremost importance. Existing welfare measures for teaching and non-teaching staff are listed below in relation to this.

Welfare measures for teaching and nonteaching staff

Financial support

· All statutory and Medical Leave for both teaching and nonteaching staff

· Maternity Leave for Eligible Members of Faculty

· Advances for festivals

· Fee Concession for the wards of the teaching and nonteaching staff

· Hostel and mess facilities at affordable cost

· Sponsorships for publications and conferences

· Transport services are available for both teaching and non-teaching staff.

Academic support

· Sponshorship for Ph.D programme.

· Internet and WiFi for all the members of staff

· Skill development and FDP for Effective Teaching and Learning

· Summer and Winter Vacations for Eligible Faculty Members

· The library subscribes to journals and magazines to support the research activities

Other support

· Gym Facility is available in evening hours

· Club and sports activities for Faculty members

· Faculty members are provided with Individual cabin and system to facilitate good ambience.

· The Women Empowerment Cell was formed in order to provide opportunities for female faculty members to thrive and acquire momentum.

In a nutshell, the Institution strives hard to keep the members of faculty happy and healthy.

File Description	Documents
Paste link for additional information	Nil
Upload any additional information	View File

6.3.2 - Number of teachers provided with financial support to attend conferences/ workshops and towards membership fee of professional bodies during the year

6.3.2.1 - Number of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies during the year

4

File Description	Documents
Upload any additional information	View File
Details of teachers provided with financial support to attend conference, workshops etc during the year (Data Template)	View File

6.3.3 - Number of professional development /administrative training programs organized by the institution for teaching and non-teaching staff during the year

6.3.3.1 - Total number of professional development /administrative training Programmes organized by the institution for teaching and non teaching staff during the year

6

File Description	Documents
Reports of the Human Resource Development Centres (UGCASC or other relevant centres).	View File
Reports of Academic Staff College or similar centers	View File
Upload any additional information	View File
Details of professional development / administrative training Programmes organized by the University for teaching and non teaching staff (Data Template)	View File

6.3.4 - Number of teachers undergoing online/face-to-face Faculty development Programmes (FDP) during the year (Professional Development Programmes, Orientation / Induction Programmes, Refresher Course, Short Term Course etc.)

6.3.4.1 - Total number of teachers attending professional development Programmes viz., Orientation / Induction Programme, Refresher Course, Short Term Course during the year

90

File Description	Documents
IQAC report summary	View File
Reports of the Human Resource Development Centres (UGCASC or other relevant centers)	View File
Upload any additional information	View File
Details of teachers attending professional development programmes during the year (Data Template)	View File

6.3.5 - Institutions Performance Appraisal System for teaching and non- teaching staff

After one year of service, each employee's performance is evaluated on a yearly basis. The goal is not only to evaluate performance in accordance with established norms, but also to discover possible areas for development that might eventually lead

to further advancement and growth of the individual.

The performance appraisal of the teaching and nonteaching staff is carried out based on the appraisal system given below.

ACADEMIC PERFORMANCE INDICATORS

Appraisal system for teaching staff

Teaching learning

Subject results

Feedback by students about the staff

Student mentoring

Faculty members involvement in student welfare

Guidance provided by the faculty members to the students

Helping students in placements

Focus towards higher education

Registered for PH.D

No of journal and conference publication

Research funding if any

General traits

Attitude

Team work

Sincerity

Commitment

Non teaching

General traits

Attitude

Team work

Sincerity

Commitment

Skill upgradation

The following are the key aspects of the performance appraisal system:

Teaching Staff

- Faculty members are explained well in advance about the performance appraisal system.
- AT the end of the academic year, The teaching and nonteaching staff shall submit the API.
- Faculty members whose promotions are due are proposed based on their Academic Performance Indicator (API) score and must appear before the screening-cum-selection committee.
- Evauation of the API of individual staff are assessed by respective HoD and Principal
- The assessment of the HODs are done by the principal.

Non-Teaching Staff

The appraisal of Non-Teaching staff will be done on following parameters:

Principal will carry out a personal interaction with library and office staff. After evaluating all parameters, the remark will be given by Principal.

S.No

Observations/Conclusions

Remedial Action

1.

Excellent

Not required. However, staff will be encouraged to maintain the performance.

2.

Appreciable

Not required. Staff will be encouraged for further improvement if required.

3.

Average

Need improvement in weaker areas. Motivation and support will be given for improvement.

4.

Poor

Need overall improvement. Motivation and support will be given for improvement.

File Description	Documents
Paste link for additional information	**Nil**
Upload any additional information	View File

6.4 - Financial Management and Resource Mobilization

6.4.1 - Institution conducts internal and external financial audits regularly Enumerate the various internal and external financial audits carried out during the year with the mechanism for settling audit objections within a maximum of 200 words

To maintain financial compliance, the Institution has created a process for performing annual internal and external audits on financial transactions. The institution's internal finance committee conducts an internal audit every six months. The committee extensively examines the revenue and spending information, and the internal audit compliance report is sent to the institution's administration via the Principal of our institution. An external audit is performed once a year by a third

party.

- Before the start of each calendar year, the principal delivers to the management a budget allocation plan based on the suggestions provided by the heads of all departments.
- The college budget contains recurrent expenses like salaries, power, internet charges, maintenance costs, stationery, other consumable charges, and so on, as well as non-recurring expenses like lab equipment purchases, furniture, and other development costs.
- The accounting department will monitor the costs in accordance with the budget set by the management.
- The depreciation costs of numerous items acquired in previous years are also calculated.
- On a semi-annual basis, an internal finance committee audits all vouchers.
- The costs incurred under various headings are extensively scrutinized by examining the bills and vouchers.
- If a disparity is discovered, it is brought to the attention of the principal.
- According to government regulations, the college's accounts are audited on a regular basis by chartered accountants.
- After the audit, the auditor checks that all payments have been lawfully approved, and the report is given to the management for approval.
- Any questions that arise throughout the auditing process will be addressed as soon as possible, together with the supporting documentation, and within the time restrictions specified.
- During the prior years, the institution received no substantial audit objections.

All of these techniques demonstrate the institution's financial openness and commitment to financial accounting discipline. The audited statement is fully signed by the management and chartered accountant authority.

File Description	Documents
Paste link for additional information	Nil
Upload any additional information	View File

6.4.2 - Funds / Grants received from non-government bodies, individuals, philanthropers during the year (not covered in Criterion III)

6.4.2.1 - Total Grants received from non-government bodies, individuals, Philanthropers during the year (INR in Lakhs)

1

File Description	Documents
Annual statements of accounts	View File
Any additional information	View File
Details of Funds / Grants received from of the non-government bodies, individuals, Philanthropers during the year (Data Template)	View File

6.4.3 - Institutional strategies for mobilization of funds and the optimal utilization of resources

- The Institute maintains and adheres to a well-planned approach for mobilizing funding and resources.
- The procedure involves the institute's numerous committees, as well as the Department Heads and the Accounts Office.
- The Institute has developed certain particular regulations for the use of funds and resources.
- Mobilization of Funds, the student tuition fee is the institute's primary source of income.
- Seminars and workshops are sponsored by a variety of government and non-government organizations.
- Alumni Contribution
- Sponsorships are sought from individuals and corporate for cultural events and fests.
- A finance committee has been formed to oversee the most efficient use of cash for different recurring and non-recurring expenditures.
- The procurement committee solicits vendor quotes for the acquisition of equipment, computers, and books.
- The Principal, finance and procurement committees review the quotations before making a final selection based on characteristics such as cost, quality, and terms of service.
- The principal, finance, and procurement committees, verify that expenditures stay within the budget.
- In the event that the expenditure exceeds the budget, management advice is sought.
- The college budget is prepared by the Principal and Heads of Departments prior to the start of the fiscal year.
- The institutional budget comprises recurrent expenses such as salaries, power and internet charges, as well as

stationary and other maintenance fees.

- It contains anticipated costs including lab equipment purchases, furnishings, and other development costs.
- The budget is scrutinized and approved by the top management and Governing Council.
- The finance department and the procurement department keep track of whether spending are exceeding the budget.
- At the end of the financial year, statutory auditors are hired to certify the accounts.
- The grants received by the college are also audited by the certified auditors.
- The college's goal is to promote research, development, consulting, and other related activities by involving academic members at various levels.
- Faculty who show initiative and win major funds for R&D or to improve the institute's infrastructure will be encouraged and will receive particular recognition.
- Depending on availability of finance, faculty may be granted travel grants to deliver research papers at or attend National Conferences in India.
- Beyond regular college hours, the existing physical infrastructure is efficiently utilized to conduct remedial classes, co-curricular activities/extra-curricular activities, and parent-teacher meetings.
- The college's facilities are used as an examination center for both government and university exams.
- For the benefit of students, professors, and alumni, the library operates outside of college hours.

File Description	Documents
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/6.4.3.pdf
Upload any additional information	View File

6.5 - Internal Quality Assurance System

6.5.1 - Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes

Internal Quality Assurance Cell (IQAC)

The IQAC's primary focus is to create a system for conscious, consistent, and catalytic improvement in the overall performance of the Institutions. The IQAC will make a significant and

meaningful contribution to the Institution's post-accreditation phase. During the post-accreditation period, the IQAC will direct all of the Institution's efforts and measures toward promoting academic excellence.

The objectives of the IQAC are

- **To ensure continuous improvement in the Institution's overall operations.**
- **To assure stakeholders associated with education, namely parents, teachers, staff, employers, funding agencies, and society in general, of its own quality and probity.**
- **To develop a quality system for conscious, consistent, and planned action to improve the academic and administrative performance of the institution.**
- **To promote measures for driving institutional functioning toward quality enhancement and institutionalisation of best practises.**

Benefits

IQAC will facilitate / contribute:

- **To ensure a heightened level of clarity and focus in institutional functioning towards**

quality enhancement and internalization of the quality culture NAAC for Quality and

Excellence in Higher Education.

- **To promote measures for the Institution's operation aimed at improving quality through the establishment of a quality culture and the institutionalisation of best practises.**
- **To improve institutional functioning by providing a solid foundation for decision making.**
- **To serve as a dynamic system for changing the institution's quality.**

Functions

Developmentandapplicationofqualitybenchmarks/parametersfortheInstitution'svariousacademicandadministrativeactivities.

Arrangement for feedback responses from students, parents and

other stakeholders on quality related processes of the institution.

• Dissemination of data on higher education's numerous quality indicators.

• Records of the many initiatives and activities that lead to quality improvement.

• Workshops and seminars on quality-related topics, as well as the promotion of quality circles.

• Preparation of the Annual Quality Assurance Report (AQAR) based on the quality parameters to be submitted to NAAC.

IQAC has contributed significantly for institutionalizing the quality assurance strategies and processes, the following two practices are the results of IQAC initiatives

To provide superior technical education to students, the institution uses a collaborative learning process. It entails groups of students cooperating to solve a problem, perform a task, or produce a product. It is founded on the notion that learning is a natural and social behaviour in which participants converse with one another.

The IQAC spearheaded efforts to successfully adopt contemporary technology in the Institute's administrative functioning via ICT and alternative energy sources, particularly the 35kW increase in solar power. Wifi and LAN facility upgrades have substantially improved the quality of the teaching-learning experience.

File Description	Documents
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/IQAC Report Summary 20 21.pdf
Upload any additional information	View File

6.5.2 - The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms and recorded the incremental improvement in various activities

The IQAC evaluates the teaching-learning process regularly and takes initiatives to improve its quality.

The Academic Calendar is planned, exhibited, and circulated throughout the Institute, and followed strictly.

The Academic Calendar includes information about holidays, Continuous Internal Assessment schedules, and starting, last working day of the semesters.

All newly enrolled students must attend the Orientation Program, during which they will learn about the Institute's philosophy, unique educational system, teaching-learning process, continuous evaluation system, mandatory core courses, numerous extracurricular activities, discipline, and culture. A guided tour of the campus and its extensive facilities is also given to all students.

Every student receives a Student Record, which contains all pertinent information for students.

Before the semester begins, students are informed of the timetable, program structure, and course syllabi.

Important announcements are delivered through regular circulars and The HODs, and tutors supervise attendance and class behavior.

The tutor and members of the Discipline Committee undertake random inspections to ensure that classes run smoothly.

Students participate in Class Committees regularly to provide comments, and appropriate efforts are taken to improve the teaching-learning process.

Students' feedback is also taken into account by faculties for their specific courses, by tutors, and directly by IQAC. Students are also welcome to provide feedback and suggestions to the Principal.

The Principal, HODs, and individual faculty members receive proper analysis and feedback.

Based on the IQAC suggestions, the teaching-learning processes are assessed and changes are implemented.

The following are some of the key efforts undertaken in the recent five years:

- **The practice-based learning process is initiated through the E-Box platform**
- **Automation of Admission Processes - Provision for online fee payment**

Introduction of Artificial Intelligence and Data Science program

File Description	Documents
Paste link for additional information	**Nil**
Upload any additional information	View File

6.5.3 - Quality assurance initiatives of the institution include: Regular meeting of Internal Quality Assurance Cell (IQAC); Feedback collected, analyzed and used for improvements Collaborative quality initiatives with other institution(s) Participation in NIRF any other quality audit recognized by state, national or international agencies (ISO Certification, NBA)

B. Any 3 of the above

File Description	Documents
Paste web link of Annual reports of Institution	http://kathir.ac.in/wp-content/uploads/2022/files/IQAC_AnnualReport_20-21.pdf
Upload e-copies of the accreditations and certifications	View File
Upload any additional information	View File
Upload details of Quality assurance initiatives of the institution (Data Template)	View File

INSTITUTIONAL VALUES AND BEST PRACTICES

7.1 - Institutional Values and Social Responsibilities

7.1.1 - Measures initiated by the Institution for the promotion of gender equity during the year

Describe gender equity & sensitization in curricular and co-curricular activities, facilities for women on campus etc., within 200 words

- **The institute addresses gender equity, gender sensitivity on a continuous basis throughout the year.**
- **The institution encourages recruitment of women employees for teaching and nonteaching roles.**

Curricular and co-curricular activities

- **Experts on the topic are invited to deliver seminars/workshops to sensitize our students and faculty members to enable them to treat each other with equity, esteem, and respect.**
- **Separate NSS unit functions with girl student members to encourage their participation in serving the society**
- **Celebration of International women’s day in the campus**

Safety and security

Installation of Surveillance cameras

- **The campus is always under CCTV surveillance**
- **CCTV is installed at vital locations. All video feeds of the CCTVs installed at all locations are recorded. This helps to have recourse to videos of any untoward incident if any to initiate investigations.**
- **The presence of CCTV installations gives a sense of safety and security on a real-time basis.**
- **The running feeds of the various CCTV locations are displayed on a television in Principal’s chamber and Chairman’s chamber.**
- **The facility of CCTV installation is augmented by security personnel posted at the main gate, portico of the main building and at other points in the campus.**

Hostel

- **The Hostel procedures for leaving the campus and entering the campus are all recorded manually in the report cards monitored by the Hostel authorities.**
- **The boys and girls Hostel is manned by separate wardens and security.**

- **The entry of visitors are strictly monitored.**

Day care centre/ gymnasium for kathir group of institutions

- **A separate day care centre has been setup to help women employees**
- **Gymnasium facility has been provided for women employees.**

File Description	Documents
Annual gender sensitization action plan	https://kathir.ac.in/wp-content/uploads/2022/files/annualgendrsens.plan_weblink.pdf
Specific facilities provided for women in terms of:a. Safety and security b. Counseling c. Common Rooms d. Day care center for young children e. Any other relevant information	https://kathir.ac.in/wp-content/uploads/2022/files/facilty_women_weblink.pdf

7.1.2 - The Institution has facilities for alternate sources of energy and energy conservation measures Solar energy Biogas plant Wheeling to the Grid Sensor-based energy conservation Use of LED bulbs/ power efficient equipment

A. 4 or All of the above

File Description	Documents
Geo tagged Photographs	View File
Any other relevant information	View File

7.1.3 - Describe the facilities in the Institution for the management of the following types of degradable and non-degradable waste (within 200 words) Solid waste management Liquid waste management Biomedical waste management E-waste management Waste recycling system Hazardous chemicals and radioactive waste management

Our institution strives to minimize the waste and thereby protect the environment. The strategy adopted is reduce, reuse and recycle.

Solid waste management

Bio degradable

- **The food waste of the mess facility is collected and given to the pig farm.**
- **The institute prides itself on a well-kept campus that is possible because of good waste management practices.**
- **The waste from the trees, gardens in the campus are periodically removed and handed over to nearby composting yards.**

Non-degradable waste

Usage of Plastics is banned inside the campus and sufficient awareness has been created. All packaging related plastics are handed over to third party vendors who are capable of recycling .

Liquid waste management

The sewerage facility is well functioning and maintained periodically. The treated water is utilized for watering the gardens. The solid waste generated is handed over to third party vendors who are capable of producing manure.

E-waste management

The institution has created a policy of segregating the unusable/ condemned computers and accessories. Post segregation these items are handed over to the third party vendors who are experts in E waste management.

Waste recycling system

The stationery waste like used papers (after their validity time is completed) is disposed of to nearby shops dealing in such waste

File Description	Documents
Relevant documents like agreements / MoUs with Government and other approved agencies	View File
Geo tagged photographs of the facilities	View File

7.1.4 - Water conservation facilities available in the Institution: Rain water harvesting Bore well /Open well recharge Construction of tanks and bunds Waste water recycling Maintenance of water bodies and distribution system in the campus

A. Any 4 or all of the above

File Description	Documents
Geo tagged photographs / videos of the facilities	View File
Any other relevant information	View File

7.1.5 - Green campus initiatives include

7.1.5.1 - The institutional initiatives for greening the campus are as follows:

A. Any 4 or All of the above

1. **Restricted entry of automobiles**
2. **Use of bicycles/ Battery-powered vehicles**
3. **Pedestrian-friendly pathways**
4. **Ban on use of plastic**
5. **Landscaping**

File Description	Documents
Geo tagged photos / videos of the facilities	View File
Various policy documents / decisions circulated for implementation	View File
Any other relevant documents	View File

7.1.6 - Quality audits on environment and energy are regularly undertaken by the institution

7.1.6.1 - The institutional environment and

A. Any 4 or all of the above

energy initiatives are confirmed through the following 1.Green audit 2. Energy audit 3.Environment audit 4.Clean and green campus recognitions/awards 5. Beyond the campus environmental promotional activities

File Description	Documents
Reports on environment and energy audits submitted by the auditing agency	View File
Certification by the auditing agency	View File
Certificates of the awards received	View File
Any other relevant information	View File

7.1.7 - The Institution has disabled-friendly, barrier free environment Built environment with ramps/lifts for easy access to classrooms. Disabled-friendly washrooms Signage including tactile path, lights, display boards and signposts Assistive technology and facilities for persons with disabilities (Divyangjan) accessible website, screen-reading software, mechanized equipment 5. Provision for enquiry and information : Human assistance, reader, scribe, soft copies of reading material, screen reading

A. Any 4 or all of the above

File Description	Documents
Geo tagged photographs / videos of the facilities	View File
Policy documents and information brochures on the support to be provided	View File
Details of the Software procured for providing the assistance	View File
Any other relevant information	View File

7.1.8 - Describe the Institutional efforts/initiatives in providing an inclusive environment i.e., tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and other diversities (within 200 words).

Cultural harmony

- **The institution consciously recognizes diversity in language, religion and other societal diversity by means of celebrating a variety of events, and festivals.**
- **The institution encourages religious tolerance by maintaining harmonious atmosphere by celebrating various cultural and religious festivals**
- **The celebrations of events like women's day, Tamil New Year, Onam etc. are also proof of the diversity in the composition of students, faculty members and non-teaching staff.**
- **National integration day was celebrated.**

communal socioeconomic initiatives

- **The institute provides merit scholarships for deserving socially and economically backward community students.**
- **This helps the institute in providing equity in access to professional education for students from all economic strata of the society.**
- **Blood donation camp is organized every year where students and faculty contribute for the noble cause of serving society.**
- **Kathir faculty members contributed to the development of contents for NEET online coaching through Ebox platform. The neet content was provided free of cost to Tamilnadu government schools.**
- **In Madurai alone, more than 100 government school students who underwent neet coaching through Ebox, got qualified.**

Linguistic inclusiveness

Kathir college of engineering admits students from other states. This diversity encourages equality of cultures within the campus.

File Description	Documents
Supporting documents on the information provided (as reflected in the administrative and academic activities of the Institution)	View File
Any other relevant information	View File

7.1.9 - Sensitization of students and employees of the Institution to the constitutional obligations: values, rights, duties and responsibilities of citizens

Kathir college of engineering periodically arranges programs inviting students and parents to sensitize them on their expected societal behavior, rights and responsibilities.

Voters awareness program

Voter awareness programs are organized to create awareness among students and faculty members to exercise their constitutional rights during elections

Safety week

The institute has organized awareness campaigns for wearing helmets while driving two-wheelers emphasizing the obligation of the students, general public to drive safe.

Independence day and Republic day

Every year our institution celebrates by highlighting the importance of freedom and creating awareness of the constitutional obligations.

International yoga day

The physical and mental health of students and faculty members are nurtured through regular classes. The importance of yoga is highlighted by celebrating international yoga day in the campus.

Cleanliness drive

The NSS unit of our college actively engages the students in the cleanliness drive inside and outside the campus.

Teachers day

A teacher plays a crucial role in the transformation of the society. Teacher's day is celebrated to honour them by the students.

File Description	Documents
Details of activities that inculcate values; necessary to render students in to responsible citizens	http://kathir.ac.in/wp-content/uploads/2022/files/7.1.9_addtn.doc.weblink.pdf
Any other relevant information	NIL

7.1.10 - The Institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic programmes in this regard. The Code of Conduct is displayed on the website There is a committee to monitor adherence to the Code of Conduct Institution organizes professional ethics programmes for students, teachers, administrators and other staff 4. Annual awareness programmes on Code of Conduct are organized

A. All of the above

File Description	Documents
Code of ethics policy document	View File
Details of the monitoring committee composition and minutes of the committee meeting, number of programmes organized, reports on the various programs etc., in support of the claims	View File
Any other relevant information	View File

7.1.11 - Institution celebrates / organizes national and international commemorative days, events and festivals

The institute does not miss a chance to celebrate events, festivals, national and international commemorative days.

World Women’s Day

Various events for women marked the celebrations on this day. The events were organized by students and faculty members. The celebrations featured a variety of performances including drawing, cooking, singing, dancing competitions involving faculty and students.

Engineers Day

Seminars on latest technical topics were organized on this day by the departments. Through this seminar the achievements of eminent engineers in their own fields were highlighted to the students to motivate them to excel in their chosen fields

Environment day

Sustainability of human life depends on the environment. The importance of maintaining a clean environment was highlighted to the students through a seminar. Cleanliness drives were organized throughout the campus to commemorate the day.

International Mathematics day

Seminar is organized by the departments inviting eminent. A bootcamp event was organized for the students to highlight the applications of mathematics in engineering.

International human rights day

A seminar was organized to highlight the importance of human rights and equality. The seminar was attended by faculty members and students.

File Description	Documents
Annual report of the celebrations and commemorative events for the last (During the year)	View File
Geo tagged photographs of some of the events	View File
Any other relevant information	View File

7.2 - Best Practices

7.2.1 - Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual.

Best Practice I

Practice

Tech Enabled Teaching and Learning for performance assessment of Individual students

Objective

To precisely observe the learning behaviour of each student to identify the strengths and weaknesses of individual student

Context

Each student’s learning behaviour is different. They may fall into any one of Gardner’s multiple intelligence models. Similarly the learning pace is also different for different students. It is essential to give individual attention to all the students during every learning activity by exposing them to exhaustive testing environment. This leads to have an elaborate assessment model with different segment of questions ranging from remembering skills to creating skills. In class strength of 60, if we frame 10 questions for each lecture session, we end up with 600 solutions which will be humanly impossible to assess on daily basis and identify the strengths and weaknesses. This leads to the dependency of any Artificial Intelligence driven platform to precisely assess the learning behaviour of individual student.

Activity

In our College we use an AI driven Ed-Tech Platform where each

faculty member will frame at least 20 questions as per RBT norms for each lecture and upload in the platform to get at least 900 questions with 300 Higher Order Thinking questions to test their analysing, evaluating and creating skills. In the process of finding solutions for the framed HoT questions, students have to refer to many resources based on their learning interest. The platform will precisely record the learning behaviour of individual student through the way students take up the question and find the solution. This gives a clear picture about strength and weakness of individual student.

Proof of concept

The proposed best practice has produced an improved performance in following areas: 1. Increased Pass percentage in regular academics 2. Improved performance during placement activities 3. Quality of Project works are improved

Challenges encountered

Preparing the students to shift their learning style from conventional to tech driven was the biggest challenge. Initially we had a lot of apprehension from students but several orientation and brainstorming sessions helped us to make students understand the real purpose of this activity.

Requirement

Investment on purchasing a customizable third party Ed-tech platform and Faculty empowerment for maximum utilization of the features of the platform.

Best Practice II

Practice

Generating public visibility, curiosity and good will for the institution by conducting events open to the public free-of-charge

Objective

To trigger the support of the community in the institute’s immediate vicinity as well as that of the Coimbatore district/nearby districts for enquiries and admissions of their wards/known contacts to the UG and PG programs offered by Kathir College of Engineering

To build brand equity and brand recall

Context

The institute needs to build public visibility and good will in the minds of the community in its immediate vicinity as well as in the extended region of Coimbatore district and nearby districts to sustain its economic viability and continued operations.

- **The institute has to develop a public image by giving back to the community services which includes conducting events that are open to the public**
- **The institute's trustees are able to leverage the offices of government authorities to lend assistance and support to the institutions initiatives involving the public**

Activity

The institute has organized events that are open to the public free-of-charge namely – a state-level job fair, public exhibitions, offered its facilities of seminar halls, classrooms, auditorium for conducting competitions for school children and reached out to and arranged transport free-of-charge, refreshments and lunch on week-ends for school students especially who are currently attending secondary school education to visit its laboratories, interact with faculty members to inform their decision-making about their higher education

The hosting of public events free-of-charge (state-level job fair, public exhibitions) acknowledges the need of the institute for direct or indirect support of its immediate community and the public at large

The institute encountered the challenge of carrying out the open-to-public events entirely with the assistance and support of its staff by motivating them to take advantage of the occasion to engage with the public, government authorities and perform their role in contributing to societal responsibilities

Proof of concept

The events were well organized and were well attended by the public. Among the many such events organized by the institute the state-level job fair enabled freshers, experienced candidates to find suitable employment

These events have built good will, brand equity involving positive brand association and recall for the institution.

The results indicate that initiatives involving the community and public support are well received and that they deserve to be provided periodically to sustain the good will and engagement already built and to be of mutual benefit.

Challenges Encountered and Resources Required

The public events need the full assistance and support of the institute's staff as engaging any external event manager will entail charging an entry fee for the public which will turn the nature of the event to a commercial exercise.

The events need to be scheduled in a manner where the entire physical infrastructure, systems of the institute will be entirely available for the event.

The institute's management should continue to leverage the good offices of the trustees to be involved in initiatives undertaken by governmental and non-governmental authorities for the long term benefit of the college.

File Description	Documents
Best practices in the Institutional website	http://kathir.ac.in/wp-content/uploads/2021/12/Best-Practices-for-web-site_2021.pdf
Any other relevant information	NIL

7.3 - Institutional Distinctiveness

7.3.1 - Portray the performance of the Institution in one area distinctive to its priority and thrust within 200 words

To provide students practice based, artificial intelligence enabled learning experience

Designing of the system

- **The institution has set its eye on preparing students for their career and the community at large by giving them the practice based, technology enabled learning experience.**

- This entails the faculty members to augment the traditional teaching learning materials with online content.
- The Tech enabled was equipped with interactive tools.
- The contents of the practice sessions were designed to match the industry requirements apart from the prescribed syllabus.
- The students were exposed to topic wise challenging questions in line with Bloom’s taxonomy.

Assessment of the students

- The practice sessions are instantly assessed by AI driven platform which gives our students immediate feedback on their individual and relative learning performance thereby motivating them to achieve higher levels of learning.

Performance of the students

- The AI enabled platform provides an instantaneous longitudinal digital profile of the students performance in the practice sessions.
- This provides a real time report of the students to the faculty. This was also shared with the stake holders(students, parents and management).
- The LDP data is used by the placement office for their placement and training operations.

Part B

CURRICULAR ASPECTS

1.1 - Curricular Planning and Implementation

1.1.1 - The Institution ensures effective curriculum delivery through a well planned and documented process

- **Kathir College of Engineering is affiliated to Anna University, Chennai. Our institution follows the curriculum prescribed by Anna University, and adopts a systematic approach to ensure effective teaching, learning and evaluation process.**
- **The Academic Calendar is prepared by the institution before the commencement of the semester as per the schedule recommended by the University and becomes the guiding document for scheduling teaching, learning and evaluation activities. Further every department prepares its own academic calendar to facilitate addition of value added courses. This information is communicated to the students and faculty members prior to the commencement of the semester.**
- **Contents of the academic calendar includes,**
  - **commencement of classes**
  - **internal assessment test schedules**
  - **co-curricular and extra-curricular events**
  - **last instruction day**
  - **practical and theory exam schedules**
  - **list of holidays**
- **Individual class time tables are prepared and circulated to the students, before the commencement of classes.**
- **To upskill the students, KCE has signed an MoU with E-box learning services. E-box is an AI driven Technology Enabled Active Learning platform.**
- **The online classes are conducted with the help of e-box platform which ensures upskilling of students along with their regular classes. Also, the assignments and continuous internal assessment test papers are collected through the platform.**
- **To ensure effective curriculum delivery, course plans are prepared for the respective courses to attain the course objectives, course and programme outcomes.**
- **To record the course design, delivery, evaluation, attainment of the outcomes and remedial measures taken, a course file is prepared for all the courses.**

The Course File includes

1. Individual Faculty Time Table

2. Syllabus Copy

3. Approved Course Plan (with details of Text & Reference Books, Scheme of Evaluation of Internal Marks)

4. Monthly Test 1 Details

? Question Paper & Answer Key

? Sample Answer Scripts

? Mark Sheet with identification of weaker students

? Action taken for improvement of weaker students

5. Monthly Test 2 Details

? Question Paper & Answer Key

? Sample Answer Scripts

? Mark Sheet with identification of weaker students-coaching class

? Action taken for improvement of weaker students

6. Monthly Test 3 Details

? Question Paper & Answer Key

? Sample Answer Scripts

? Mark Sheet with identification of weaker students

? Action taken for improvement of weaker students

7. Assignment Sheets : Question paper, Samples

8. Tutorial Sheets : Question paper, Samples

9. Details of Technical Quiz / Seminars / Any other Components conducted: Question paper, Samples

10. Record of Class Work with Internal Mark Evaluation

11. Topics covered beyond the syllabi with material

12. End Semester Question Paper & Answer Key

13. Course End survey

14. CO-PO Attainment with Excel sheet

The evaluation is done as per the university regulation and the pattern consists of continuous internal assessment and university examination with 20% and 80 % weightage respectively. The internal assessment comprises of an average of three internal tests. The internal test questions are prepared by the concerned faculty member and reviewed by the HODs before sending it to the Exam Cell. The end semester examinations are conducted by the Anna University, Chennai.

File Description	Documents
Upload relevant supporting document	View File
Link for Additional information	http://kathir.ac.in/wp-content/uploads/2022/files/Academic-calendar.pdf

1.1.2 - The institution adheres to the academic calendar including for the conduct of Continuous Internal Evaluation (CIE)

- **The Academic Calendar is prepared by the institution before the commencement of the semester as per the schedule recommended by the University and becomes the guiding document for scheduling teaching, learning and evaluation activities. Further every department prepares its own academic calendar to facilitate addition of value added courses. This information is communicated to the students and faculty members prior to the commencement of the semester.**
- **Contents of the academic calendar includes,**
  - **commencement of classes**
  - **internal assessment test schedules**
  - **co-curricular and extra-curricular events**
  - **last instruction day**
  - **practical and theory exam schedules**
  - **list of holidays**

The Time table is prepared on par with the academic calendar and displayed in the department notice board and circulated to the students. The institution completes the curricular activities as per calendar. The institution adheres strictly to the academic calendar and revisions are made as per the notifications issued by the AICTE and affiliating university, if any.

The evaluation is done as per the university regulation and the pattern consists of continuous internal assessment and university examination with 20% and 80 % weightage respectively. The internal assessment comprises of an average of three internal tests. The internal test questions are prepared by the concerned faculty member and reviewed by the HODs before sending it to the Exam Cell. The end semester examinations are conducted by the Anna University, Chennai.

File Description	Documents
Upload relevant supporting document	View File
Link for Additional information	http://kathir.ac.in/wp-content/uploads/2022/files/1.1.2_CIA_screenshots.pdf

1.1.3 - Teachers of the Institution participate in following activities related to curriculum development and assessment of the affiliating University and/are represented on the following academic bodies during the year. Academic council/BoS of Affiliating University Setting of question papers for UG/PG programs Design and Development of Curriculum for Add on/ certificate/ Diploma Courses Assessment /evaluation process of the affiliating University

B. Any 3 of the above

File Description	Documents
Details of participation of teachers in various bodies/activities provided as a response to the metric	View File
Any additional information	View File

1.2 - Academic Flexibility

1.2.1 - Number of Programmes in which Choice Based Credit System (CBCS)/ elective course system has been implemented

1.2.1.1 - Number of Programmes in which CBCS/ Elective course system implemented

10

File Description	Documents
Any additional information	View File
Minutes of relevant Academic Council/ BOS meetings	View File
Institutional data in prescribed format (Data Template)	View File

1.2.2 - Number of Add on /Certificate programs offered during the year

1.2.2.1 - How many Add on /Certificate programs are added during the year. Data requirement for year: (As per Data Template)

18

File Description	Documents
Any additional information	View File
Brochure or any other document relating to Add on /Certificate programs	View File
List of Add on /Certificate programs (Data Template)	View File

1.2.3 - Number of students enrolled in Certificate/ Add-on programs as against the total number of students during the year

469

File Description	Documents
Any additional information	View File
Details of the students enrolled in Subjects related to certificate/Add-on programs	View File

1.3 - Curriculum Enrichment

1.3.1 - Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum

The curriculum of Anna University efficiently incorporates cross-cutting themes such as gender, environment and sustainability, human values, and ethical standards, resulting in a strong value-based holistic development of students.

Throughout the year, many events are scheduled as part of the curriculum to aid in this quest.

1. **Gender Sensitivity**

Gender-related courses are an integral ingredient of many programmes. Students are educated and encouraged to strive toward gender justice from a cross-cultural standpoint. A Counselling Cell provides free counselling services. Gender awareness camps are organised in rural regions, covering topics like as equal liberation, human rights, child rights, gender justice, and gender equality. Mandatory core courses, as well as a diverse variety of community projects such as health and hygiene camps, provide exposure to real-world problems. KCE offers gender-sensitive seminars, guest lectures, exhibits on a yearly basis.

1. **Environment and Sustainability**

Water quality, air quality, education and healthcare, agricultural and dairy practises, innovation, and human values are all part of KCE's strong community-oriented work culture.

KCE provides university recommended UG/PG programmes in water, sanitation and wastewater treatment, alternative fuels, environmental and green technology, which results in vocational and skill development education. All UG programmes contain a required core course in environmental studies. Camps for environmental workshops, presentations, company visits, and field trips are all planned. Research in inter-disciplinary topics centred on renewable energy, environmental pollution, and health care challenges are valued highly at KCE.

1. **Human Values and Professional Ethics**

The curriculum of Anna University comprises of Human Values and Professional Ethics as an elective course for all UG programmes and the students are encouraged to choose the same.

The course comprises of,

- **Understanding Human Values**
- **Ethics in Engineering**
- **Engineering as Social Experimentation**
- **Safety, Responsibilities and Rights**
- **Global Issues**

File Description	Documents
Any additional information	View File
Upload the list and description of courses which address the Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum.	View File

1.3.2 - Number of courses that include experiential learning through project work/field work/internship during the year

19

File Description	Documents
Any additional information	View File
Programme / Curriculum/ Syllabus of the courses	View File
Minutes of the Boards of Studies/ Academic Council meetings with approvals for these courses	View File
MoU's with relevant organizations for these courses, if any	View File
Institutional Data in Prescribed Format	View File

1.3.3 - Number of students undertaking project work/field work/ internships

307

File Description	Documents
Any additional information	View File
List of programmes and number of students undertaking project work/field work/ /internships (Data Template)	View File

1.4 - Feedback System

1.4.1 - Institution obtains feedback on the syllabus and its transaction at the institution from the following stakeholders Students Teachers Employers Alumni

A. All of the above

File Description	Documents
URL for stakeholder feedback report	http://kathir.ac.in/feedback-2/
Action taken report of the Institution on feedback report as stated in the minutes of the Governing Council, Syndicate, Board of Management	View File
Any additional information	View File

1.4.2 - Feedback process of the Institution may be classified as follows

A. Feedback collected, analyzed and action taken and feedback available on website

File Description	Documents
Upload any additional information	View File
URL for feedback report	http://kathir.ac.in/wp-content/uploads/2022/files/1.4_Action-taken.pdf

TEACHING-LEARNING AND EVALUATION

2.1 - Student Enrollment and Profile

2.1.1 - Enrolment Number Number of students admitted during the year

2.1.1.1 - Number of students admitted during the year

62

File Description	Documents
Any additional information	View File
Institutional data in prescribed format	View File

2.1.2 - Number of seats filled against seats reserved for various categories (SC, ST, OBC, Divyangjan, etc. as per applicable reservation policy during the year (exclusive of supernumerary seats)

2.1.2.1 - Number of actual students admitted from the reserved categories during the year

30

File Description	Documents
Any additional information	View File
Number of seats filled against seats reserved (Data Template)	View File

2.2 - Catering to Student Diversity

2.2.1 - The institution assesses the learning levels of the students and organizes special Programmes for advanced learners and slow learners

The affiliating university announces the conduct of three continuous assessment test for each semester. The internal assessment marks are calculated based on the above three tests. This is forwarded to the university. The university conducts the end semester examination and the marks obtained by the students are taken as external assessment marks. The total of both internal and external assessment marks is declared as result by the university.

This forms the basis for the assessment of learning levels of the students. Based on the university marks the students are categorized as advanced and slow learners.

Special curriculum related programs are arranged for the slow learners. This would help them to improve their pace of learning and help achieve academic standard. As for advanced learners, special programs are conducted for them to improve

their skills and help them achieve academic excellence.

A comprehensive schedule is prepared in advance for the advanced and slow learners. Based on the schedule, the programs are conducted for the respective category of students. An assessment is planned in each program for slow learners. The students are given the assessment and outcome is mapped with their improvement in performance.

The Advanced learners are provided with seminars on latest topics, workshops with hands on sessions/mini projects, and competitions. They are made to participate in such events and their outcomes are mapped with respective skills.

File Description	Documents
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/2.2.1.pdf
Upload any additional information	View File

2.2.2 - Student- Full time teacher ratio (Data for the latest completed academic year)

Number of Students	Number of Teachers
516	90

File Description	Documents
Any additional information	View File

2.3 - Teaching- Learning Process

2.3.1 - Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences

Kathir college of engineering offers the students an ambience of Academic excellence. The students are exposed to various types of learning methods. This academic year, our institution has subscribed to an academic platform called Ebox. This platform is an AI driven technology enabled platform. It automates the assessment of learning ability of the student. The above technology platform enables the student to participate/interact with the faculty members, thus ensuring

participative learning. Further, the components included in the practice sessions of the topics helps them experience the learning while helping them solve the problems in the topics of the respective subjects. However, the students are also provided with real time experience by facilitating industrial visits to enable them to gain hands on experience relevant to their topics of study.

In addition to this, they are also allowed to undergo internship in companies which gives them required live practice sessions. Students are made to work along with their peers in the industry which helps them acquire real time exposure and hone their skills. Students are encouraged to do their projects in industry which provides them an opportunity to obtain expert project inputs. This project experience provides them with problem solving skills. Overall the various learning methodologies help the students in enhancing their learning experiences.

File Description	Documents
Upload any additional information	View File
Link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/2.3.1.pdf

2.3.2 - Teachers use ICT enabled tools for effective teaching-learning process. Write description in maximum of 200 words

In order to be industry ready, students must acquire and master the most up-to-date technology today. As a result, teachers are merging technology with conventional teaching methods to keep them engaged in lifelong learning. In order to assist, enhance, and optimise the delivery of education, KCE employ information and communication technology (ICT) in education.

KCE uses the following ICT Tools to provide skilling and assessment to the learners.

1. **Projectors are available in different classrooms/labs/seminar halls**
2. **Desktop and Laptops- Arranged at Computer Lab and Faculty cabins all over the campus.**
3. **Printers are installed at Labs, HOD Cabins and all prominent places.**

4. Photocopier machines - Multifunction printers are available at all prominent places
5. Scanners & Multifunction printers
6. Seminar Rooms- Three seminar halls are equipped with all digital facilities.
7. Smart Board- Installed in the campus.
8. Auditorium- It is digitally equipped with mike, projector, cameras and computer system.
9. Online Classes through E-Box, Zoom, Google Meet, Microsoft Team, Google Classroom
10. Digital Library resources

Use of ICT by Faculty

1. PowerPoint Presentations: Faculty members are encouraged to use LCDs and projectors to provide power-point presentations in their classes. They may also create successful presentations with the use of a digital library, internet search engines, and websites.
2. Virtual labs: Faculty members conduct simulation based experiments through remote access.
3. Industry Connect: Guest lectures, professional discussions, and other contests are often conducted for students in the seminar and conference rooms, which are technologically equipped.
4. Online Quiz/Competitions
5. Video Conferencing
6. E-Box Platform: E-Box is a Learning and Assessment auto-evaluation engine created to revolutionize engineering education through Technology Enabled Active Learning across different spheres of education, learning & technology training. E-Box provides a wide range of teaching aid to help students to apply their learning through problem-solving exercises and many interesting modules on knowledge harvesting
7. Workshops

File Description	Documents
Upload any additional information	View File
Provide link for webpage describing the ICT enabled tools for effective teaching-learning process	View File

2.3.3 - Ratio of mentor to students for academic and other related issues (Data for the latest completed academic year)

2.3.3.1 - Number of mentors

41

File Description	Documents
Upload, number of students enrolled and full time teachers on roll	View File
Circulars pertaining to assigning mentors to mentees	View File
Mentor/mentee ratio	View File

2.4 - Teacher Profile and Quality

2.4.1 - Number of full time teachers against sanctioned posts during the year

90

File Description	Documents
Full time teachers and sanctioned posts for year (Data Template)	View File
Any additional information	View File
List of the faculty members authenticated by the Head of HEI	View File

2.4.2 - Number of full time teachers with Ph. D. / D.M. / M.Ch. /D.N.B Superspeciality / D.Sc. / D.Litt. during the year (consider only highest degree for count)

2.4.2.1 - Number of full time teachers with Ph. D. / D.M. / M.Ch. /D.N.C Superspeciality / D.Sc. / D.Litt. during the year

24

File Description	Documents
Any additional information	View File
List of number of full time teachers with Ph. D. / D.M. / M.Ch./ D.N.B Super specialty / D.Sc. / D.Litt. and number of full time teachers for year (Data Template)	View File

2.4.3 - Number of years of teaching experience of full time teachers in the same institution (Data for the latest completed academic year)

2.4.3.1 - Total experience of full-time teachers

345

File Description	Documents
Any additional information	View File
List of Teachers including their PAN, designation, dept. and experience details(Data Template)	View File

2.5 - Evaluation Process and Reforms

2.5.1 - Mechanism of internal assessment is transparent and robust in terms of frequency and mode. Write description within 200 words.

The effective and seamless administration of examinations, as well as the timely announcement of results, can only be achieved with the collaboration of all stakeholders, including KCE teaching, non-teaching, and administrative employees. They are required to be knowledgeable of the numerous procedures and timelines that must be followed. Invigilators are requested to acquaint with the following procedures:

END SEMESTER EXAMINATION

1. **The invigilator is not permitted to carry a cell phone or other reading material. The invigilator is required to remain watchful and to make several passes through the test hall.**
2. **The invigilator is required to be diplomatic while dealing with difficult situations and to maintain tranquility in the test hall. In the event of a difficulty, he or she may bring it to the attention of**

the chief superindent (CS).

3. Any conflicts of interest in performing a specific examination function should be disclosed to the Controller of Examinations well in advance. This is critical to maintaining openness in the Examination system and avoiding unwanted complications/allegations and litigation after the Examination.
4. Only teaching personnel will be assigned to serve as invigilators.
5. Generally, scheduled forenoon session Examinations begins at 10.00 AM and afternoon session examinations begins at 2.30 PM. At least 30 minutes before the commencement of the examination, the invigilator should arrive at the venue, i.e. 9:30 a.m. for the morning session and 2:00 p.m. for the afternoon session.
6. Any changes to the invigilation duty shall be communicated to the CS one day before the date of duty assignment, with alternate arrangements established in the event of absence.
7. Before entering the Exam Halls, invigilators should double-check the material presented for accuracy in the count of answer scripts, questions, and other associated material.
8. Students are permitted inside the test venue after correctly validating their Hall Ticket and ID card and reporting any discrepancies to the CS.
9. The students are allowed to leave their luggage, wallets, books, computers, and other belongings in the designated area before proceeding to their assigned hall.
10. The attendance and other procedures are completed Within the first half-hour of the examination. The invigilator must visit each student and double-check the information on the signature sheet and answer booklets, as well as sign the answer booklet and signature sheet.
11. When an invigilator suspects a candidate of engaging in malpractice during the exam, the invigilator must confiscate the material(s) utilised for the malpractice and bring it to the notice of the CS.
12. If any student uses unfair methods or misconduct at any time, the occurrence should be informed to the CS in writing, and the student shall be handed over along with the answer booklet, question paper, and any banned material, if any.
13. Except for the faculty involved in the examinations, no one else is permitted to enter the examination hall during the examination.

INTERNAL EXAMINATION

1. At the end of each unit of study, all teachers conduct unit examinations. The teachers ensure that the pattern of the questions varies among units.
2. The university regulations governing course-specific examination patterns are given to students. The university circulars in this respect are distributed to faculty members and administrative personnel on a regular basis, and they are also placed on notice boards for students.
3. Every year, an examination committee is formed to organise internal and external examination activities and to disseminate examination-related information to students, professors, and administrative personnel.
4. Changes in schedules, patterns, and procedures, if any, are immediately communicated to learners via notice boards and classroom briefings by the relevant subject instructors.
5. The internal examination timetable is posted on the notice board in advance. Each semester, three internal examinations are held.
6. Post evaluation answer booklets are shared with the students to enhance the transparency policy of the institution.
7. Students are further encouraged to actively discuss with the concern faculty member with regards to any grievance in their evaluation.

Mechanism of internal assessment

1. The schedule of Continuous Internal Assessment (CIA) and Model Examinations, as well as assignments, is provided at the start of each session.
2. The course instructor will provide the question bank for the respective courses in advance.
3. Course instructor maintains a course file, which includes records of attendance in internal examinations, question papers, valued sample answer sheets, and summary of mark statements for academic audit.

Model Examination

1. Valuation is done by the respective course instructor

within two days of Examination.

2. Answer sheets are shown to all the students and answers are also discussed with the students. After satisfaction, students sign the answer sheets and return the same to maintain the database.

Practical Examination

1. Evaluation is done with transparency based on different parameters like Practical Records, Performance and Viva-Voce.

Assignments

1. Assignments are provided in every course to enhance the learning process.

Internal Assessment Marks

1. Internal Assessment Marks which comprises of CIA-1, CIA-2, CIA-3/model examination and Assignments and model exam marks are conveyed to students.

File Description	Documents
Any additional information	View File
Link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/2.5.1.pdf

2.5.2 - Mechanism to deal with internal examination related grievances is transparent, time-bound and efficient

A transparent, time-bound and efficient method is being followed at KCE in terms of dealing with internal examination related grievances.

College Level

1. If a student is unable to attend for an examination due to medical or other legitimate reasons, an examination is held for that student in accordance with the rules, provided he or she makes an application with all required documentation.

2. If a student receives less than a passing grade in a subject and wishes to improve, he or she may take the improvement test.
3. Students' concerns about evaluation are addressed by displaying their performance on the answer sheet.
4. In the presence of the student, the faculty assesses the student's answer sheet once more. Faculty members correct any errors in the total of marks or in the evaluation of answer booklets that students have noticed.
5. Any student who is dissatisfied with the assessment and award of grades should contact the concerned HOD, who can intervene and seek the advice of another course teacher.
6. The Institute uses an open assessment approach in which student performance is posted on the notice board and parents are notified.

University level

1. In terms of assessment, if a student receives a lower grade than predicted, he or she can request a revaluation of his or her answer script by paying the required fee.
2. In the event that a student has a grievance about an evaluation, the university will give a photocopy of the answer sheet.

File Description	Documents
Any additional information	View File
Link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/2.5.2.pdf

2.6 - Student Performance and Learning Outcomes

2.6.1 - Programme and course outcomes for all Programmes offered by the institution are stated and displayed on website and communicated to teachers and students.

Programme Outcomes (POs), Programme Specific Outcomes (PSOs), and Course Outcomes (COs) are framed by the department delivering the concerned programme after extensive consultation with all faculty and stakeholders, in strict conformity with the objectives of Outcome Based Education (OBE).

Following the establishment of unanimity, the information is extensively disseminated and promoted via different methods, such as display and/or communication, as described below.

- Website
- Curriculum /regulations books
- Class rooms
- Department Notice Boards
- Laboratories
- Student Induction Programs
- Meetings/ Interactions with employers
- Parent meet
- Faculty meetings
- Alumni meetings
- Library

The HODs create awareness of POs, PSOs, and COs when speaking to the learners.

Faculty members, mentors, course coordinators, and programme coordinators also provide information to students, raise awareness, and highlight the role of meeting the objectives.

Specified skill criteria and accomplishments to be met by students at the micro level and at the conclusion of the programme are known as programme specific outcomes (PSOs). The PSOs, which are normally 2 - 3 in number, are prepared by the programme coordinators in cooperation with the course coordinators. The Head of Department and subject specialists from each department will debate it and approve it after it has been approved by the Programme Advisory Committee of the department.

Programme Outcomes (POs) are declarations that summarise the professional accomplishments that the programme aspires for and that students are expected to achieve at the end of the programme. POs include a wide range of interconnected information, talents, and personality attributes that students must acquire before graduating.

Course outcomes (COs) are explicit statements that indicate the important and enduring discipline knowledge, talents that students should have, and level of learning that is expected upon course completion. They are stated and expressed explicitly. The Course Outcomes are developed by the course coordinator in collaboration with faculty members who teach the same course. The Module coordinator will double-check it. Finally, they are considered and authorised in the relevant department's meeting.

The COs, POs and PSOs are published on the college website. Awareness of POs, PSOs, and COs is intentionally encouraged in all interactions with learners.

File Description	Documents
Upload any additional information	View File
Paste link for Additional information	http://kathir.ac.in/wp-content/uploads/2022/files/CO_PO_PSO_PEO.pdf
Upload COs for all Programmes (exemplars from Glossary)	View File

2.6.2 - Attainment of Programme outcomes and course outcomes are evaluated by the institution.

The program outcomes and Program Specific outcomes are assessed with the help of course outcomes of the relevant courses through direct and indirect methods. Direct methods are provided through direct examinations or observations of student knowledge or skills against measurable course outcomes. The knowledge and skills described by the course outcomes are mapped to specific problems on University Examination, internal exams and home assignment. Finally, program outcomes are assessed and Program Assessment Committee concludes the PO attainment level. At the end of each semester, university conducts examinations based on the result published by university the course outcomes are measured. Assignments are given at the end of each module. The assignments are provided to students and they refer the text books and good reference books to find out the answers and understand the expected outcome of the given problem. Three internal tests are conducted per semester for the following purposes: To ensure that students have achieved desired level of competencies at module level. To evaluate, whether corresponding COs are achieved or not. According to the performance of the student in answering each question, mapping is carried out with the respective COs for assessing the attainment level of the specific CO of the Course.

File Description	Documents
Upload any additional information	View File
Paste link for Additional information	https://kathir.ac.in/wp-content/uploads/2022/files/2.6.2_CO-PO-Mapping.pdf

2.6.3 - Pass percentage of Students during the year

2.6.3.1 - Total number of final year students who passed the university examination during the year

196

File Description	Documents
Upload list of Programmes and number of students passed and appeared in the final year examination (Data Template)	View File
Upload any additional information	View File
Paste link for the annual report	http://kathir.ac.in/wp-content/uploads/2022/files/IQAC_AnnualReport_20-21.pdf

2.7 - Student Satisfaction Survey

2.7.1 - Student Satisfaction Survey (SSS) on overall institutional performance (Institution may design its own questionnaire) (results and details need to be provided as a weblink)

http://kathir.ac.in/wp-content/uploads/2022/files/2.7.1_Student_survey.pdf

RESEARCH, INNOVATIONS AND EXTENSION

3.1 - Resource Mobilization for Research

3.1.1 - Grants received from Government and non-governmental agencies for research projects / endowments in the institution during the year (INR in Lakhs)

3.1.1.1 - Total Grants from Government and non-governmental agencies for research projects / endowments in the institution during the year (INR in Lakhs)

2

File Description	Documents
Any additional information	View File
e-copies of the grant award letters for sponsored research projects /endowments	View File
List of endowments / projects with details of grants(Data Template)	View File

3.1.2 - Number of teachers recognized as research guides (latest completed academic year)

3.1.2.1 - Number of teachers recognized as research guides

3

File Description	Documents
Any additional information	View File
Institutional data in prescribed format	View File

3.1.3 - Number of departments having Research projects funded by government and non government agencies during the year

3.1.3.1 - Number of departments having Research projects funded by government and non-government agencies during the year

2

File Description	Documents
List of research projects and funding details (Data Template)	View File
Any additional information	View File
Supporting document from Funding Agency	View File
Paste link to funding agency website	Nil

3.2 - Innovation Ecosystem

3.2.1 - Institution has created an ecosystem for innovations and has initiatives for creation and transfer of knowledge

The Institute has taken numerous initiatives for innovations, creation and transfer of knowledge. The Institute has created Centre's of Excellence for the promotion of research and transfer of knowledge to the students.

Our institution has created an eco-system to help students develop deep learning, acquire Higher order skills, innovate and develop new products.

1. Centres of Excellence(COE)

The Centres of Excellence are set up in collaboration with

- Amphisoft Technologies Private Limited
  - for Artificial Intelligence and Data Science skill development,
- KCARDS
  - for Embedded system Research and development,
- National Instruments
  - for innovations using Lab view,
- Texas instruments
  - For industrial automation,
- Kalam interdepartmental innovation centre.
  - Inter disciplinary product innovation.

Start up eco system

Kathir college of engineering has created an eco system to help students to venture into product development and commercialization. KCE has signed an MOU with amphisoft technologies to provide necessary expertise to incubate startups and promote Entrepreneurship skills in students at a young age.

The Startup studios at the Institution include

1. ASICplay – a cloud based IC design learning platform
2. TrustGreenz – an agricultural based start-up;
3. Freshstory – An Artificial intelligence based business development start up;
4. Fibres & Fabrics – A data automation engine for logistic

management in Textile industry

5. Ariel bots – a robotics based start-up for harvesting automation in Tea industry.

The selection process for incubation training includes technical and aptitude test, followed by interview by industry experts.

Tech enabled learning platform

The Institution has a distinct advantage of implementing an Artificial Intelligence blended teaching-learning process and a digitally enabled campus through Ebox – a learning portal.

The Ebox platform is designed based on the blooms taxonomy which is the primary learning requirement for outcome based education. The contents of the practice session in Ebox portal is created by the faculty members of each department of our institution to enhance the learning, exploring, analyzing, designing skills of the students and an assessment based on these skills. The portal is enabled 24/7 and the students can practice at their convenience.

The platform also has the capacity to learn the problem solving skills of the students and provides longitudinal digital profile(LDP).

This LDP enables the faculty members to assess, support and equip the students to overcome their skill gaps. It also helps in preparing the students to be competent enough to be successful in campus placements.

File Description	Documents
Upload any additional information	View File
Paste link for additional information	http://kathir.ac.in/centre-of-excellence/, https://kathir.ac.in/wp-content/uploads/2022/files/INNOVATION-ECOSYSTEM.pdf

3.2.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the year

3.2.2.1 - Total number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship year wise during the year

7

File Description	Documents
Report of the event	View File
Any additional information	View File
List of workshops/seminars during last 5 years (Data Template)	View File

3.3 - Research Publications and Awards

3.3.1 - Number of Ph.Ds registered per eligible teacher during the year

3.3.1.1 - How many Ph.Ds registered per eligible teacher within the year

2

File Description	Documents
URL to the research page on HEI website	http://kathir.ac.in/research-collaboration/
List of PhD scholars and their details like name of the guide , title of thesis, year of award etc (Data Template)	View File
Any additional information	View File

3.3.2 - Number of research papers per teachers in the Journals notified on UGC website during the year

3.3.2.1 - Number of research papers in the Journals notified on UGC website during the year

17

File Description	Documents
Any additional information	View File
List of research papers by title, author, department, name and year of publication (Data Template)	View File

3.3.3 - Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during the year

3.3.3.1 - Total number of books and chapters in edited volumes/books published and papers in national/ international conference proceedings year wise during year

6

File Description	Documents
Any additional information	View File
List books and chapters edited volumes/ books published (Data Template)	View File

3.4 - Extension Activities

3.4.1 - Extension activities are carried out in the neighborhood community, sensitizing students to social issues, for their holistic development, and impact thereof during the year

Extension activities for social impact

Kathir college of engineering encourages active participation of students in programs involving social issues.

- **NSS, YRC**

Our students actively participated in community service activities through National Service Schemes conducted by Kathir College of Engineering. NSS volunteers have addressed various social issues which include

- **Cleanliness,**
- **Blood donation,**
- **Tree plantation,**

- Yoga
- meditation

- Sensitization programs of social issues for students
  - Environmental awareness
  - Women empowerment
  - National integrity
  - Financial literacy
  - Language workshop(French)
  - Literary festival

The Institution also organized ‘Thiruvalluvar Vizha’honouring great tamil poet Thiruvalluvar and conducted many events for nearby school students. The theme of the competitions was related to social issues. The best presentations were awarded in a separate function in the presence of renowned Tamil poets and speakers. The students were exposed to the noble preaching of the renowned poet and actively participated in the function.

- Community sensitization programs
  - Road safety week,
  - Voter awareness programs
- Personality development

The Institute also actively involves the students in various club activities thereby contributing to their overall holistic development. The club activities enable the students to overcome their inhibitions and actively contribute to the society and environment.

These activities have profound positive impact on the students, and it also helps in developing relationship of students with community, leadership skills and overall confidence of students.

- Fitness workshop
- Workshop on Writing in style

File Description	Documents
Paste link for additional information	Nil
Upload any additional information	View File

3.4.2 - Number of awards and recognitions received for extension activities from

government / government recognized bodies during the year

3.4.2.1 - Total number of awards and recognition received for extension activities from Government/ Government recognized bodies year wise during the year

1

File Description	Documents
Any additional information	View File
Number of awards for extension activities in last 5 year (Data Template)	View File
e-copy of the award letters	View File

3.4.3 - Number of extension and outreach programs conducted by the institution through NSS/NCC/Red cross/YRC etc., (including the programmes such as Swachh Bharat, AIDS awareness, Gender issues etc. and/or those organized in collaboration with industry, community and NGOs) during the year

3.4.3.1 - Number of extension and outreach Programs conducted in collaboration with industry, community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., during the year

16

File Description	Documents
Reports of the event organized	View File
Any additional information	View File
Number of extension and outreach Programmes conducted with industry, community etc for the during the year (Data Template)	View File

3.4.4 - Number of students participating in extension activities at 3.4.3. above during year

3.4.4.1 - Total number of Students participating in extension activities conducted in collaboration with industry, community and Non- Government Organizations such as Swachh Bharat, AIDs awareness, Gender issue etc. year wise during year

450

File Description	Documents
Report of the event	View File
Any additional information	View File
Number of students participating in extension activities with Govt. or NGO etc (Data Template)	View File

3.5 - Collaboration

3.5.1 - Number of Collaborative activities for research, Faculty exchange, Student exchange/ internship during the year

3.5.1.1 - Number of Collaborative activities for research, Faculty exchange, Student exchange/ internship year wise during the year

81

File Description	Documents
e-copies of related Document	View File
Any additional information	View File
Details of Collaborative activities with institutions/industries for research, Faculty	View File

3.5.2 - Number of functional MoUs with institutions, other universities, industries, corporate houses etc. during the year

3.5.2.1 - Number of functional MoUs with Institutions of national, international importance, other universities, industries, corporate houses etc. year wise during the year

10

File Description	Documents
e-Copies of the MoUs with institution./ industry/corporate houses	View File
Any additional information	View File
Details of functional MoUs with institutions of national, international importance, other universities etc during the year	View File

INFRASTRUCTURE AND LEARNING RESOURCES

4.1 - Physical Facilities

4.1.1 - The Institution has adequate infrastructure and physical facilities for teaching- learning. viz., classrooms, laboratories, computing equipment etc.

KCE has a well-developed green campus of 7.5 acres; it is equipped with modern facilities and learning resources to achieve academic excellence according to its vision and strategic objectives. The college has adequate number of class rooms and laboratories as per norms to continue the academic activity. Following facilities are available in our campus.

Class Rooms:

KCE has 34spacious and well ventilated classrooms, each equipped with required number of desks, benches, and black-boards. Five classrooms have been earmarked and equipped with smart boards and ten classrooms are equipped with LCD projectors.These ICT facilities shall enhance students interactive learning and knowledge acquisition.

Laboratories and Workshops:

Twenty six well equipped laboratories and one workshop cater to the students practical learning. These laboratories help the students acquire hands on experience thereby enhancing their knowledge and skill. The experiments are designed to be conducted using latest equipments and the experimental results are analyzed using computers. In addition to this the computer centers are also equipped with latest versions of softwares and simulation tools.

Library:

A library is the heart of an academic institution. Our institution encourages all students and staff members to make the best use of the library that has been carefully built up since the inception of the college. The library is housed in a spacious area of 625 sq.m., fully computerized and air-conditioned with Reference Section, Magazine Section and Stack Area. Presently there are 29,000 books and reference volumes and numerous magazines in all relevant streams of engineering and management, stacked for the benefit of staff and students.

Digital Library:

Our library houses a set of computers equipped with e-book, e-contents, e-journals, e-magazines to enable students to acquire wide scope of knowledge.

Seminar Halls:

KCE has a fully furnished auditorium and it can accommodate 600 students. KCE also has two seminar halls with capacity of 150 and 100 students, respectively.

Renewable Power Source:

As one of the green campus initiative our institution has installed solar plants at various locations in the campus. KCE has an installed capacity of 30 kW renewable solar power source which ensures a regular and reliable power supply. In addition, KCE has a diesel generator set power back up for the campus as well as for both hostels with a capacity of 80 KVA.

Safety and Surveillance:

For safety and surveillance purpose, KCE has installed 50 CCTV cameras with recording facilities in the campus. Apart from surveillance, the institution has employed sufficient number of security personnel to maintain campus safety and discipline.

File Description	Documents
Upload any additional information	View File
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/4.1.1.pdf

4.1.2 - The Institution has adequate facilities for cultural activities, sports, games (indoor, outdoor), gymnasium, yoga centre etc.

Kathir College of Engineering inculcates holistic personality development of students, by providing them necessary facilities apart from academics.

Cultural activities:

The students of our institution are encouraged to actively

participate in cultural events on and off the campus. This enables them to hone the organizational skills and special talents.

Cultural activities such as vocal singing, solo dance and group dance are performed by students during intra-department competitions. A devoted ‘Fine Arts’ club is functional in the college so as to bring out the hidden talents of the students. In addition, students are motivated to participate in other college cultural festivities to have an all-round development. Several students across departments take part in cultural events and bag prizes and bring laurels to the college.

Annual cultural festival:

An annual cultural event has been conducted every year to bring out and display the fine arts skill of the students. The event is planned, organized and conducted by the students. The event provides the platform to recognize and appreciate the cultural diversity of our institution.

Students are encouraged to actively participate in indoor games. Sports activities such as Volley ball, Shuttle Badminton and Basketball are being carried out in the sports arena by students after curriculum hours as well as on sports periods. For the lovers of football, an exclusive ground is dedicated and District-wise, Intra-College level, Regional and State-wise tournaments are organized at regular intervals.

Sports and Games:

Physical facilities:

- Indoor games includes
  - Carom
  - Chess
  - Table Tennis
- Outdoor games includes

  - Volley ball
  - Cricket
  - Shuttle Badminton
  - Basketball
  - Football

Annual sports festival:

KCE conducts sports day every year. It is a platform where the students exhibit their sports skills. This also enables them to compete in inter college events.

Fitness center:

Gymnasium:

Round the clock fully-furnished inbuilt gymnasium is also available in the campus for the physical well-being of Day-scholar and Hostel students.

Yoga center:

The mental fitness of the faculty and students are taken care of by providing Yoga and meditation sessions in periodic intervals. External yoga experts are invited to conduct the sessions.

File Description	Documents
Upload any additional information	View File
Paste link for additional information	https://kathir.ac.in/wp-content/uploads/2022/files/4.1.2.pdf

4.1.3 - Number of classrooms and seminar halls with ICT- enabled facilities such as smart class, LMS, etc.

18

File Description	Documents
Upload any additional information	View File
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/4.1.3_ICT_facilities.pdf
Upload Number of classrooms and seminar halls with ICT enabled facilities (Data Template)	View File

4.1.4 - Expenditure, excluding salary for infrastructure augmentation during the year (INR in Lakhs)

4.1.4.1 - Expenditure for infrastructure augmentation, excluding salary during the year (INR in lakhs)

218.7

File Description	Documents
Upload any additional information	View File
Upload audited utilization statements	View File
Upload Details of budget allocation, excluding salary during the year (Data Template	View File

4.2 - Library as a Learning Resource

4.2.1 - Library is automated using Integrated Library Management System (ILMS)

- **Name of ILMS software: MODERNLIB**
- **Nature of automation: Full**
- **Version: Perpetual**
- **Year of Automation: 2008**

KCE library holds the rich collection of more than 29,000 text as well as reference books in the domain of Electronics and Communication Engineering, Computer Science and Engineering, Mechanical Engineering, Civil Engineering, Electrical and Electronics Engineering, Applied Sciences, General Management, etc. It has subscribed to 52 print journals of 'National' as well as 'International' repute, magazines, newspaper and

periodicals. It has subscribed to the E-Resources such as 'DELNET' under which campus wide access to more than 8500 e-books, 9000 e-Journals, 1000 NPTEL & multimedia videos are available for the students use.

File Description	Documents
Upload any additional information	View File
Paste link for Additional Information	https://kathir.ac.in/wp-content/uploads/2022/files/4.2.1.pdf

4.2.2 - The institution has subscription for the following e-resources e-journals e-ShodhSindhu Shodhganga Membership e-books Databases Remote access toe-resources

A. Any 4 or more of the above

File Description	Documents
Upload any additional information	View File
Details of subscriptions like e-journals,e-ShodhSindhu, Shodhganga Membership etc (Data Template)	View File

4.2.3 - Expenditure for purchase of books/e-books and subscription to journals/e-journals during the year (INR in Lakhs)

4.2.3.1 - Annual expenditure of purchase of books/e-books and subscription to journals/e-journals during the year (INR in Lakhs)

2.34

File Description	Documents
Any additional information	View File
Audited statements of accounts	View File
Details of annual expenditure for purchase of books/e-books and journals/e- journals during the year (Data Template)	View File

4.2.4 - Number per day usage of library by teachers and students (foot falls and login data for online access) (Data for the latest completed academic year)

4.2.4.1 - Number of teachers and students using library per day over last one year

517

File Description	Documents
Any additional information	View File
Details of library usage by teachers and students	View File

4.3 - IT Infrastructure

4.3.1 - Institution frequently updates its IT facilities including Wi-Fi

Computer labs are well-equipped with branded computer systems adequately supported by 60 Mbps leased lines for internet connectivity with a wide range of licensed system software and application software.

The institute has 376 computers with the following configurations:

- **Lenovo Thinkcenter M80 Core 2 Duo Processor**
- **Lenovo Thinkcenter M72e i3 Processor**
- **Lenovo Thinkcenter M80 i5 Processor**
- **Lenovo Thinkcenter M72e Dual Core Processor**
- **Dell Vostro 230 Slim Core 2 Duo Processor**
- **Zenta Intel Core i5 Processor.**

The entire campus is connected with LAN. Computer labs and departments are well connected to the internet in order to help students and faculty to carry out their theoretical and practical work. Technicians are available to assist the students to acquire knowledge.

LAN facility: 3-Layer Switching (Core, Distributed and Access) model is implemented to connect all the computers to the network. Core layer switches in the buildings are connected with Optical Fiber Ring Network. This core switching is further extended to Distributed Switching for departments.

Wi-Fi facility: The system administration team extends the complete support to the students by setting and installing (KAWIFI) Wi-Fi zones at various locations such as Library, Hostels, Department corridors and at the Green lawn area. Staff and Students can access this facility on their Laptops and mobile phones by registering with system administration team.

Intercom Facility: The campus is well connected with a well planned Telecom Network with intercom facilities provided at important locations in the administrative office, library, departments, laboratories and hostels, etc.

CCTV Facility: The entire campus is under the surveillance of Closed Circuit Television facility to monitor the safety, discipline and activities of the students.

File Description	Documents
Upload any additional information	View File
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/wifiphoto.pdf

4.3.2 - Number of Computers

376

File Description	Documents
Upload any additional information	View File
List of Computers	View File

4.3.3 - Bandwidth of internet connection in	**B. 30 - 50MBPS**

the Institution

File Description	Documents
Upload any additional Information	View File
Details of available bandwidth of internet connection in the Institution	View File

4.4 - Maintenance of Campus Infrastructure

4.4.1 - Expenditure incurred on maintenance of infrastructure (physical and academic support facilities) excluding salary component during the year (INR in Lakhs)

4.4.1.1 - Expenditure incurred on maintenance of infrastructure (physical facilities and academic support facilities) excluding salary component during the year (INR in lakhs)

60.5

File Description	Documents
Upload any additional information	View File
Audited statements of accounts	View File
Details about assigned budget and expenditure on physical facilities and academic support facilities (Data Templates)	View File

4.4.2 - There are established systems and procedures for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc.

Laboratory:

Stock registers

Record of equipment’s is maintained in Stock Register.

Maintenance of equipment

Laboratories are regularly maintained. Equipment’s are maintained properly, calibrated and serviced periodically.

Repair and service

Major breakdown maintenance if required, is carried out by external agencies.

Maintenance of Library Facilities:

- **The books and journals are maintained.**
- **Book binding is carried out on regular basis for damaged books to avoid further damage.**
- **Stock verification is done as a part of regular monitoring and control. Pest control is done on regular basis for maintaining books safe from termites.**
- **Procurement of new books & renew of journals and recommendation for additional books.**
- **Updating and maintaining of all library records. Addressing issues and grievances of users.**
- **Update and upgrade the library contents, periodically as per updates in curriculum.**

Computers:

- **The institute has an adequate number of computers with internet connections and utility softwares.**
- **Computer systems, UPS, Softwares and Servers are maintained by system admin and Lab-In Charges.**
- **The computing infrastructure is maintained by the system admin team under the supervision of Dept. of Computer Science and Engineering.**

Classrooms, Conference Hall:

- **Classrooms, Conference Hall and Auditorium are provided with enough seating capacity and LCD projectors.**
- **Cleanliness of class rooms and Conference Hall is maintained on a daily basis. Working condition of audio system, LCD projectors etc. is done on regular basis.**

Sport complex:

- **Physical Director of the institute looks after the sports facilities and the activities.**
- **The sports equipments are issued to the students as per the schedule of the events.**
- **Preventive maintenance measures are taken periodically.**
- **Physical director is responsible for keeping the record of utilization of sport Facilities, activities held, awards for the students etc.**

File Description	Documents
Upload any additional information	View File
Paste link for additional information	Nil

STUDENT SUPPORT AND PROGRESSION

5.1 - Student Support

5.1.1 - Number of students benefited by scholarships and free ships provided by the Government during the year

5.1.1.1 - Number of students benefited by scholarships and free ships provided by the Government during the year

516

File Description	Documents
Upload self attested letter with the list of students sanctioned scholarship	View File
Upload any additional information	View File
Number of students benefited by scholarships and free ships provided by the Government during the year (Data Template)	View File

5.1.2 - Number of students benefitted by scholarships, free ships etc. provided by the institution / non- government agencies during the year

5.1.2.1 - Total number of students benefited by scholarships, free ships, etc provided by the institution / non- government agencies during the year

456

File Description	Documents
Upload any additional information	View File
Number of students benefited by scholarships and free ships institution / non- government agencies in last 5 years (Date Template)	View File

5.1.3 - Capacity building and skills enhancement initiatives taken by the institution include the following: Soft skills Language and communication skills Life skills (Yoga, physical fitness, health and hygiene) ICT/computing skills

A. All of the above

File Description	Documents
Link to Institutional website	http://kathir.ac.in/gallery/
Any additional information	View File
Details of capability building and skills enhancement initiatives (Data Template)	View File

5.1.4 - Number of students benefitted by guidance for competitive examinations and career counseling offered by the institution during the year

120

5.1.4.1 - Number of students benefitted by guidance for competitive examinations and career counseling offered by the institution during the year

45

File Description	Documents
Any additional information	View File
Number of students benefited by guidance for competitive examinations and career counseling during the year (Data Template)	View File

5.1.5 - The Institution has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases Implementation of guidelines of statutory/regulatory bodies Organization wide awareness and undertakings on policies with zero tolerance Mechanisms for submission of online/offline students' grievances Timely redressal of the grievances through appropriate committees

A. All of the above

File Description	Documents
Minutes of the meetings of student redressal committee, prevention of sexual harassment committee and Anti Ragging committee	View File
Upload any additional information	View File
Details of student grievances including sexual harassment and ragging cases	View File

5.2 - Student Progression

5.2.1 - Number of placement of outgoing students during the year

5.2.1.1 - Number of outgoing students placed during the year

77

File Description	Documents
Self-attested list of students placed	View File
Upload any additional information	View File
Details of student placement during the year (Data Template)	View File

5.2.2 - Number of students progressing to higher education during the year

5.2.2.1 - Number of outgoing student progression to higher education

3

File Description	Documents
Upload supporting data for student/alumni	View File
Any additional information	View File
Details of student progression to higher education	View File

5.2.3 - Number of students qualifying in state/national/ international level examinations during the year (eg: JAM/CLAT/GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/State government examinations)

5.2.3.1 - Number of students qualifying in state/ national/ international level examinations (eg: JAM/CLAT/NET/ SLET/ GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/ State government examinations) during the year

0

File Description	Documents
Upload supporting data for the same	View File
Any additional information	View File
Number of students qualifying in state/ national/ international level examinations during the year (Data Template)	View File

5.3 - Student Participation and Activities

5.3.1 - Number of awards/medals for outstanding performance in sports/cultural activities at university/state/national / international level (award for a team event should be counted as one) during the year

5.3.1.1 - Number of awards/medals for outstanding performance in sports/cultural activities at university/state/ national / international level (award for a team event should be counted as one) during the year.

1

File Description	Documents
e-copies of award letters and certificates	View File
Any additional information	View File
Number of awards/medals for outstanding performance in sports/cultural activities at university/state/national/international level (During the year) (Data Template)	View File

5.3.2 - Institution facilitates students' representation and engagement in various administrative, co-curricular and extracurricular activities (student council/ students representation on various bodies as per established processes and norms)

- **Class committee:**

The class committee comprises of a chairperson who is not associated with the class, faculty advisor, faculty members handling subjects and three students of the concerned class. This committee addresses issues raised by the students regarding the courses of the current semester.

- **Student Council**

The student council enables the students to be an integral part of the decision making process in academic, non-academic and administrative bodies of our institution. The activities of the student council help to impart a sense of ownership and responsibility among the students, and improve their leadership qualities. By understanding the nuances in institutional operations, the students become aware of the social responsibilities and emotionally balanced in taking decisions. The student council composition includes 3 students from each

year totaling 12 students and a president, vice president, secretary, treasurer and executive members are nominated out of these students.

- Sports Council:

This committee comprises of principal as the chairperson and the physical director as the member secretary. It also includes student members from each class of every department. The role of this committee is to plan the sports activities in the campus.

The sports committee extends financial support to the deserving students to participate in state and national level sports meets.

- Hostel and Mess Committee:

The students who are in hostels, will also be a part of the Hostel and Mess committee. This helps them to communicate with the management regarding the facilities required in the hostel.

- Anti-Ragging Committee:

The Anti- Ragging committee Constitutes

- Chairperson
- Six Board Members
- Six members in Squad (Faculty Members)

Any student who has a grievance, including abuse, may bring it to the attention of the Chairperson or any of the Committee Members from different departments, who will take appropriate action and resolution.

- Creating awareness among the students about ragging
- Display of anti-ragging warning posts at vital places
- Dissemination of Guidelines given by Government of Tamilnadu and supreme court
- Regular surprise Inspections

- Entrepreneurship Development cell

- Entrepreneurship Development Cell (EDC) educates and trains the students who prefer to do business on their own and motivate them to start their own firm.
- It trains the students to prepare project reports, to obtain information on technologies and to understand business ethics and start-up procedures
- EDC organizes Entrepreneurship awareness camps, Entrepreneurship development programs in the college for the benefit of the students
- The cell organizes seminars and workshops periodically. The alumni, who are successful entrepreneurs, are invited as resource persons.

- Department Association

The structure of the Department Association is as follows. Students are the main driving force of the association and they hold the positions ranging from Secretary, Joint Secretary, Treasurer and Executive Members. The Head of the Department guides the students as mentors and one another faculty guides the students in managing the association funds. Students actively organize informative Guest lectures, Workshops, Symposiums, National and International Conferences. By participating in the association activities students imbibe the best practices in event management, financial management.

- Training and placement cell

Students coordinators are nominated to the Placement and training committee which will be presided by the Placement officer of our institution.

This committee plans, prepares and monitors the training schedules of the students. The attendance and performance of the students are analysed with the assistance of departments. They also arrange on and off campus placement drives. They collect feedback about the performance of the students from the employers.

Club Activities

Fine arts club

Youth Red cross club

Photography club

Tamil Mandram

The above clubs are meant for overall intellectual development of the students.

10. Grievance Redressal committee

The committee is constituted.

The committee takes action appropriately on thecomplaints received from the students.

File Description	Documents
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/5.3.2.pdf
Upload any additional information	View File

5.3.3 - Number of sports and cultural events/competitions in which students of the Institution participated during the year (organized by the institution/other institutions)

5.3.3.1 - Number of sports and cultural events/competitions in which students of the Institution participated during the year

09

File Description	Documents
Report of the event	View File
Upload any additional information	View File
Number of sports and cultural events/competitions in which students of the Institution participated during the year (organized by the institution/other institutions (Data Template)	View File

5.4 - Alumni Engagement

5.4.1 - There is a registered Alumni Association that contributes significantly to the development of the institution through financial and/or other support services

Yes. An Alumni Association is registered on our campus. Alumni Engagement is an integral part of student support services. The primary objectives of Alumni association are

- **To enable interaction between the institution and alumni which promotes mutual understanding and mutual information sharing. WhatsApp groups and other social media are utilized regularly to be in touch with alumni.**
- **To obtain feedback regarding recent technologies and opportunities, are often collected from alumni. Willing alumni are allowed to make specific contributions to the institute, enabling them to be a part in the process of growth and development of the institution.**
- **To utilize referral programs in alumni's current organization to drive placement for students with appropriate skills as per the requirement.**
- **Alumni who are associated with research establishments, interact with students with research inclination. This helps them to understand and pursue research in upcoming areas.**
- **To organize mentorship programs for creating awareness**

among the students regarding competitive examination and other recruitment exams conducted by state and central government.

- To provide scholarships for students who have exemplary academic records or have an outstanding sports profile.
- Seminars, workshops and conferences are held in association with the alumni network. This promotes mutual learning and also helps students to learn state of the art technologies.
- To promote multidisciplinary learning by organizing extracurricular activities such as sports events which provide life skills to our students.
- Industry and academia interaction is encouraged through online webinars in association with the alumni network, to enhance practical skills of the students, in turn improving their employability.
- Annual contests and activities are organized for alumni and their family members to maintain an everlasting relationship with the institute.
- To build on these main objectives of the alumni association, we at our institute meticulously organize alumni related events and contests to maintain a cordial relationship with our alumni. This relationship fosters an environment where the institute, the students and our alumni, all benefit mutually.

File Description	Documents
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/5.4.1.pdf
Upload any additional information	View File

5.4.2 - Alumni contribution during the year (INR in Lakhs)	C. 3 Lakhs - 4Lakhs

File Description	Documents
Upload any additional information	View File

GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 - Institutional Vision and Leadership

6.1.1 - The governance of the institution is reflective of and in tune with the vision and mission of the institution

Vision:

Strive to promote Excellence in Engineering Education and Research by developing our students as Real-Time Problem solvers thereby contributing to the societal needs

Mission:

- **Providing stake holders an academic ambience to acquire Higher Order Thinking Skills to be technically competent**
- **Imparting required skills in niche areas through our Industry driven Centres of Excellence.**
- **Nurturing critical and creative thinking skills to innovate new ideas for solving societal problems and become successful entrepreneurs**

Nature of governance

Kathir College of Engineering believes in decentralizing the governance and it’s perspective plan aims towards reaching the following metrics based on 6 E’s for effective implementation and monitoring are detailed and aligned with Mission statements:

Mission 1:

- **Excelling in Teaching Learning Process**
- **Empowering students in PRIDE (Projects, Research, Innovation, Design & Entrepreneurship) activities**

Mission 2:

- Enhancing research capacities and Outcomes
- Enabling Inclusive and sustainable growth

Mission 3

- Extending collaborations and capacity building efforts
- Expanding opportunities for societal services

Perspective Plans

- Autonomous status
- Starting an in-house incubator with atleast 10 start-up firms
- Enhancing Research Capabilities and Outcomes
- Strengthening collaboration with Industry in Research, Consultancy, Training & Internships
- UG in Emerging Areas & PG in Niche Areas
- To improve Core Placements
- Enhanced Community Engagement
- Faculty Competency Building in areas of New Age Technologies & Research
- 50% of Faculty Members with Doctoral Degree

Participation of the teachers in the decision making bodies of the institution

Following committees are formed for better governance with faculty members as members:

Planning and Evaluation Committee, Grievance Redressal Committee, Examination Committee, Library Committee, Student Welfare Committee, NSS, YOGA Committee, IQAC-Academic Audit Committee, Timetable Committee, Alumni Association, Discipline Committee, Research Cell & Extension Services Committee, Women Empowerment Committee, Institutional Industry Collaboration Committee and Anti Ragging Committee

File Description	Documents
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/6.1.1.pdf
Upload any additional information	View File

6.1.2 - The effective leadership is visible in various institutional practices such as decentralization and participative management.

1. **Placements and Admissions for the respective departments:**

- **With a view to strengthen the admission and placement process, the leadership team of the institute has decentralized and empowered each department to participate for the betterment of the students.**
- **Each department will have an admission and placement coordinator who will represent the needs of the department to the central coordination cell.**
- **The departmental admission and placement committee shall include senior faculty members as coordinator.**
- **This practice has helped to build a eco system of leadership at the department level. The departments are able to strategize, implement and successfully achieve the desired outcome.**
- **The strategy meetings were conducted at the department level with the participation of all faculty members of the department. This approach enabled contribution by all faculty members. All faculty members weighed in with their experiences, insight and professional contacts.**
- **The decisions about fee concessions for meritorious students, deserving students were also in the purview of the respective departments with due approvals from the institution’s top management.**
- **The department level placement committees are empowered to liaise with the industry contacts to arrange internships and placements for students. They are allowed to visit the industries anytime they are required to. The HOD shall encourage faculty members and students to actively engage in such activities.**

File Description	Documents
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/Committee_list_2020-2021.pdf
Upload any additional information	View File

6.2 - Strategy Development and Deployment

6.2.1 - The institutional Strategic/ perspective plan is effectively deployed

Introduction

A strategic planning framework should be in place for every organisation to grow and thrive. Strategic planning is the process through which an organisation defines its strategy, or direction, and decides how to allocate resources to execute that goal. It might also include control measures for directing the strategy's execution. The strategy plan is formulated through workshop

Kathir College of Engineering will maintain its quality and uniqueness by adhering to a strategy plan based on the following sub-areas:

- **Teaching and Learning Process**
- **Outcome Based Education**
- **Research and Development**
- **Startup Studios**
- **Self learning and Personality Development**

Due to COVID pandemic there has been a necessity for transition from traditional teaching to online teaching. E-BOX Edu-Tech platform was used to implement Blended Learning methods. Students were given username and password to use the platform to attend the classes and do practice questions and problems.

The online mode of teaching and practice sessions were much useful and effective to implement outcome based education. The student skills were tested using the online platform and practice sessions. It was achieved by creating questions with the six levels of Revised Blooms Taxonomy. The students were well motivated to attend the practice sessions.

Five Year Strategic Plan 2021-2026

The action plans in the previously listed sub areas are suitably linked to the following tasks in order for KCE to achieve the given milestones.

- **Outcome Based Teaching and Learning Process**
- **Empowering the students to becoming Entrepreneurs**
- **Developing Research and Development**
- **Industry Collaborated Research Opportunities**
- **Maintaining Substantial Growth in Pride Activities**

Planned Milestones

- **Strengthening Industrial Connect relationships to create research and internship opportunities**
- **Establishing start up studios to make the students as Entrepreneurs**
- **Tech Enabled Learning and Skilling**
- **Building faculty competencies to provide outcome based education**
- **Attaining NBA accreditation and Autonomous Status**

File Description	Documents
Strategic Plan and deployment documents on the website	View File
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/6.2.1_SPDD.pdf
Upload any additional information	View File

6.2.2 - The functioning of the institutional bodies is effective and efficient as visible from policies, administrative setup, appointment and service rules, procedures, etc.

Kathir college of engineering has an elaborate hierarchical structure to effectively administer the institution. The details of the structure have been illustrated through an organogram.

Policies

The broad policies of the institute are framed by the leadership of the institute. The policies are in tune with the vision and mission of the institute. The subordinate bodies strategize and implement the policies to achieve the desired outcome.

Administrative setup

The principal of the institution is the head of the administrative setup. The leadership has provided necessary procedures to carry out the administrative work.

- **The HODs are provided necessary instructions by the head of the institution for executing the administrative functions of their respective departments**
- **The personnel heading the infrastructure and maintenance body, under the guidance of the principal, carries out**

the daily, weekly and monthly routines with regard to maintenance of the campus.

- The administration of Hostel for men and women students are supervised by the wardens under the guidance of the head of the institution.
- IQAC cell is empowered through the guidelines provided by the principal.
- Administration of library, placement, exam cell, R&D cell, sports, welfare committees, transport are conducted as per norms suggested by the leadership.

Appointment and service rules, procedures

The appointment of teaching and non-teaching staff, service rules and procedures are followed by the guidelines provided by the leadership team.

File Description	Documents
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/KCE-HR%20Policy.pdf
Link to Organogram of the institution webpage	http://kathir.ac.in/organogram/
Upload any additional information	View File

6.2.3 - Implementation of e-governance in areas of operation Administration Finance and Accounts Student Admission and Support Examination	A. All of the above

File Description	Documents
ERP (Enterprise Resource Planning)Document	View File
Screen shots of user inter faces	View File
Any additional information	View File
Details of implementation of e-governance in areas of operation, Administration etc(Data Template)	View File

6.3 - Faculty Empowerment Strategies

6.3.1 - The institution has effective welfare measures for teaching and non- teaching staff

At Kathir College of Engineering, welfare of the members of faculty is given foremost importance. Existing welfare measures for teaching and non-teaching staff are listed below in relation to this.

Welfare measures for teaching and nonteaching staff

Financial support

· All statutory and Medical Leave for both teaching and nonteaching staff

· Maternity Leave for Eligible Members of Faculty

· Advances for festivals

· Fee Concession for the wards of the teaching and nonteaching staff

· Hostel and mess facilities at affordable cost

· Sponsorships for publications and conferences

· Transport services are available for both teaching and non-teaching staff.

Academic support

· Sponshorship for Ph.D programme.

· Internet and WiFi for all the members of staff

· Skill development and FDP for Effective Teaching and Learning

· Summer and Winter Vacations for Eligible Faculty Members

· The library subscribes to journals and magazines to support the research activities

Other support

· Gym Facility is available in evening hours

· Club and sports activities for Faculty members

· Faculty members are provided with Individual cabin and system to facilitate good ambience.

· The Women Empowerment Cell was formed in order to provide opportunities for female faculty members to thrive and acquire momentum.

In a nutshell, the Institution strives hard to keep the members of faculty happy and healthy.

File Description	Documents
Paste link for additional information	Nil
Upload any additional information	View File

6.3.2 - Number of teachers provided with financial support to attend conferences/ workshops and towards membership fee of professional bodies during the year

6.3.2.1 - Number of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies during the year

4

File Description	Documents
Upload any additional information	View File
Details of teachers provided with financial support to attend conference, workshops etc during the year (Data Template)	View File

6.3.3 - Number of professional development /administrative training programs organized by the institution for teaching and non-teaching staff during the year

6.3.3.1 - Total number of professional development /administrative training Programmes organized by the institution for teaching and non teaching staff during the year

6

File Description	Documents
Reports of the Human Resource Development Centres (UGCASC or other relevant centres).	View File
Reports of Academic Staff College or similar centers	View File
Upload any additional information	View File
Details of professional development / administrative training Programmes organized by the University for teaching and non teaching staff (Data Template)	View File

6.3.4 - Number of teachers undergoing online/face-to-face Faculty development Programmes (FDP) during the year (Professional Development Programmes, Orientation / Induction Programmes, Refresher Course, Short Term Course etc.)

6.3.4.1 - Total number of teachers attending professional development Programmes viz., Orientation / Induction Programme, Refresher Course, Short Term Course during the year

90

File Description	Documents
IQAC report summary	View File
Reports of the Human Resource Development Centres (UGCASC or other relevant centers)	View File
Upload any additional information	View File
Details of teachers attending professional development programmes during the year (Data Template)	View File

6.3.5 - Institutions Performance Appraisal System for teaching and non- teaching staff

After one year of service, each employee's performance is evaluated on a yearly basis. The goal is not only to evaluate performance in accordance with established norms, but also to discover possible areas for development that might eventually lead to further advancement and growth of the individual.

The performance appraisal of the teaching and nonteaching staff is carried out based on the appraisal system given below.

ACADEMIC PERFORMANCE INDICATORS

Appraisal system for teaching staff

Teaching learning

Subject results

Feedback by students about the staff

Student mentoring

Faculty members involvement in student welfare

Guidance provided by the faculty members to the students

Helping students in placements

Focus towards higher education

Registered for PH.D

No of journal and conference publication

Research funding if any

General traits

Attitude

Team work

Sincerity

Commitment

Non teaching

General traits

Attitude

Team work

Sincerity

Commitment

Skill upgradation

The following are the key aspects of the performance appraisal system:

Teaching Staff

- **Faculty members are explained well in advance about the performance appraisal system.**
- **AT the end of the academic year, The teaching and nonteaching staff shall submit the API.**
- **Faculty members whose promotions are due are proposed based on their Academic Performance Indicator (API) score and must appear before the screening-cum-selection committee.**

- Evaluation of the API of individual staff are assessed by respective HoD and Principal
- The assessment of the HODs are done by the principal.

Non-Teaching Staff

The appraisal of Non-Teaching staff will be done on following parameters:

Principal will carry out a personal interaction with library and office staff. After evaluating all parameters, the remark will be given by Principal.

S.No

Observations/Conclusions

Remedial Action

1.

Excellent

Not required. However, staff will be encouraged to maintain the performance.

2.

Appreciable

Not required. Staff will be encouraged for further improvement if required.

3.

Average

Need improvement in weaker areas. Motivation and support will be given for improvement.

4.

Poor

Need overall improvement. Motivation and support will be given

for improvement.

File Description	Documents
Paste link for additional information	Nil
Upload any additional information	View File

6.4 - Financial Management and Resource Mobilization

6.4.1 - Institution conducts internal and external financial audits regularly Enumerate the various internal and external financial audits carried out during the year with the mechanism for settling audit objections within a maximum of 200 words

To maintain financial compliance, the Institution has created a process for performing annual internal and external audits on financial transactions. The institution's internal finance committee conducts an internal audit every six months. The committee extensively examines the revenue and spending information, and the internal audit compliance report is sent to the institution's administration via the Principal of our institution. An external audit is performed once a year by a third party.

- Before the start of each calendar year, the principal delivers to the management a budget allocation plan based on the suggestions provided by the heads of all departments.
- The college budget contains recurrent expenses like salaries, power, internet charges, maintenance costs, stationery, other consumable charges, and so on, as well as non-recurring expenses like lab equipment purchases, furniture, and other development costs.
- The accounting department will monitor the costs in accordance with the budget set by the management.
- The depreciation costs of numerous items acquired in previous years are also calculated.
- On a semi-annual basis, an internal finance committee audits all vouchers.
- The costs incurred under various headings are extensively scrutinized by examining the bills and vouchers.
- If a disparity is discovered, it is brought to the attention of the principal.
- According to government regulations, the college's accounts are audited on a regular basis by chartered accountants.

- **After the audit, the auditor checks that all payments have been lawfully approved, and the report is given to the management for approval.**
- **Any questions that arise throughout the auditing process will be addressed as soon as possible, together with the supporting documentation, and within the time restrictions specified.**
- **During the prior years, the institution received no substantial audit objections.**

All of these techniques demonstrate the institution's financial openness and commitment to financial accounting discipline. The audited statement is fully signed by the management and chartered accountant authority.

File Description	Documents
Paste link for additional information	**Nil**
Upload any additional information	View File

6.4.2 - Funds / Grants received from non-government bodies, individuals, philanthropers during the year (not covered in Criterion III)

6.4.2.1 - Total Grants received from non-government bodies, individuals, Philanthropers during the year (INR in Lakhs)

1

File Description	Documents
Annual statements of accounts	View File
Any additional information	View File
Details of Funds / Grants received from of the non-government bodies, individuals, Philanthropers during the year (Data Template)	View File

6.4.3 - Institutional strategies for mobilization of funds and the optimal utilization of resources

- **The Institute maintains and adheres to a well-planned approach for mobilizing funding and resources.**
- **The procedure involves the institute's numerous committees, as well as the Department Heads and the**

Accounts Office.

- The Institute has developed certain particular regulations for the use of funds and resources.
- Mobilization of Funds, the student tuition fee is the institute's primary source of income.
- Seminars and workshops are sponsored by a variety of government and non-government organizations.
- Alumni Contribution
- Sponsorships are sought from individuals and corporate for cultural events and fests.
- A finance committee has been formed to oversee the most efficient use of cash for different recurring and non-recurring expenditures.
- The procurement committee solicits vendor quotes for the acquisition of equipment, computers, and books.
- The Principal, finance and procurement committees review the quotations before making a final selection based on characteristics such as cost, quality, and terms of service.
- The principal, finance, and procurement committees, verify that expenditures stay within the budget.
- In the event that the expenditure exceeds the budget, management advice is sought.
- The college budget is prepared by the Principal and Heads of Departments prior to the start of the fiscal year.
- The institutional budget comprises recurrent expenses such as salaries, power and internet charges, as well as stationary and other maintenance fees.
- It contains anticipated costs including lab equipment purchases, furnishings, and other development costs.
- The budget is scrutinized and approved by the top management and Governing Council.
- The finance department and the procurement department keep track of whether spending are exceeding the budget.
- At the end of the financial year, statutory auditors are hired to certify the accounts.
- The grants received by the college are also audited by the certified auditors.
- The college's goal is to promote research, development, consulting, and other related activities by involving academic members at various levels.
- Faculty who show initiative and win major funds for R&D or to improve the institute's infrastructure will be encouraged and will receive particular recognition.
- Depending on availability of finance, faculty may be granted travel grants to deliver research papers at or

attend National Conferences in India.

- Beyond regular college hours, the existing physical infrastructure is efficiently utilized to conduct remedial classes, co-curricular activities/extra-curricular activities, and parent-teacher meetings.
- The college's facilities are used as an examination center for both government and university exams.
- For the benefit of students, professors, and alumni, the library operates outside of college hours.

File Description	Documents
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/6.4.3.pdf
Upload any additional information	View File

6.5 - Internal Quality Assurance System

6.5.1 - Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes

Internal Quality Assurance Cell (IQAC)

The IQAC's primary focus is to create a system for conscious, consistent, and catalytic improvement in the overall performance of the Institutions. The IQAC will make a significant and meaningful contribution to the Institution's post-accreditation phase. During the post-accreditation period, the IQAC will direct all of the Institution's efforts and measures toward promoting academic excellence.

The objectives of the IQAC are

- To ensure continuous improvement in the Institution's overall operations.
- To assure stakeholders associated with education, namely parents, teachers, staff, employers, funding agencies, and society in general, of its own quality and probity.
- To develop a quality system for conscious, consistent, and planned action to improve the academic and administrative performance of the institution.
- To promote measures for driving institutional functioning toward quality enhancement and institutionalisation of best practises.

Benefits

IQAC will facilitate / contribute:

- **To ensure a heightened level of clarity and focus in institutional functioning towards**

quality enhancement and internalization of the quality culture NAAC for Quality and

Excellence in Higher Education.

- **To promote measures for the Institution's operation aimed at improving quality through the establishment of a quality culture and the institutionalisation of best practises.**
- **To improve institutional functioning by providing a solid foundation for decision making.**
- **To serve as a dynamic system for changing the institution's quality.**

Functions

Developmentandapplicationofqualitybenchmarks/parametersfortheInstitution'svariousacademicandadministrativeactivities.

Arrangement for feedback responses from students, parents and other stakeholders on quality related processes of the institution.

• Dissemination of data on higher education's numerous quality indicators.

• Records of the many initiatives and activities that lead to quality improvement.

• Workshops and seminars on quality-related topics, as well as the promotion of quality circles.

• Preparation of the Annual Quality Assurance Report (AQAR) based on the quality parameters to be submitted to NAAC.

IQAC has contributed significantly for institutionalizing the

quality assurance strategies and processes, the following two practices are the results of IQAC initiatives

To provide superior technical education to students, the institution uses a collaborative learning process. It entails groups of students cooperating to solve a problem, perform a task, or produce a product. It is founded on the notion that learning is a natural and social behaviour in which participants converse with one another.

The IQAC spearheaded efforts to successfully adopt contemporary technology in the Institute's administrative functioning via ICT and alternative energy sources, particularly the 35kW increase in solar power. Wifi and LAN facility upgrades have substantially improved the quality of the teaching-learning experience.

File Description	Documents
Paste link for additional information	http://kathir.ac.in/wp-content/uploads/2022/files/IQAC_Report_Summary_20_21.pdf
Upload any additional information	View File

6.5.2 - The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms and recorded the incremental improvement in various activities

The IQAC evaluates the teaching-learning process regularly and takes initiatives to improve its quality.

The Academic Calendar is planned, exhibited, and circulated throughout the Institute, and followed strictly.

The Academic Calendar includes information about holidays, Continuous Internal Assessment schedules, and starting, last working day of the semesters.

All newly enrolled students must attend the Orientation Program, during which they will learn about the Institute's philosophy, unique educational system, teaching-learning process, continuous evaluation system, mandatory core courses, numerous extracurricular activities, discipline, and culture. A guided tour of the campus and its extensive facilities is also

given to all students.

Every student receives a Student Record, which contains all pertinent information for students.

Before the semester begins, students are informed of the timetable, program structure, and course syllabi.

Important announcements are delivered through regular circulars and The HODs, and tutors supervise attendance and class behavior.

The tutor and members of the Discipline Committee undertake random inspections to ensure that classes run smoothly.

Students participate in Class Committees regularly to provide comments, and appropriate efforts are taken to improve the teaching-learning process.

Students' feedback is also taken into account by faculties for their specific courses, by tutors, and directly by IQAC. Students are also welcome to provide feedback and suggestions to the Principal.

The Principal, HODs, and individual faculty members receive proper analysis and feedback.

Based on the IQAC suggestions, the teaching-learning processes are assessed and changes are implemented.

The following are some of the key efforts undertaken in the recent five years:

- The practice-based learning process is initiated through the E-Box platform
- Automation of Admission Processes - Provision for online fee payment

Introduction of Artificial Intelligence and Data Science program

File Description	Documents
Paste link for additional information	Nil
Upload any additional information	View File

6.5.3 - Quality assurance initiatives of the institution include: Regular meeting of Internal Quality Assurance Cell (IQAC); Feedback collected, analyzed and used for improvements Collaborative quality initiatives with other institution(s) Participation in NIRF any other quality audit recognized by state, national or international agencies (ISO Certification, NBA)

B. Any 3 of the above

File Description	Documents
Paste web link of Annual reports of Institution	http://kathir.ac.in/wp-content/uploads/2022/files/IQAC_AnnualReport_20-21.pdf
Upload e-copies of the accreditations and certifications	View File
Upload any additional information	View File
Upload details of Quality assurance initiatives of the institution (Data Template)	View File

INSTITUTIONAL VALUES AND BEST PRACTICES

7.1 - Institutional Values and Social Responsibilities

7.1.1 - Measures initiated by the Institution for the promotion of gender equity during the year

Describe gender equity & sensitization in curricular and co-curricular activities, facilities for women on campus etc., within 200 words

- **The institute addresses gender equity, gender sensitivity on a continuous basis throughout the year.**
- **The institution encourages recruitment of women employees for teaching and nonteaching roles.**

Curricular and co-curricular activities

- **Experts on the topic are invited to deliver seminars/workshops to sensitize our students and faculty members to enable them to treat each other with equity, esteem, and respect.**
- **Separate NSS unit functions with girl student members to encourage their participation in serving the society**
- **Celebration of International women's day in the campus**

Safety and security

Installation of Surveillance cameras

- **The campus is always under CCTV surveillance**
- **CCTV is installed at vital locations. All video feeds of the CCTVs installed at all locations are recorded. This helps to have recourse to videos of any untoward incident if any to initiate investigations.**
- **The presence of CCTV installations gives a sense of safety and security on a real-time basis.**
- **The running feeds of the various CCTV locations are displayed on a television in Principal's chamber and Chairman's chamber.**
- **The facility of CCTV installation is augmented by security personnel posted at the main gate, portico of the main building and at other points in the campus.**

Hostel

- **The Hostel procedures for leaving the campus and entering the campus are all recorded manually in the report cards monitored by the Hostel authorities.**
- **The boys and girls Hostel is manned by separate wardens and security.**
- **The entry of visitors are strictly monitored.**

Day care centre/ gymnasium for kathir group of institutions

- **A separate day care centre has been setup to help women employees**
- **Gymnasium facility has been provided for women employees.**

File Description	Documents
Annual gender sensitization action plan	https://kathir.ac.in/wp-content/uploads/2022/files/annualgendrsens.plan_weblink.pdf
Specific facilities provided for women in terms of:a. Safety and security b. Counseling c. Common Rooms d. Day care center for young children e. Any other relevant information	https://kathir.ac.in/wp-content/uploads/2022/files/facilty_women_weblink.pdf

7.1.2 - The Institution has facilities for alternate sources of energy and energy conservation measures Solar energy Biogas plant Wheeling to the Grid Sensor-based energy conservation Use of LED bulbs/ power efficient equipment

A. 4 or All of the above

File Description	Documents
Geo tagged Photographs	View File
Any other relevant information	View File

7.1.3 - Describe the facilities in the Institution for the management of the following types of degradable and non-degradable waste (within 200 words) Solid waste management Liquid waste management Biomedical waste management E-waste management Waste recycling system Hazardous chemicals and radioactive waste management

Our institution strives to minimize the waste and thereby protect the environment. The strategy adopted is reduce, reuse and recycle.

Solid waste management

Bio degradable

- **The food waste of the mess facility is collected and given to the pig farm.**
- **The institute prides itself on a well-kept campus that is possible because of good waste management practices.**
- **The waste from the trees, gardens in the campus are periodically removed and handed over to nearby composting**

yards.

Non-degradable waste

Usage of Plastics is banned inside the campus and sufficient awareness has been created. All packaging related plastics are handed over to third party vendors who are capable of recycling .

Liquid waste management

The sewerage facility is well functioning and maintained periodically. The treated water is utilized for watering the gardens. The solid waste generated is handed over to third party vendors who are capable of producing manure.

E-waste management

The institution has created a policy of segregating the unusable/ condemned computers and accessories. Post segregation these items are handed over to the third party vendors who are experts in E waste management.

Waste recycling system

The stationery waste like used papers (after their validity time is completed) is disposed of to nearby shops dealing in such waste

File Description	Documents
Relevant documents like agreements / MoUs with Government and other approved agencies	View File
Geo tagged photographs of the facilities	View File

7.1.4 - Water conservation facilities available in the Institution: Rain water harvesting Bore well /Open well recharge Construction of tanks and bunds Waste water recycling Maintenance of water bodies and distribution system in the campus

A. Any 4 or all of the above

File Description	Documents
Geo tagged photographs / videos of the facilities	View File
Any other relevant information	View File

7.1.5 - Green campus initiatives include

7.1.5.1 - The institutional initiatives for greening the campus are as follows:

1. **Restricted entry of automobiles**
2. **Use of bicycles/ Battery-powered vehicles**
3. **Pedestrian-friendly pathways**
4. **Ban on use of plastic**
5. **Landscaping**

A. Any 4 or All of the above

File Description	Documents
Geo tagged photos / videos of the facilities	View File
Various policy documents / decisions circulated for implementation	View File
Any other relevant documents	View File

7.1.6 - Quality audits on environment and energy are regularly undertaken by the institution

7.1.6.1 - The institutional environment and energy initiatives are confirmed through the following 1.Green audit 2. Energy audit 3.Environment audit 4.Clean and green campus recognitions/awards 5. Beyond the campus environmental promotional activities	A. Any 4 or all of the above

File Description	Documents
Reports on environment and energy audits submitted by the auditing agency	View File
Certification by the auditing agency	View File
Certificates of the awards received	View File
Any other relevant information	View File

7.1.7 - The Institution has disabled-friendly, barrier free environment Built environment with ramps/lifts for easy access to classrooms. Disabled-friendly washrooms Signage including tactile path, lights, display boards and signposts Assistive technology and facilities for persons with disabilities (Divyangjan) accessible website, screen-reading software, mechanized equipment 5. Provision for enquiry and information : Human assistance, reader, scribe, soft copies of reading material, screen reading	A. Any 4 or all of the above

File Description	Documents
Geo tagged photographs / videos of the facilities	View File
Policy documents and information brochures on the support to be provided	View File
Details of the Software procured for providing the assistance	View File
Any other relevant information	View File

7.1.8 - Describe the Institutional efforts/initiatives in providing an inclusive environment i.e., tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and other diversities (within 200 words).

Cultural harmony

- **The institution consciously recognizes diversity in language, religion and other societal diversity by means of celebrating a variety of events, and festivals.**
- **The institution encourages religious tolerance by maintaining harmonious atmosphere by celebrating various cultural and religious festivals**
- **The celebrations of events like women's day, Tamil New Year, Onam etc. are also proof of the diversity in the composition of students, faculty members and non-teaching staff.**
- **National integration day was celebrated.**

communal socioeconomic initiatives

- **The institute provides merit scholarships for deserving socially and economically backward community students.**
- **This helps the institute in providing equity in access to professional education for students from all economic strata of the society.**
- **Blood donation camp is organized every year where students and faculty contribute for the noble cause of serving society.**
- **Kathir faculty members contributed to the development of contents for NEET online coaching through Ebox platform. The neet content was provided free of cost to Tamilnadu government schools.**
- **In Madurai alone, more than 100 government school students who underwent neet coaching through Ebox, got qualified.**

Linguistic inclusiveness

Kathir college of engineering admits students from other states. This diversity encourages equality of cultures within the campus.

File Description	Documents
Supporting documents on the information provided (as reflected in the administrative and academic activities of the Institution)	View File
Any other relevant information	View File

7.1.9 - Sensitization of students and employees of the Institution to the constitutional obligations: values, rights, duties and responsibilities of citizens

Kathir college of engineering periodically arranges programs inviting students and parents to sensitize them on their expected societal behavior, rights and responsibilities.

Voters awareness program

Voter awareness programs are organized to create awareness among students and faculty members to exercise their constitutional rights during elections

Safety week

The institute has organized awareness campaigns for wearing helmets while driving two-wheelers emphasizing the obligation of the students, general public to drive safe.

Independence day and Republic day

Every year our institution celebrates by highlighting the importance of freedom and creating awareness of the constitutional obligations.

International yoga day

The physical and mental health of students and faculty members are nurtured through regular classes. The importance of yoga is highlighted by celebrating international yoga day in the campus.

Cleanliness drive

The NSS unit of our college actively engages the students in the cleanliness drive inside and outside the campus.

Teachers day

A teacher plays a crucial role in the transformation of the society. Teacher’s day is celebrated to honour them by the students.

File Description	Documents
Details of activities that inculcate values; necessary to render students in to responsible citizens	http://kathir.ac.in/wp-content/uploads/2022/files/7.1.9_addtn.doc.weblink.pdf
Any other relevant information	NIL

7.1.10 - The Institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic programmes in this regard. The Code of Conduct is displayed on the website There is a committee to monitor adherence to the Code of Conduct Institution organizes professional ethics programmes for students, teachers, administrators and other staff 4. Annual awareness programmes on Code of Conduct are organized	**A. All of the above**

File Description	Documents
Code of ethics policy document	View File
Details of the monitoring committee composition and minutes of the committee meeting, number of programmes organized, reports on the various programs etc., in support of the claims	View File
Any other relevant information	View File

7.1.11 - Institution celebrates / organizes national and international commemorative days, events and festivals

The institute does not miss a chance to celebrate events, festivals, national and international commemorative days.

World Women’s Day

Various events for women marked the celebrations on this day. The events were organized by students and faculty members. The celebrations featured a variety of performances including drawing, cooking, singing, dancing competitions involving faculty and students.

Engineers Day

Seminars on latest technical topics were organized on this day by the departments. Through this seminar the achievements of eminent engineers in their own fields were highlighted to the students to motivate them to excel in their chosen fields

Environment day

Sustainability of human life depends on the environment. The importance of maintaining a clean environment was highlighted to the students through a seminar. Cleanliness drives were organized throughout the campus to commemorate the day.

International Mathematics day

Seminar is organized by the departments inviting eminent. A bootcamp event was organized for the students to highlight the applications of mathematics in engineering.

International human rights day

A seminar was organized to highlight the importance of human rights and equality. The seminar was attended by faculty members and students.

File Description	Documents
Annual report of the celebrations and commemorative events for the last (During the year)	View File
Geo tagged photographs of some of the events	View File
Any other relevant information	View File

7.2 - Best Practices

7.2.1 - Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual.

Best Practice I

Practice

Tech Enabled Teaching and Learning for performance assessment of Individual students

Objective

To precisely observe the learning behaviour of each student to identify the strengths and weaknesses of individual student

Context

Each student’s learning behaviour is different. They may fall into any one of Gardner’s multiple intelligence models. Similarly the learning pace is also different for different students. It is essential to give individual attention to all the students during every learning activity by exposing them to exhaustive testing environment. This leads to have an elaborate assessment model with different segment of questions ranging from remembering skills to creating skills. In class strength of 60, if we frame 10 questions for each lecture session, we end up with 600 solutions which will be humanly impossible to assess on daily basis and identify the strengths and weaknesses. This leads to the dependency of any Artificial Intelligence driven platform to precisely assess the learning behaviour of individual student.

Activity

In our College we use an AI driven Ed-Tech Platform where each faculty member will frame at least 20 questions as per RBT norms for each lecture and upload in the platform to get at least 900 questions with 300 Higher Order Thinking questions to test their analysing, evaluating and creating skills. In the process of finding solutions for the framed HoT questions, students have to refer to many resources based on their learning interest. The platform will precisely record the learning behaviour of individual student through the way students take up the question and find the solution. This gives a clear picture about strength and weakness of individual student.

Proof of concept

The proposed best practice has produced an improved performance in following areas: 1. Increased Pass percentage in regular academics 2. Improved performance during placement activities 3. Quality of Project works are improved

Challenges encountered

Preparing the students to shift their learning style from conventional to tech driven was the biggest challenge. Initially we had a lot of apprehension from students but several orientation and brainstorming sessions helped us to make students understand the real purpose of this activity.

Requirement

Investment on purchasing a customizable third party Ed-tech platform and Faculty empowerment for maximum utilization of the features of the platform.

Best Practice II

Practice

Generating public visibility, curiosity and good will for the institution by conducting events open to the public free-of-charge

Objective

To trigger the support of the community in the institute’s immediate vicinity as well as that of the Coimbatore district/nearby districts for enquiries and admissions of their wards/known contacts to the UG and PG programs offered by Kathir College of Engineering

To build brand equity and brand recall

Context

The institute needs to build public visibility and good will in the minds of the community in its immediate vicinity as well as in the extended region of Coimbatore district and nearby districts to sustain its economic viability and continued operations.

- **The institute has to develop a public image by giving back to the community services which includes conducting events that are open to the public**
- **The institute’s trustees are able to leverage the offices of government authorities to lend assistance and support to the institutions initiatives involving the public**

Activity

The institute has organized events that are open to the public free-of-charge namely – a state-level job fair, public exhibitions, offered its facilities of seminar halls, classrooms, auditorium for conducting competitions for school children and reached out to and arranged transport free-of-

charge, refreshments and lunch on week-ends for school students especially who are currently attending secondary school education to visit its laboratories, interact with faculty members to inform their decision-making about their higher education

The hosting of public events free-of-charge (state-level job fair, public exhibitions) acknowledges the need of the institute for direct or indirect support of its immediate community and the public at large

The institute encountered the challenge of carrying out the open-to-public events entirely with the assistance and support of its staff by motivating them to take advantage of the occasion to engage with the public, government authorities and perform their role in contributing to societal responsibilities

Proof of concept

The events were well organized and were well attended by the public. Among the many such events organized by the institute the state-level job fair enabled freshers, experienced candidates to find suitable employment

These events have built good will, brand equity involving positive brand association and recall for the institution.

The results indicate that initiatives involving the community and public support are well received and that they deserve to be provided periodically to sustain the good will and engagement already built and to be of mutual benefit.

Challenges Encountered and Resources Required

The public events need the full assistance and support of the institute’s staff as engaging any external event manager will entail charging an entry fee for the public which will turn the nature of the event to a commercial exercise.

The events need to be scheduled in a manner where the entire physical infrastructure, systems of the institute will be entirely available for the event.

The institute’s management should continue to leverage the good offices of the trustees to be involved in initiatives undertaken by governmental and non-governmental authorities for

the long term benefit of the college.

File Description	Documents
Best practices in the Institutional website	http://kathir.ac.in/wp-content/uploads/2021/12/Best-Practices-for-web-site_2021.pdf
Any other relevant information	NIL

7.3 - Institutional Distinctiveness

7.3.1 - Portray the performance of the Institution in one area distinctive to its priority and thrust within 200 words

To provide students practice based, artificial intelligence enabled learning experience

Designing of the system

- **The institution has set its eye on preparing students for their career and the community at large by giving them the practice based, technology enabled learning experience.**
- **This entails the faculty members to augment the traditional teaching learning materials with online content.**
- **The Tech enabled was equipped with interactive tools.**
- **The contents of the practice sessions were designed to match the industry requirements apart from the prescribed syllabus.**
- **The students were exposed to topic wise challenging questions in line with Bloom’s taxonomy.**

Assessment of the students

- **The practice sessions are instantly assessed by AI driven platform which gives our students immediate feedback on their individual and relative learning performance thereby motivating them to achieve higher levels of learning.**

Performance of the students

- **The AI enabled platform provides an instantaneous longitudinal digital profile of the students performance in the practice sessions.**
- **This provides a real time report of the students to the faculty. This was also shared with the stake holders(students, parents and management).**
- **The LDP data is used by the placement office for their placement and training operations.**

File Description	Documents
Appropriate web in the Institutional website	View File
Any other relevant information	View File

7.3.2 - Plan of action for the next academic year

The following are the areas planned to be focused on:

1. Institution level Plan

- **Devising the roadmap to attain autonomous status with milestones to be achieved**
- **To get NAAC accreditation with higher grades**

2. Teaching and learning

- **Extra classes are to be conducted to bride the skill gap due covid situation.**
- **To provide additional assessments to enable the transition from online to offline mode.**
- **Guiding students to achieve Anna University academic ranks**

3. Creation of new Centres of excellence

- **To plan and establish COE in the areas of Artificial intelligence, Robotics and Renewable energy**

4. Personality development

- **To improve communication skills of students as they are from rural background**
- **To compete and win prizes in university sports events**

5. Research and development

- **Increasing research publications in indexed journals**

6.Skill development of faculty members and students

- **Student development program and Hands on sessions on latest technical topics etc., to help them in their placements**
- **Faculty development programs for skill upgradation .**

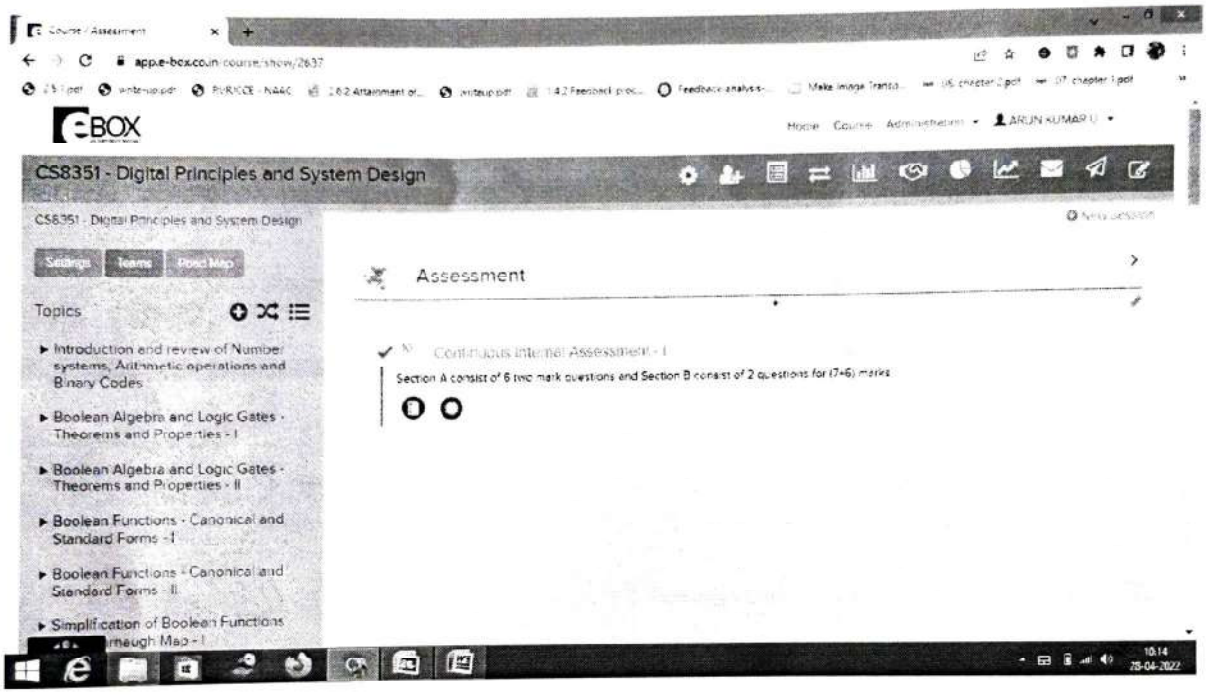
NAAC

Kathir College of Engineering

[Approved by AICTE | Affiliated to Anna University | Accredited by NAAC]

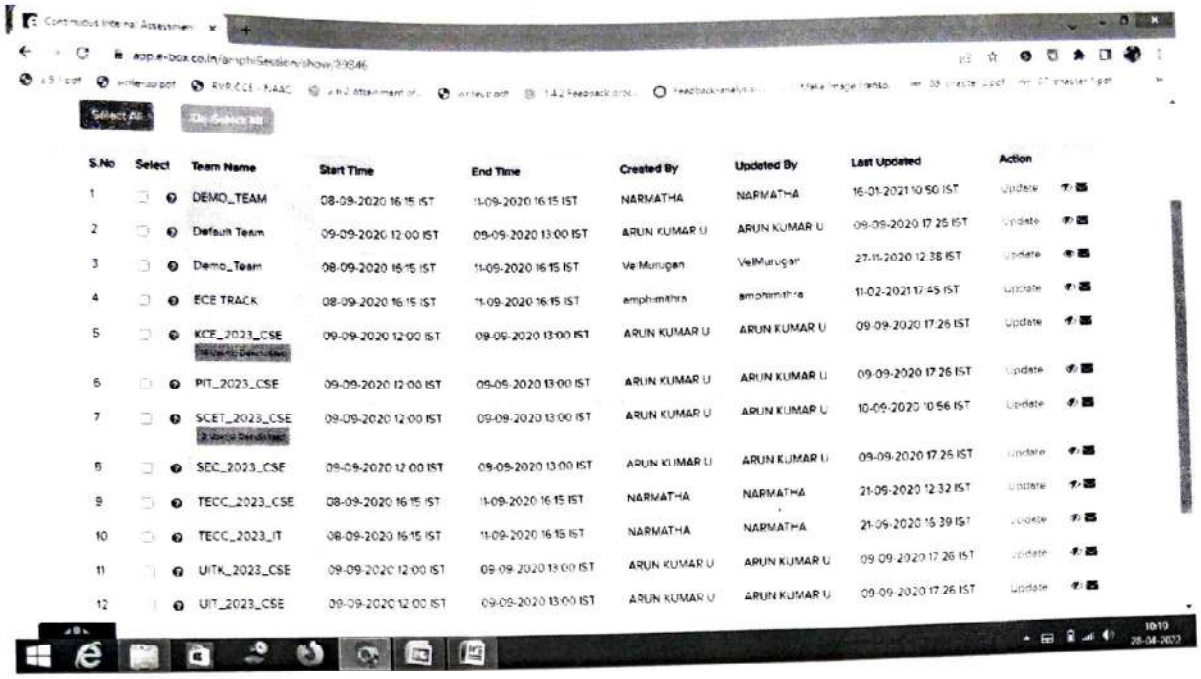
Wisdom Tree, Neelambur, Avinashi Road, Coimbatore-62

Collaborative quality initiatives with other institution(s)

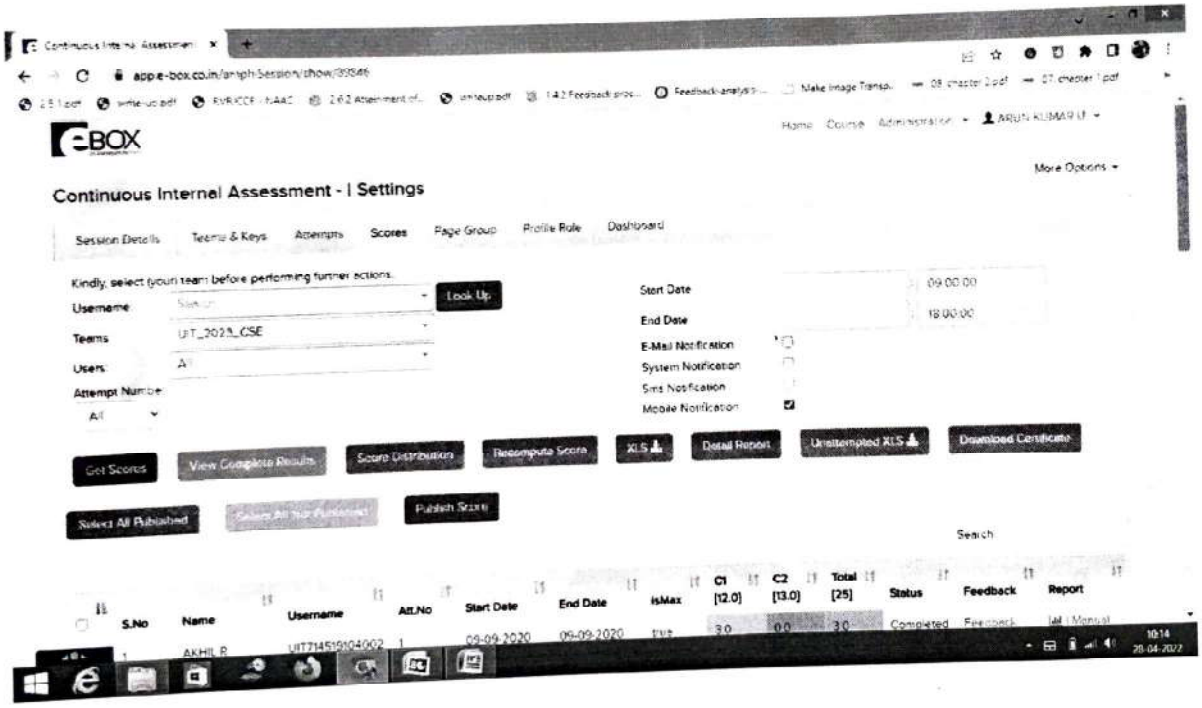




Dr. R. UDAIYAKUMAR, M.E., Ph.D.
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S.No	Select	Team Name	Start Time	End Time	Created By	Updated By	Last Updated	Action
1		DEMO_TEAM	08-09-2020 16:15 IST	11-09-2020 16:15 IST	NARMATHA	NARMATHA	16-01-2021 10:50 IST	Update
2		Default Team	09-09-2020 12:00 IST	09-09-2020 13:00 IST	ARUN KUMAR U	ARUN KUMAR U	09-09-2020 17:26 IST	Update
3		Demo_Team	08-09-2020 16:15 IST	11-09-2020 16:15 IST	Ve Murugan	VelMurugan	27-11-2020 12:38 IST	Update
4		ECE TRACK	08-09-2020 16:15 IST	11-09-2020 16:15 IST	amphimathra	amphimathra	11-02-2021 17:45 IST	Update
5		KCE_2023_CSE	09-09-2020 12:00 IST	09-09-2020 13:00 IST	ARUN KUMAR U	ARUN KUMAR U	09-09-2020 17:26 IST	Update
6		PIT_2023_CSE	09-09-2020 12:00 IST	09-09-2020 13:00 IST	ARUN KUMAR U	ARUN KUMAR U	09-09-2020 17:26 IST	Update
7		SCET_2023_CSE	09-09-2020 12:00 IST	09-09-2020 13:00 IST	ARUN KUMAR U	ARUN KUMAR U	10-09-2020 10:56 IST	Update
8		SEC_2023_CSE	09-09-2020 12:00 IST	09-09-2020 13:00 IST	ARUN KUMAR U	ARUN KUMAR U	09-09-2020 17:26 IST	Update
9		TECC_2023_CSE	08-09-2020 16:15 IST	11-09-2020 16:15 IST	NARMATHA	NARMATHA	21-09-2020 12:32 IST	Update
10		TECC_2023_IT	08-09-2020 16:15 IST	11-09-2020 16:15 IST	NARMATHA	NARMATHA	21-09-2020 15:39 IST	Update
11		UITK_2023_CSE	09-09-2020 12:00 IST	09-09-2020 13:00 IST	ARUN KUMAR U	ARUN KUMAR U	09-09-2020 17:26 IST	Update
12		UIT_2023_CSE	09-09-2020 12:00 IST	09-09-2020 13:00 IST	ARUN KUMAR U	ARUN KUMAR U	09-09-2020 17:26 IST	Update



Continuous Internal Assessment - I Settings

Session Details | Teams & Keys | Attempts | Scores | Page Group | Profile Role | Dashboard

Kindly select (your) team before performing further actions.

Username | Look Up

Teams: UIT_2023_CSE

Users: All

Attempt Number: All

Start Date: 09:00:00

End Date: 18:00:00

E-Mail Notification

System Notification

Sms Notification

Mobile Notification

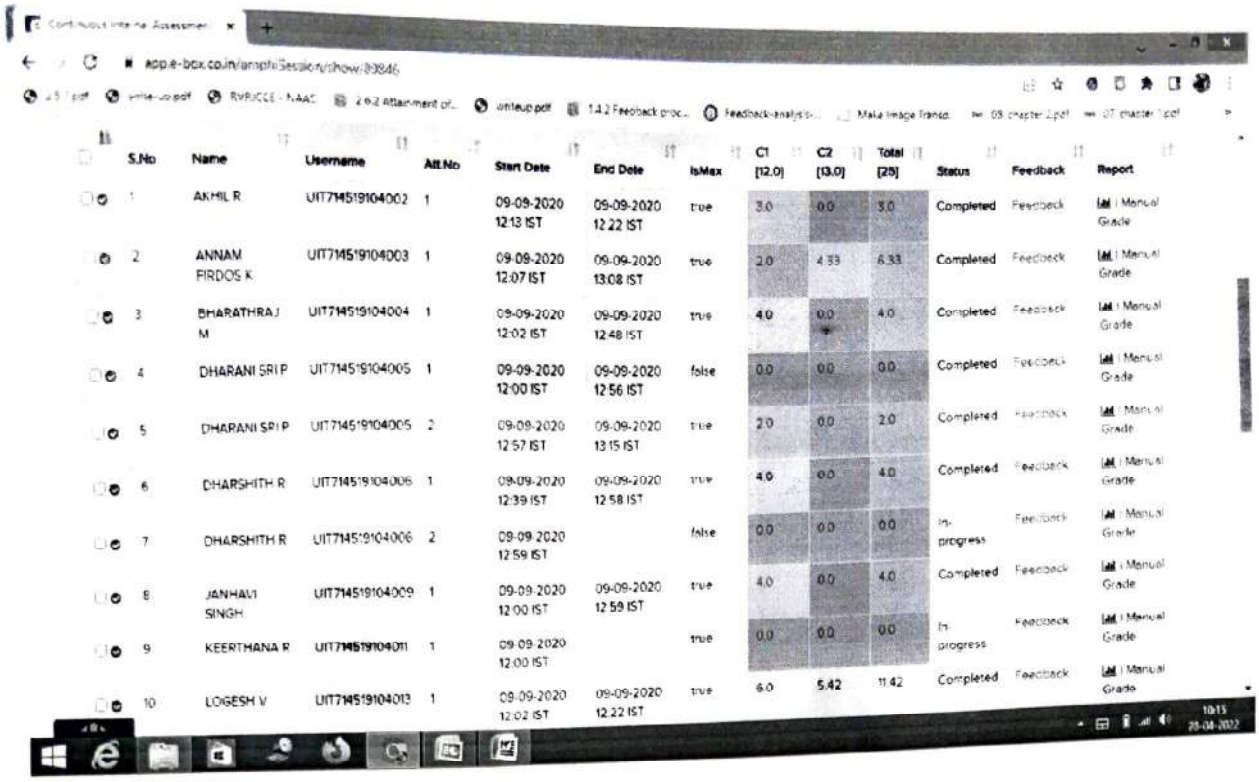
Get Scores | View Complete Results | Score Distribution | Recompute Score | XLS | Detail Report | Unattempted XLS | Download Certificate

Select All Published | Publish Score

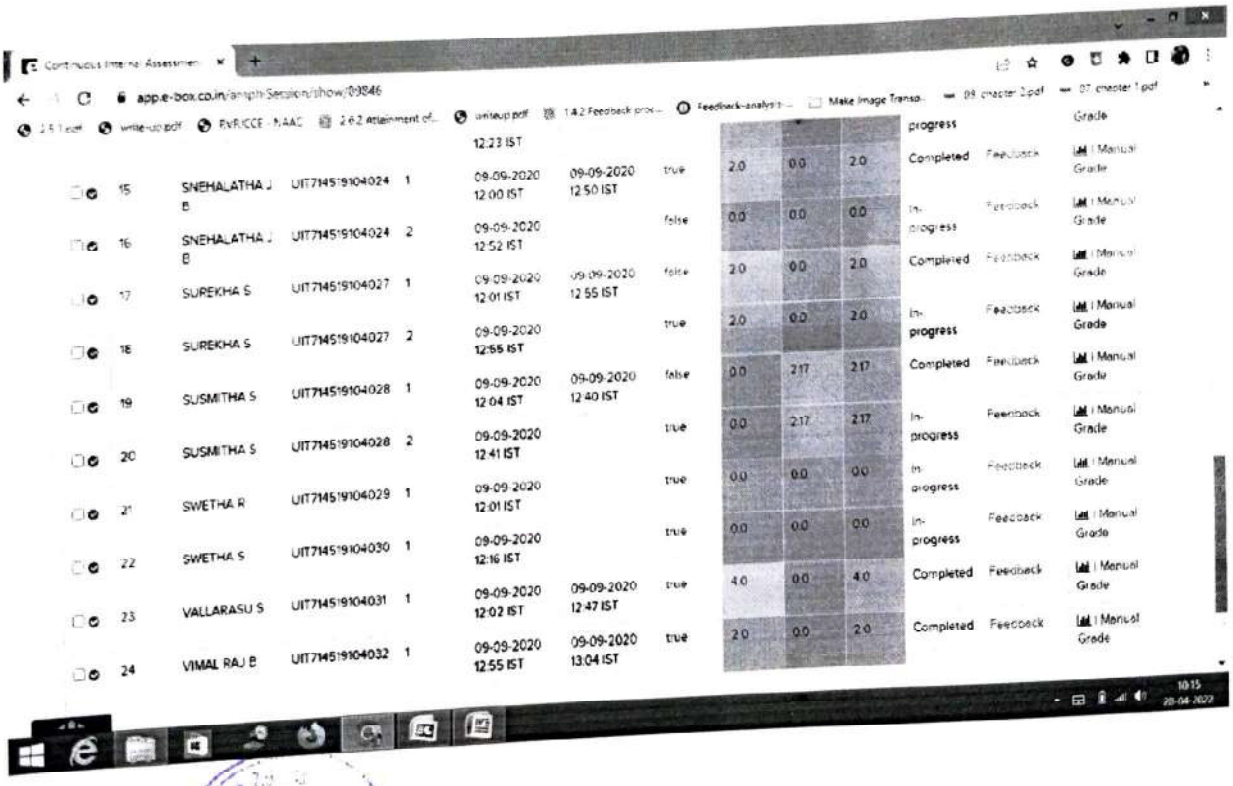
Search

S.No	Name	Username	Att.No	Start Date	End Date	isMax	C1 [12.0]	C2 [13.0]	Total [25]	Status	Feedback	Report
1	AKHIL R	UIT21451910400 2	1	09-09-2020	09-09-2020	Yes	3.0	0.0	3.0	Completed	Feedback	[M] Manual

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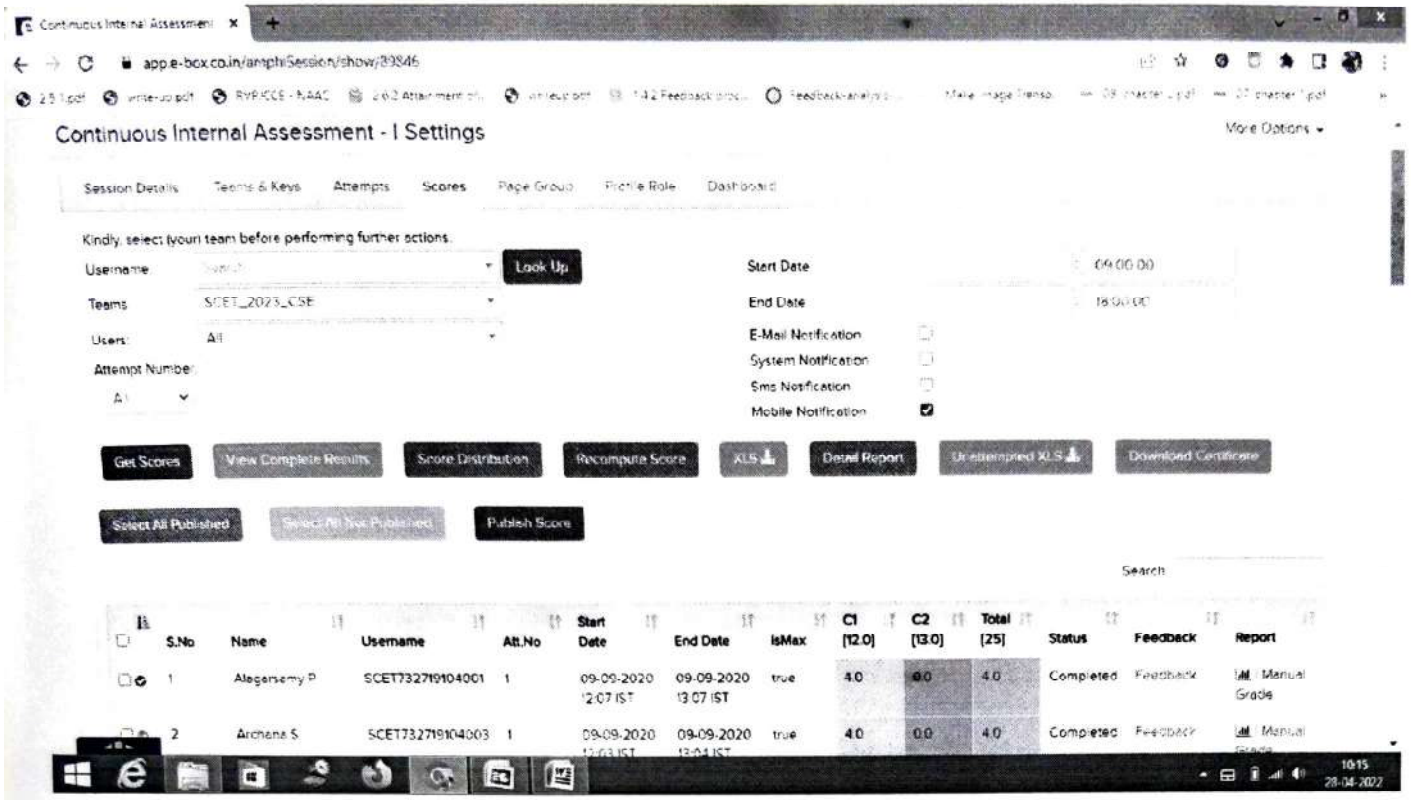


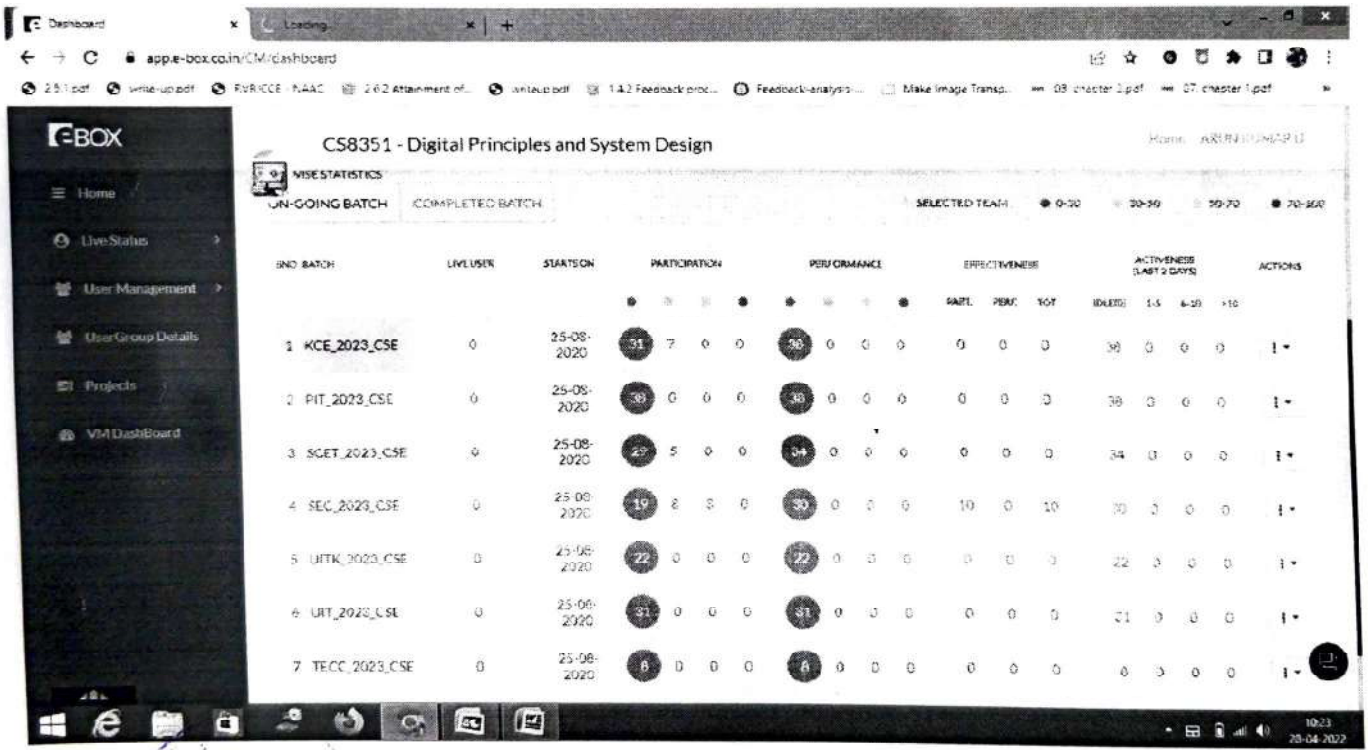
S.No	Name	Username	Att.No	Start Date	End Date	IsMax	C1 [12.0]	C2 [13.0]	Total [25]	Status	Feedback	Report
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2	ANNAM FIRDOS K	UIT7145191040003	1	09-09-2020 12:07 IST	09-09-2020 13:08 IST	true	2.0	4.33	6.33	Completed	Feedback	Manual Grade
3	BHARATHRAJ M	UIT7145191040004	1	09-09-2020 12:02 IST	09-09-2020 12:48 IST	true	4.0	0.0	4.0	Completed	Feedback	Manual Grade
4	DHARANI SRI P	UIT7145191040005	1	09-09-2020 12:00 IST	09-09-2020 12:56 IST	false	0.0	0.0	0.0	Completed	Feedback	Manual Grade
5	DHARANI SRI P	UIT7145191040005	2	09-09-2020 12:57 IST	09-09-2020 13:15 IST	true	2.0	0.0	2.0	Completed	Feedback	Manual Grade
6	DHARSHITH R	UIT7145191040006	1	09-09-2020 12:39 IST	09-09-2020 12:58 IST	true	4.0	0.0	4.0	Completed	Feedback	Manual Grade
7	DHARSHITH R	UIT7145191040006	2	09-09-2020 12:59 IST		false	0.0	0.0	0.0	In-progress	Feedback	Manual Grade
8	JANHAVI SINGH	UIT7145191040009	1	09-09-2020 12:00 IST	09-09-2020 12:59 IST	true	4.0	0.0	4.0	Completed	Feedback	Manual Grade
9	KEERTHANA R	UIT7145191040011	1	09-09-2020 12:00 IST		true	0.0	0.0	0.0	In-progress	Feedback	Manual Grade
10	LOGESH V	UIT7145191040013	1	09-09-2020 12:02 IST	09-09-2020 12:22 IST	true	6.0	5.42	11.42	Completed	Feedback	Manual Grade



				12:23 IST						progress		Grade
15	SNEHALATHA J B	UIT7145191040024	1	09-09-2020 12:00 IST	09-09-2020 12:50 IST	true	2.0	0.0	2.0	Completed	Feedback	Manual Grade
16	SNEHALATHA J B	UIT7145191040024	2	09-09-2020 12:52 IST		false	0.0	0.0	0.0	In-progress	Feedback	Manual Grade
17	SUREKHA S	UIT7145191040027	1	09-09-2020 12:01 IST	09-09-2020 12:55 IST	false	2.0	0.0	2.0	Completed	Feedback	Manual Grade
18	SUREKHA S	UIT7145191040027	2	09-09-2020 12:55 IST		true	2.0	0.0	2.0	In-progress	Feedback	Manual Grade
19	SUSMITHA S	UIT7145191040028	1	09-09-2020 12:04 IST	09-09-2020 12:40 IST	false	0.0	2.17	2.17	Completed	Feedback	Manual Grade
20	SUSMITHA S	UIT7145191040028	2	09-09-2020 12:41 IST		true	0.0	2.17	2.17	In-progress	Feedback	Manual Grade
21	SWETHA R	UIT7145191040029	1	09-09-2020 12:01 IST		true	0.0	0.0	0.0	In-progress	Feedback	Manual Grade
22	SWETHA S	UIT7145191040030	1	09-09-2020 12:16 IST		true	0.0	0.0	0.0	In-progress	Feedback	Manual Grade
23	VALLARASU S	UIT7145191040031	1	09-09-2020 12:02 IST	09-09-2020 12:47 IST	true	4.0	0.0	4.0	Completed	Feedback	Manual Grade
24	VIMAL RAJ B	UIT7145191040032	1	09-09-2020 12:55 IST	09-09-2020 13:04 IST	true	2.0	0.0	2.0	Completed	Feedback	Manual Grade

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S.No	Title of paper	Name of the author/s	Department of the teacher	Name of journal	Year of publication
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4.	Upgrading the Quality of Power Using TVSS Device and PFC Converter Fed SBLDC Motor	Arun Kumar U	EEE	Arabian Journal for Science and Engineering	2021
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11.	Design and Implementation of FPGA-Based Grid-Connected Impedance-Source Inverter	T. Sivakumar	EEE	Journal of The Institution of Engineers (India): Series B	2020
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Universal dispersion curves of a planar waveguide with an exponential graded-index guiding layer and a nonlinear cladding

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ARTICLE INFO

Keywords:
Slab waveguide
Exponential graded index
Nonlinearity
Dispersion

ABSTRACT

A planar waveguide consisting of three layers is considered. The guiding layer is assumed of exponentially graded index of refraction. The cover layer is a nonlinear material of Kerr-type. The refractive index distribution of the film layer changes as an exponential function from the guiding layer to the substrate. The solutions of Helmholtz equation are found. They are written in terms of three parameters a, b and V. The solutions in the guiding layer and substrate are found as Bessel functions of order $V\sqrt{b}$. The characteristic equation is derived and the dispersion curves are plotted and analyzed. A set of attracting features are found such as there is no cut-off thickness corresponding to a symmetric waveguide structure. The b-values do not exceed unity. This means the dispersion curves refer to guided modes.

Introduction

For the past decades, graded-index waveguide [1–3] achieved greater attention as it is more practical than step-index. The properties of both step-index and graded index waveguides are generally similar to each other except some delicate changes. A waveguide with graded-index guiding layer is the composition of three layers whose index profile has a region with index n_s, a guiding layer with index n_f and a cladding with an index n_c. In general, waveguides with graded-index profile, the substrate and guiding layers merge smoothly as a continuous area which indicates that the index in both layers is merged. It is represented by one function $n(x)$. The index of refraction $n(x)$ alters continuously from n_f to n_s. In waveguides like lithium tantalate and in-diffused lithium niobate, the index distribution has a smooth variation from that of the film to that of the substrate. It is approximated as an exponential function. To investigate a graded-index waveguide with a random profile, it is required to employ numerical techniques. Sometimes the techniques of approximation may be employed such as WKB. Approximate dispersion relation can be deduced in these cases.

There has been considerable interest in the waveguide analysis that comprises nonlinear media of intensity-dependent indices. Waves guided by these structures were investigated [4–7]. A large variety of optical devices are based on these waveguides. Various solutions of wave equation characterized by nonlinear index were proposed. Formulating a theory was proposed for the reflection and refraction of electromagnetic waves at the boundary between a linear and nonlinear media [8]. It was shown that as the wave angle of incidence is amended, hysteresis hops are noted from the transmission regime to the regime of total internal reflection and vice versa. When the nonlinearity is small, the closeness of the linear index of the nonlinear material and that of the linear material is the crucial condition required for hysteresis consequence presence. Such studies, which handled reflection and refraction of electromagnetic waves at an interface between nonlinear and linear materials, stimulated additional theoretical and experimental research on electromagnetic waves both refracted and guided by these interfaces [9]. Researchers have found numerous analytical solutions for the

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Upgrading the Quality of Power Using Hybrid Controller Based PFC Converter Fed SBLDC Motor Drive

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Abstract - The globe has now come to a point where it is unmanageable for humans to do any work without power. Therefore, the main motive of this paper is to ameliorate the quality of power. So, to enhance the quality of power, unification of PF, and lowering the harmonic distortion is required. This paper presents the improvement of power quality using a power factor correction regulator feeding a brushless drive with sensorless control. The converter configurations designed used here operates in intermittent conduction mode which acts as an inherant part to improve the quality of power. A brushless drive fed using the power factor correction converter is controlled using hysteresis comparator technique which reduces the phase lag of back emf and improves the consistency of the system. Moreover usage of fuzzy logic improves the robustness of the system and enhances the consistency. A comparative analysis is done among the various converters with sensorless control of BLDC and the converter with better performance is analyzed based on the PQ parameters. Also, usage of bridgeless configuration of converter reduces the switching losses as the diode rectifier is partially eliminated. The designed system is validated through experimental results with wide range of control speeds and voltages. The obtained quality of power is under the acceptable limits of IEEE and IEC standards.

Keywords: Improved Power Quality; Sensorless Brushless DC (SBLDC) motor; Power Factor Correction (PFC), Hybrid Controller (Fuzzy+PI)

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ORIGINAL RESEARCH

Combined phase balancing and reconfiguration for unbalanced distribution system optimization through hybrid fuzzy-MFOA

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Abstract
The phase balance and reconfiguration of the power distribution system is a dynamic analysis to improve and manage the radial power distribution system. Power loss analysis in the distribution system is mainly central, considering the point of view of money. In order to reduce power loss, different technologies are excluded in reconstruction, capacitor layout and phase balance. In addition to these three methods, in unevenness in the distribution system, the phase balance is considered one of three dynamic processes all of those above. Unbalanced feeders are dangerous for incremental power loss and excessive burden conditions; however, they affect quality and cost. A severely uneven circuit can convey an unsafe voltage drop in the intense phase. A positive feeder system is arranged to be load-dependent, recording balanced feed, the desire to improve the load and unbalanced load errors will begin feeder imbalance. For the equilibrium phase feeder, the exchange is a quick and convincing way. This paper proposes a problem of adding phase balance and reconfiguration to try to assist the hybrid fuzzy and Moth flame optimization algorithm (MFOA) to deal with the uneven distribution system. The verification of the estimative program is completed with two standard evaluations, and the work approves the simulation results.

Keywords Distribution system · Fuzzy · Moth-flame optimization · Phase balancing · Reconfiguration · Unbalanced feeder

1 Introduction

1.1 Background of the study

The optimization of the power distribution system is because the presentation of the system greatly improves the basics. The well-known techniques, namely feeder reconfiguration, capacitor placement, Distributed Generator (DG) placement and phase exchange, can reduce power loss and reduce unbalanced loads at the feeder.

The reconfiguration of the power distribution system is a process, which changes the feeder interconnection planning in the power distribution system by changing the handle opening/closing condition (Ding and Loparo 2016; Pegado et al. 2019). DG and capacitor positions (Abdelsamad et al. 2015; Pereira et al. 2016; El-Ela et al. 2018; Mehmood et al. 2018; Gangwar et al. 2019) are the proof and optimization estimation mechanism of the perfect zone. The DG/capacitor layout and feeder reconfiguration have been swapped in the previous schedule for a significant expansion timeline and were generally ignored by general inspections. Due to the openness of the set number of segment switches, feeder reconfiguration is challenging. The principle of phase change encountered is an unbalanced feeder system. Phase swapping is a direct and alternative method of phase change. To improve the program's use, it is necessary to be exchanged in the same three stages spread the load. Phase exchange has not yet developed its reasonable idea, due to inconsistencies in the feeder system, to assess the problem and internal and external, regardless of the stage of irregular effect. Most of the problems to extend distribution systems exchange has not been marked investigation.

1.2 Literature review

In Dolloff (1996), a phase balance machine was suggested, which records phase adjustment changes in the feeder. A heuristic backtracking search algorithm is described in

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RESEARCH ARTICLE-COMPUTER ENGINEERING AND COMPUTER SCIENCE

Upgrading the Quality of Power Using TVSS Device and PFC Converter Fed SBLDC Motor

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Abstract
This globe has now come to a point where it is unmanageable for humans to do any work without power. Therefore, the main motive of this paper is to ameliorate the status of power. So to boost the condition of power, there are three predominant processes. So this proposed procedure performs functions like repressing the transitory voltage surge, get unification of PF, and lowering the harmonic distortion. This is because power changes, whether high or low, present a complication with electrical equipment. Therefore, transient voltage surge suppressors are utilized in the AC power line to stay the power changes usual. Then, for the motive of unifying the energy factor and lessening the harmonic distortion, this paper utilizes the more efficient BLDC Motor fed through bridgeless converter configuration. Because utilizing a brushless motor, performs functions extremely efficiently such as longevity, increasing reliability and reduced noise. However, since it is exceeding principle to command the speed of the motor, the Sensorless form is utilized here. The intention of utilizing this is the spot of the rotor is extremely pivotal to handle the momentum of the motor and it's also hugely difficult to identify. Therefore, this proposed mechanism for performing these functions utilizes the Sensorless BLDC Motor and to reach power factor correction (PFC) bridgeless converter topologies are used. A comparitive analysis is done among the various converters and the best converter is analyzed based on the PQ parameters. The obtained quality of power is under the acceptable limits of IEEE and IEC standards.

Keywords Improved power quality · TVSS device · Sensorless brushless DC (SBLDC) motor · Power factor correction (PFC)

1 Introduction

Nowadays brushless motors are utilized additional often than brushed motors. The reason is that brushless motors are very good performing at the low sound noise and power efficiency improvements. Usually brushless motors use one or more sensors. With this function, the sensor is wired and the cost of operating it is high. Also, sensors cannot be used in rotor existing applications in closed housing. In applications where the motor is submerged in a fluid such as a compressor, or some pumps, must keep the number of electrical inputs to a minimum. So in terms of technology and cost reason, Sensorless BLDC Motor is considered as a major requirement. This Sensorless BLDC Motor gives very high performance, at very low cost. As a result of high performance, excessive torque to inertia ratio, excessive power density, low preservation need and extensive variety of speed manipulate; brushless DC (BLDC) motors are extensively favoured in lots of minimal and medium energy exeercises. It's far used in many house equipments of Gadget like fans, air conditioners, water pumps, Refrigerators, washing machines etc.It also finds applications in lots of commercial gear, medical equipments, Heating, air flow and air con, robotics and Particular movement control structures [1–3].

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A Bridgeless Landsman Converter Fed Sensorless Brushless DC Motor Drive For Upgrading The Quality of Power

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Abstract— This paper presents the upgradation of quality of power using a bridgeless landsman converter fed SBLDC motor drive. The designed regulator operates in intermittent inductor current mode and used to attain a close to unity power factor at supply ends. The speed of the SBLDC drive is maintained using a sensorless technique where the BLDC is fed through a bridgeless regulator. Moreover, usage of BL regulator provides minimal conduction losses as the diode rectifier is eliminated partially. The proposed design shows a substantial improvement in the efficiency compared with the existing system. The achieved quality of power indices that the limits are under various international standards like IEC and IEEE.

Keywords- *Intermittent Inductor Current Mode, SBLDC Motor Drive, Bridgeless (BL) Landsman (LM) Regulator*

I. INTRODUCTION

Brushless drives have acquired significance in most recent decades because of power quality upgradation and wide performance compared with traditional drive systems[9]. The features of high effectiveness, high unwavering quality, reduced electromagnetic difficulties and astounding process execution over wide scope of speed control have made this drive more popular[3]. The BLDC drive is fit for many low and medium power applications varying from computer hard drives, fuel pumps, e vehicles, compressors and dryers.

A diode rectifier feeding the voltage source inverter via DC link capacitor makes the drive to draw high harmonic current from the mains resulting in reduced quality of power[7]. To avoid these blemishes, power factor regulators are used. Few many designs are derived in the literature surveys with less number of components and reduced losses. Usually, a boost converter approach will be used which includes current multiplier approach requiring three sensors and high with high switching stress. The front end cuk and sepic converter configurations have been designed but a higher cost. BL SEPIC converter is designed with higher inductance and huge cost.

Bridgeless configurations have gained importance recently due to minimal switching losses due to partial avoiding of uncontrolled rectifier[5]. Figure 1 shows the basic stepup converter fed BLDC drive. In

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Liquid phase hydrodeoxygenation of furfural over laponite supported NiPMoS nanocatalyst: Effect of phosphorus addition and laponite support

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ABSTRACT

Unsupported and laponite supported NiPMoS catalysts were prepared under the hydrothermal method and investigated for liquid-phase hydrodeoxygenation of furfural in a high-pressure batch reactor at 423 K – 463 K under 20 bar H_2 pressure. The reaction significantly produced 94% of furfural conversion with 75% yield of 2-MF on NiPMoS catalyst whereas, NiPMoS/Lap catalyst exhibited 28% of 2-MF yield with complete conversion at 463 K under 20 bar H_2 pressure in toluene solvent. The influence of process parameters such as reaction temperature, reactant volume, catalyst compositions, and hydrogen pressure on furfural conversion and product yield was investigated in detail. The high reactivity and synergetic effect of the NiPMoS catalyst are due to added phosphorus, which has a profound influence on the structure of the catalyst, thereby increasing surface acidity, basicity, hydrogen consumption, and a number of MoS_2 fringes and the dispersion of MoS_2 on the surface of the support. The catalysts were characterized based on HRTEM, H_2, CO_2, and NH_3 TPD, FT-IR, FT-Raman, DRS UV-Vis, XRD, N_2-physisorption, and TGA. Recyclability, N_2-physisorption, and XRD results confirm the stability and practical applicability of the catalyst for industrial applications.

1. Introduction

In the current decade, the scarcity of non-renewable fossil fuel has harnessed to find renewable and sustainable resources to solve the rapid increase in energy demand related to petrochemical products. In addition to that, from the point of eco-friendly perspective, the constant consumption of fossil fuel would be responsible for CO_2 emission which results in air pollution and global warming. With consideration of these facts, much attention has been paid to re-balancing the carbon cycle. Biomass seems to be considered an alternate and naturally available material for future energy production and petrochemical economics. Biomass can be converted into value-added chemicals and petrochemical intermediate compounds through pyrolysis, high-pressure liquefaction and hydrogenation of bio oil into through catalytic hydrogenation and hydrodeoxygenation [1–3]. In addition to that, the carbon emission from the biomass derived fuel compounds can be kept constant for producing carbon-neutral fuel that would be a potential alternative for fossil fuels.

In recent years, biomass into fine chemicals *via* catalytic hydrogenation and its derived biofuel is much more attractive because of an increase in the demand for energy to produce sustainable fuel chemicals. As biomass contains a significant weight percentage of oxygenated unsaturated compounds, the catalytic conversion of biomass-derived oxygenates through hydrodeoxygenation (HDO) is considered to be important for the fundamental understanding of the process [4–6]. Furfural (FFR) is an important heterocyclic organic compound of lignocellulosic biomass, considered a platform chemical [7]. Catalytic conversion of this compound can be utilized to generate various kinds of fuel-grade hydrocarbons and chemicals such as, for instance, 2-methyl furan, furfuryl alcohol, and tetrahydrofurfuryl alcohol [8,9]. It has been reported that catalytic conversion of furfural into alicyclic five-membered compounds was achieved on Pt and Pd supported catalysts [10,11]. The reaction involved in obtaining those compounds either through selective catalytic hydrogenation of FFR or C-O bond breaking by catalytic cracking over a suitable hydrotreating catalyst [12].

These compounds can be used as a potential fuel/fuel additive or solvent for the production of resins [7,13]. tetrahydrofurfuryl alcohol is extensively applied as an eco-friendly solvent, associated with the following reasons, significantly less toxic, and it could be degradable and stable compared to unsaturated furan compounds. Furfural derivative

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SUSTAINABILITY

ENVIRONMENTAL PROGRESS & SUSTAINABLE ENERGY

Performance, environment, and cost-benefit analysis of a split air conditioning unit using HC-290 and HCFC-22

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Abstract

A widely used hydrochlorofluorocarbon (HCFC) refrigerant HCFC-22 in the split air conditioner (AC) is being phased out in all countries under the Montreal Protocol. Propane (HC-290) is a favorable substitute for HCFC-22. The performance, environment impact and cost-benefit analysis of a split AC unit operated with HCFC-22 and HC-290 has been carried out experimentally under different test conditions prescribed by IS 1391. The results showed that the variation in system performance was more significant for HCFC-22 than for that of HC-290 while varying the refrigerant charge. The experienced optimum charges that represent the maximum coefficient of performance (COP) was varied with the working environment and it was realized that, generally the optimum charge for HC-290 was 50% lesser than that of HCFC-22. The COP of the AC unit with HC-290 was observed to be 5% more than that of HCFC-22. However, the system capacity diminished by 7.8%. The operation of a split AC unit with HC-290 produced up to 15.9% lesser CO_2 emission than that of HCFC-22 under all the test conditions. The use of HC-290 in an existing HCFC-22 split AC system can save up to 12.22% of the life time total cost. Finally, it was inferred that the replacement of HCFC-22 with HC-290 in the split AC unit showed dominance in all aspects such as performance, emission, and life time total cost.

KEYWORDS
COP, global warming potential, HC-290, HCFC-22, total equivalent warming impact

1 | INTRODUCTION

Hydrochlorofluorocarbon (HCFC) refrigerant HCFC-22 has been widely used as a refrigerant in heat pump and air conditioning (AC) applications. The use of HCFCs is restricted due to environmental protocols.[1-2] The Montreal protocol agendas have been progressive to phase out the manufacturing and practicing of HCFCs by 2020 and 2030 by the developed and developing countries (India), respectively.[3-4] In India, about 6.7 million AC units were sold in 2018 and it is expected to reach 124 million by 2030. Approximately 145 GW of electricity is needed for its operation. Also, most of the split ACs in India use HCFC-22 (about 70%), and this results in more

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Upgrading The Quality Of Power Using Bridgeless Cuk Converter Fed SBLDC Drive

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Abstract—This paper develops a BL Ćuk converter-fed SBLDC drive for an air conditioning usability. A new technique to manage the speed of SBLDC motor is proposed with the aid of controlling the potential at DC bus the usage of a one voltage sensor. The proposed drive utilises a BL Ćuk converter working in Intermittent inductor current mode (IICM) for the power aspect correction and advanced energy excellence at the AC mains for a extensive variety of speed manipulation. The speed of the SBLDC drive is maintained using a sensorless technique where the BLDC is fed through a bridgeless regulator. The BL Ćuk regulator working in a IICM offers an inherent PAC and calls for a simple voltage follower technique for the voltage control. The BL topology is designed for acquiring the low conduction losses and need of low size of warmth sink for the devices. The proposed system is designed and its overall performance is simulated for an air conditioning system to function over a huge form of speed manage with near energy factor at AC mains

Keywords- *Intermittent Inductor Current Mode, SBLDC Drive (Sensorless Brushless Drive), (BL) Ćuk Regulator, Power Aspect Correction (PAC), Uncontrolled Bridge Rectifier (UBR)*

I. INTRODUCTION

As a result of high performance, excessive torque to inertia ratio, excessive power density, low preservation need and extensive variety of speed manipulate; brushless DC (BLDC) motors are extensively favoured in lots of minimal and medium energy exeercises. It's far used in many house equipments of Gadget like fans, air conditioners, water pumps, Refrigerators, washing machines etc [1-3].It also finds applications in lots of commercial gear, medical equipments, Heating, air flow and air con, robotics and Particular movement control structures [1-3]. This machine has a 3 segment windings on the stator and permanent magnet within the rotor. As the call suggests, it has no brushes for the commutation moreover an electronic commutation is utilised in which hall transducers are utilized for the position analyzing to arise the desired commutation situation using a potential supply inverter (VSI). Hence, it is also referred to as electronically commutated drive[3]. Owing to this, majority problems related to the mechanical commutator which include sparking, put on and tear of brushes and commutator meeting, noise troubles and electromagnetic intervention are eliminated[3].

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DESIGN AND ANALYSIS OF MPPT BASED BUCK BOOST CONVERTER FOR SOLAR PHOTOVOLTAIC SYSTEM

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ABSTRACT

Maximum power point trackers are so important to improve the efficiency of photovoltaic systems. Many methods have been proposed to achieve the maximum power that the PV modules are capable of producing under different atmospheric conditions. This paper proposed a Perturb and Observe based Maximum Power Point Tracking (MPPT) algorithm for solar system. The solar panel is simulated and analyzed in MATLAB/SIMULINK. Photovoltaic system is connected to a DC-DC Buck-boost converter. The Solar panel can produce maximum power at a certain operating point called Maximum Power Point (MPP).To achieve maximum power and to get maximum efficiency, the whole system must operate at that Maximum Power point. Maximum power point of PV panel keeps same on changing with changing solar irradiance and temperature of cell. Then to obtain maximum power from a PV system, MPPT algorithms are implemented. So that, P & O based MPPT is developed and Simulation results show the effective of the P&O based controller to produce more stable power.

Keywords: DC-DC Boost Converter, Maximum Power Point Tracking, PV System, P&O Method, Solar Panel.

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ORIGINAL CONTRIBUTION

Design and Implementation of FPGA-Based Grid-Connected Impedance-Source Inverter

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Abstract In recent time, Z-source inverter (ZSI) is designed by a new power adapting concept mainly for renewable energy application and other industrial applications. ZSI eliminates the drawbacks of the traditional inverter and provides high efficiency, and it also contains the buck and boost operation in it. This paper presents the grid-connected Z-source inverter and LZ-source inverter by controlling the shoot-through states of an impedance-source neutral-point-clamped inverter using a space vector modulation technique. Normally, the grid-side source contains harmonics. The main aim of this paper is to design, model and experimentally study the Z-source and LZ-source grid-connected inverters by using the MATLAB simulation. By using the control algorithm, the grid-side total harmonic distortion (THD) is controlled and maintains the IEEE standard level. The control algorithms make this inverter's outputs purely sinusoidal. The THD values of the Z-source and LZ-source grid-connected inverters are compared to find the efficient impedance-source inverter. The proposed control technique hardware is designed, and the experimental results are compared with the simulation results.

Keywords ZSI · L-ZSI · FPGA · Grid · THD

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Introduction

Recently, the distributed generation (DG) is progressively critical to get an increasingly productive power exchange [1, 2]. The profoundly utilized distribution generation frameworks are sunlight-based boards, windmills and thermal power plants. Mainly, the energy is received from these resources and further connected with the inverter/converter circuit, which is further fed to the grid side for carrying the transmission of active and reactive power. The major disadvantages are: It can infuse or it will ingest the receptive power at times and the vast majority of the frameworks are working unity power factor. Another downside of the conveyance age framework is the power will not consistently go to the grid on account of certain variables such as the absence of intensity request and more utilization.

Many forms of new and renewable energy are not natural 50 Hz or 60 Hz sources, and the question arises on the means of incorporating them into a standard electricity grid [3]. Power systems are experiencing a quick development with reference to distributed generation [4]. A number of factors arise due to this trend including monetary benefits, environmental concerns, consistency needs and tax incentives. Different power production technologies including microturbines, fuel cells and renewable sources such as solar and wind powers are described by [5, 6]. This list will certainly develop with the advent of cap hybrid electric vehicles and well-organized energy storage to mention just two technologies that draw a special attention [7, 8]. Miniature generators have been spread throughout the power system. Generally, these sources are not coordinated with the grid power supply, but rather put into service when the primary supply is intermittent. Furthermore, they tend not to be organized with each other.

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PWM STRATEGY FOR THREE PHASE VOLTAGE SOURCE INVERTER WITH MINIMUM HARMONIC DISTORTION

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ABSTRACT

In this paper, comparison between two different Pulse Width Modulation (PWM) techniques employed for three phase Voltage Source Inverter (VSI) is discussed. A suitable PWM technique is employed to obtain the required output voltage in the line side of the inverter. The PWM generation techniques used in this paper mainly based on Space Vector based Pulse Width Modulation (SVPWM) and Modified Space Vector based Pulse Width Modulation (MSVPWM). MSVPWM method involves the comparison of the three phase reference modulating signals with a common triangular carrier wave to generate the pulses for the three phases. Whereas, in SVPWM method, a revolving reference voltage vector is provided as voltage reference instead of three phase modulating waves. This paper analyses the two Pulse Width Modulation techniques for three phase VSI and the current THD is maintained at the level of below 5%. The two Pulse Width Modulation techniques for three phase Voltage source inverter are compared by the current THD values to select the method with lower THD values.

Keywords: Pulse Width Modulation, Voltage Source Inverter, Total Harmonic Distortion, SVPWM, MSVPWM.

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POWER FACTOR CORRECTION BY BRIDGELESS BUCK BOOST CONVERTER

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ABSTRACT

In current Scenario, efficiency and economic are the major concerns in designing and developing low-power applications. The aim of the paper is to design a Bridge Less Power Factor Corrected (BLPFC) buck boost converter for low power applications. The diode bridge is eliminating using bridgeless configuration thus reducing the conduction losses associate with in it. A BLPFC buck boost converter is design to operate in Discontinuous Current Mode (DCM) to provide a better Power Factor Correction (PFC) at AC mains. The PI controller design will be used to reduce the harmonics present in the system and to maintain the unity power factor at different voltages. This drive is to compare with the different input voltages and shows satisfactory performance. The performance of the system is to be simulated using MATLAB/Simulink. The experimental output values will be tabulated and the system is maintaining unity power factor at various voltages (90V, 100V, 125V).

Keywords: Power factor correction, Bridge Less Power Factor Corrected (BLPFC), Buck boost converter, PI Controller, discontinuous current mode.

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http://iaeme.com/Home/issue/IJEET?Volume=11&Issue=2

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SMART DIGITAL WATER FLOW SURVEILLANCE SYSTEM USING IOT

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Abstract: *The idea of a Smart digital water flow surveillance system is for the Smart buildings, Colleges, Hospitals, Industries, and Homes. In our day to day life, we see our cities facing many problems with water wastage, which leads to water scarcity and water pollution due to the overflow of water along roadsides. The main process is to save the water and monitor the usage of water. The wastage of water will also affect the environment and can cause water pollution due to the addition of oils and pesticides around the land. The most important need for having a smart way of life is by saving water. The Smart digital water flow surveillance system is a new idea to save water. It can send information through IoT to an android application of the user about the filling and empty water tank and it can also detect the water flow from the public water line. This system also used to measure the usage of water by the user using the water flow meter. Every process of the system is updated in an android application for user convenience.*

Index Terms **- PIC16F877A, Moisture sensor, Floating sensor, Wi-Fi module, Water flow sensor, Solenoid valve.**

I.INTRODUCTION

The world is getting automated more day by day and hence an eco-friendly technique is essentially required. Water management is the most required process around the world. Water usage can be estimated by monitoring and measuring the water utilized by a person. So far, the technology is much developed but there is a need for innovation. The concept provides a plan for reducing the wastage of water[4]. Nowadays, most of the industries are given rebirth with automation but, the local is still backward in automation. It is also equally important to have a low cost, robust and simple system to monitor the water consumption in the residence using an automated system.

The implementation of concept may differ among countries; insufficient water is a major issue among most developing nations. Since, less water usage is always welcomed wide over the world. Water management has an important commitment to ensure water consumption awareness and to avail of the measurement to the consumers. Mostly, the usage is unlimited due to the lack of measurement. In some cases, consumer involvement is necessary to save water but the concept must result in a system that combines both measurement and monitoring without the presence or any manual interruption of the consumer. The smart digital water flow surveillance system is presented in this paper. This system is available to measure and manage water consumption. The processed results will be published with the help of a Wi-Fi module for and displayed in the smartphone with the help of an android application [6]. The android application is used for the quick access and control of the device from anywhere. These can be supported in all versions and it can be updated and new supports can be added when it is needed. The smart digital water flow surveillance system can reduce the cost of the system. This system uses IoT for fast sharing of information to the user.

1.1Related Work

Nihil R, Riya Rajan, Rangit Varghese [2019]
Proposed the Water Quality Monitoring System is a real-time water quality measurement system focused on GSM. The system is incredibly robust and cost-effective. This machine tests various criteria relating to the water and sends them to the control center. It can automatically track the quality of water and is low in cost and does not require duty staff. Authorized users can access the data by logging in to the Thing Speak website. By entering the registered user ID and password, it will be led to the web page where the parameters will be shown in real-time in the form of plots. [1]

ImranB, Shakir Ahmed Sha KS, PavethraM, Siva Sankari k, Kavitha [2018]
Proposed a research that helped to designed and managed by a Wireless Sensor Network (WSN) which helps to track the quality of water with the aid of information sensed by sensors immersed in water, in order to keep the water resource within the norm defined for domestic use and to be able to take the necessary measures to restore the health of the deteriorated water body. The introduction of industrial process regulation is made possible through the use of the Internet. [5]

GowthamyJ, ChintaRohith Reddy, PijushMeher, SaranshShrivastava, Guddu Kumar [2018]
Proposed a study by installing this device in the smart city, it will be able to collect and evaluate the trends of residents ' water usage and save a lot of water from waste. The Internet of Things (IoT) is a revolutionary concept, that has the potential to turn almost anything into a smart thing. IoT provides an interface to track and work remotely from anywhere and at any time. Existing liquid level control systems are commonly used for controlling liquid levels, reservoirs, silos and dams, etc. The device suggested is used for the home/office. [3]

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POINT OF INTEREST RECOMMENDATION ENGINE

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Abstract—The popularity of location-based social networks (LBSNs) has led to an enormous amount of user-based check-in data.Recommended Points of Interest (POIs) plays a key role in meeting the needs of LBSN users. While recent work has explored the thought of adopting a collaborative ranking (CR) for recommendations, few attempts are made to include time-based information for POI recommendations using CR. In this article, we propose a two-phase CR algorithm that comes with the geographical influence of POIs and is regularized supported the variance of recognition of POIs and user activities over time.Time-sensitive regularized penalizes users and POIs that have been more time-sensitive in the past, helping the model to account for long-term behavioural patterns while learning from user-POI interactions. Moreover, in the first phase, it attempts to rank the visited POIs higher than the unvisited ones and, at the same time, to apply the geographical influence. In the second phase, our algorithm attempts to rank the preferred POI users higher on the recommendation list. Both phases use a collaborative learning strategy that enables the model to capture complex latent associations from two different perspectives. Real-world dataset experiments show that our proposed time-sensitive collaborative ranking model beats the state-of - the-art POI recommendation methods.

Keywords — Point-of-interest recommendation, time-aware recommendation, collaborative ranking, location-based social networks.

I. INTRODUCTION

With the launch of location-based social networks (LBSNs) such as Yelp, Trip Advisor and Foursquare, users can share check-in data on their mobile devices. LBSNs collect valuable information about mobile user records with check-in details. Generating Points of Interest (POIs) guidelines play a key role in addressing user needs, such as exploring a new POI or visiting a city. In reality, every city has multiple POIs , and a user may have visited just a few in her hometown as well as when out of town.POI Recommendation attempts to ensure the satisfaction of users by proposing to them the most interesting locations in theirvicinity, taking into account their preferences and contextual constraints.

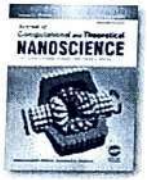
The accuracy of POI recommendation is constrained by many challenges. For example, data scarcity is a major challenge in Recommendation of the POI. Despite the fact that there are LBSNs with a large number of locations, in practice users visit a very limited number of locations, making the user-item matrix sparse. Moreover, as users spend most of their time in their hometown, the data scarcity problem is aggravated when a user visits a new city where has no history of visited locations. Some studies seek to address the question of data scarcity by integrating additional data into the model, such asgeographical and temporal data.The data scarcity problem is actually even worse when suggesting POIs as opposed to other things like movies or songs.This is mainly due to the fact that the check-in data provides an implicit feedback whereas users usually express their

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In this paper, an ultra-compact photonic crystal sensor based resonant cavities is proposed with improved quality factor, sensitivity and detection limit. The proposed sensor has 2D pillar photonic crystals with hexagonal array of dielectric rods. The refractive index of dielectric rods, radius of rods, filling factor *(r/a)* and lattice constant of the proposed structure are 3.46, 108 nm, 0.2 and 542 nm, respectively. The mean transmission efficiency, Quality factor, sensitivity, Figure of Merit (FOM) and limit of detection (LOD) are calculated as 92.2%, 9975.8, 371 nm/RIU, 2366 and 4.5 x 10^{-5} RIU, respectively. The corresponding electric field distributions and it band characteristics are studied using finite different time domain method (FDTD) and plan wave expansion (PWE). The cross-section of the proposed structure is 86 $/xm^2$ and is desirable for photonic integrated circuits (PIC) and ultra-compact optical sensors.

Keywords: Detection Limit; Photonic Crystal Sensor; Quality Factor; Sensitivity

Document Type: Research Article

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Conflagration and logging detection

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Abstract

The forest fire and deforestation has an adverse effect in environment. A wild land fire is an uncontrollable fire that occurs mainly in forest areas, it also occurs in urban or agricultural areas. Among the most causes of wildfires, human factors, either intentional or accidental, are the foremost usual ones. The number and impact of forest dangerous fires are expected to grow as a consequence of the worldwide warming. In order to fight against these disasters, it's necessary to adopt a comprehensive and multiple approaches that permit endless situational awareness and instant responsiveness. The main intention of this project is to provide forest security by preventing unauthorized cutting of trees and forest fires. The detection device used to detect the forest fire and deforestation comprises of multiple sensors such as LM35 temperature sensor, MQ3 smoke sensor, Flame sensor and PIR sensor to indicate the fire in different factors. Arduino board and Wemos D1 are used to control all these sensors. The program will be loaded and uploaded in Wemos. An application was developed to connect and work in a single server. The detected information will be send to user mobile and mobile apps using SMS and Wi-Fi interface by the Arduino.

Keywords Arduino UNO, Wemos D1, GSM.

1. Introduction

Nowadays forest fire occurs very frequently. It causes great damage to the great extension of forest land and destroys habitats like animals and birds. Due to the forest fire some rare species of trees and medicinal plants get extinct. Forest fire increases carbon-di-oxide levels in atmosphere contributing to greenhouse effect and climate changes. It destroys much of the soil and erodes the soil causing flood and landslide. The entire forest ecosystem will also be collapsed. In earlier days fire occurs naturally, ignited by heat from the sun. One of the main reasons of natural occurrence of forest fire is due to the departure of the lightening strike, sometimes collision of two siliceous rocks that also produces spark which results in the minimal impact of fire. Naturally occurring fires can be quickly detected as they have only one outbreak. However most of the wildfires are due to human's uncontrollable activity and carelessness such as lit cigar, not burning debris properly, fireworks, arson and camp fire and also due to the damage of power lines or military accidents. Next to the forest fire deforestation has an adverse effect on society. Development of urbanization and the construction of industries and factories in rural areas are the major reasons which results in deforestation. Since the dams are constructed across the river it results in destruction of forest cover. Farming, cattling, logging for materials also results in deforestation. 70% of animals and plants live in forest and deforestation leads to destroy their homes, since they provide shelter for some rare species of plants. Deforestation not only reduces the level of ground water but also that results in water scarcity. Logging of trees results in the release of large amount of green house gases into the atmosphere and also leads to global warming. It decreases the level of pollution that could be controlled by the nature warming and climate changes. Soil erosion is being caused by wide spread deforestation. The proposed unique solution helps to overcome the above

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Opulent Futuristic Smart Sensing Garden

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***Abstract*—** The project proposed here is an automatic public garden system which uses a PIC16F877A controller. The PIC controller is used to control the entire system. The hardware components required for this project are PIC16F877A, timer, battery, DC motor, humidity sensor, relay, solar panel, water level sensor, voice module, IR sensor. The project is an automatic design in which PIC controller controls the entire public garden system like gate, water system, lights and dustbin. Initially, the controller switches ON the entry gate that is opened for certain time, after some time the exit gate will also open. A voice indication is given to alert the public for closing time of garden then both gates will be closed. An IR sensor is fixed in the exit gate which is used to exit the people stuck inside the garden after closing time. Lights are automatically turned ON and OFF using timer. Based on humidity sensor the DC motor will supply water by using water sprinklers. If the water level in tank is beyond a certain fixed level the motor will automatically ON and fills the tank by using water level sensor. For disposal of garbage we introduce a smart garbage system which has two dustbins in which if one dustbin is filled by trash it gets automatically closed and another dustbin will be opened. The filled dustbin is indicated by LED and a message is send to the corresponding authorities for disposal. The overall power supply to the garden is generated and provided internally using a renewable energy.

***Keywords*—** PIC16F877A, Timer, Moisture sensor, Water level sensor, IR sensor, GSM, Solar panel

I. INTRODUCTION

At present the public gardens are playing a vital role in our society. Garden helps to keep cities cool and act as a place of recreation. In crowded cities, it will be difficult to maintain a clean and secure public garden. The most important problems faced in public garden are the misuse of electricity. Sometimes carelessness of the workers will result in wastage of electricity. The water wastage is an another issue which will be faced in gardens. Due to improper watering, plants are suffering from prolonged drought or high humidity which causes infection to the greeneries. In addition, it requires manpower to open and close the garden's gate.

The improper maintenance of trash is a big problem in gardens. This can cause spread of pest species and many diseases. So by implementing a smart garbage system this can be overcome which is also easy to maintain. There is a need of external power supply from the Electricity Board for the garden. To overcome this, we use renewable energy will play a vital role to generate the needed power for the garden. By implementing the project named as '**Opulent Futuristic Smart Sensing Garden**' all the above situations can be avoided which is used to develop a smart city.

II. RELATED WORK

Pawar P.M, et al (2016) proposed an automatic garden monitoring system that is used for household gardens and can be expanded to greenhouses. It is a microcontroller based project. It helps to reduce the human efforts and makes the appropriate use of water resources to improve the health and life of plants [1].

Mr. Mahadev Vilas, et al (2017) proposed a project that helped to gain a better knowledge on various aspects related to automation. Using this system the farmers can utilizes the available resources efficiently without wastage. The user can feed the input through the GSM so that a particular condition will turn on for a predefined time [2].

Ramkumar.E, et al (2018) proposed the plant monitoring and smart gardening using IoT in the Raspberry Pi platform. The main goal of automation is to make the people comfort by reducing manual work. All the sensors in this system connected with the Raspberry pi and the information about the garden is directly monitored and controlled by the owner through smart phone [5].

R.B.Thombare, et al (2018) proposed a public garden automation by using arduino. To control the wastage of

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Newfangled Immaculate Trash Can Tracking System

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Abstract: *The idea of trash can monitoring systems is for the Smart buildings, Colleges, Hospitals and Bus stands. In our day to day life, we see our cities facing many problems with garbage overloading, which leads to producing green-house gases and it leads to polluting our environment and also it is harmful to humans. The main natural process is the greenhouse effect that warms the earth's surface.*

The emission of greenhouse gases can also affect the ozone layer. The most important need for having a smart way of life is being clean smart garbage system. Trash can monitoring system is a new idea of implementation which makes a normal dustbin as smart using Arduino Uno and GSM modules are used to send the SMS. The proteus software tool is used to create the schematic diagram of our project.

The trash can will constantly measure the level of garbage in the bin and automatically detect if any toxic gases present in the bin and also detect any burning occurs in the garbage and it Sense and sends a message to the higher authority. If that cleaning team will not initiate cleaning, then the dustbin will automatically move by using the line follower sensors to dispose of the waste at the desired location.

Keywords: *Arduino, GSM, ultrasonic sensor, gas sensor, temperature sensor, Proteus tool, and line follower robot.*

I. INTRODUCTION

All cities in the world are facing great challenges due to increasing urbanization and one of the major challenges is reducing the amount of dumping waste. In many public places, we see that garbage bins are kept but they have not been cleaned. Overflow of waste causes air pollution, land pollution, and respiratory problems. Some gaseous compounds are extracted from the wastes in the bin, it can cause health effects by causing shortness of breath, headaches, eye irritation. Some of the industries produce toxic products that are thrown away into normal dustbin against the rule.

Though the dustbin is filled there is a formation of gases such as ammonia, carbon dioxide, and methane and some of the contents in the garbage that react with each other and release Sulphur & Nitrogen. Burning of garbage releases very poisonous carbon monoxide gas in the air. This may cause fire and pollute the atmosphere severely. Fire can also occur due to people's careless and they are unaware of the burnings & combusting material. This fire may also spread to homes, working area & causes a threat to the surroundings.

To reduce these problems we can use the existing technology to sense these unusual conditions. Using the level monitor like an ultrasonic sensor we can sense the level of waste in the dustbin [1]. Using the gas sensor we can sense the formation of hazardous gases like CO2, SO2, NO2, methane, and ammonia. Fire sensor is used to sense the temperature level in the garbage if any burning occurs it senses it. GSM & Arduino module is used to transfer data and messages.

If any unusual condition occurs in the waste like overflow, toxic gas or any burning of waste then it senses and sends the message or voice call to higher authority and scavengers for cleaning [3]. After sending these messages, if the scavengers are not coming to clean the waste.

Then the dustbin will automatically move towards disposing of the waste. Here the line follower concept is used. These line follower sensors are used to move the dustbin in that pre desired path or black line. When it reaches that destination it automatically disposes the waste at the desired location [5]. Upload the code to Arduino after setting up the smart trash can and providing a 5V power supply to the Arduino board to circuits. Thus using this method we can avoid some undesirable health problems and environmental pollutions. Using this idea we can make our India as smart cities.

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IOT Based Refuse Reuse Recycle Technique for Zero Waste Management

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Abstract : In almost all parts of the world there is no a proper solution for the disposal of waste. There is no proper monitoring and maintenances. The trash may overflow at times and make the city look unclean as well as it leads to the spread of various infections. If the trash pertains for more than a week in the same place it leads to the release of various toxic gases which may affect the children and old age people living in that area. The main idea of this project is to maintain the city clean by a proper collection of waste and not allowing it to overflow. At the same time, it makes utilization of biodegradable waste as natural manure to enhance crop production with the help of the bokashi composting technique. This method effectively increases crop production all over the world by 40%. So, it reduces the risk of disposing waste or dumping it under the water.

IndexTerms - PIC microcontroller, GSM, Servo motor, LCD display, DC motor, Infrared sensor, Dustbin, Mobile phone.

I. INTRODUCTION

In India, almost 60 million tonnes of waste are generated every year. Out of these, only 20% of waste is treated and the remaining 80 % of waste is either dumped as landfill into the earth or in most cases it is burnt. Both of these cases cause great disaster to the earth. Burring the waste deep into the ocean may lead to depletion of water organisms and burning of waste might cause depletion of the ozone layer.

The major problem faced all over the world is the scarcity of food. Totally 11% of the Earth's land area is utilized for agricultural purposes. Nowadays, the remaining agricultural area is also destroyed due to the construction of various buildings and it is also destroyed due to various natural disasters. If this situation prevails there will be a dramatic decrease in crop production. The usage of artificial manure may lead to decreased crop production and produces unhealthy crops that would be harmful for human consumption

To maintain the city clean and reduce the deposition of waste onto the earth and at the same time to increase the total crop production by 40% it paves way to go for the REFUSE REUSE RECYCLE concept.

There are 3 types of composting techniques like

1.Normal Composting,
2.Vermi Composting,
3.Bokashi Composting

But the first two has the following drawback. The biodegradable trash thus obtained is again segregated into GREEN AND BROWN trash and mixed up in a 50:50 ratio. They must be exposed to air whenever needed and needs sunlight at times. There is a chance of forming anaerobic bacteria which might be harmful to live beings. Due to all these complications, advised to adopt the BOKASHI COMPOSTING technique. Where an alternate layer of BOKASHI POWDER and trash is mixed up and placed in an airtight container and it is left undisturbed for 2 weeks. The extract thus obtained can be sprayed onto the crop which act as a natural fertilizer and increases the crop yield by 40%

II. LITERATURE SURVEY

In the former adopted methods, there was a hole dug inside, above which a polythene bag was covered. The biodegradable waste followed by a layer of cow dung and phosphate powder is sprinkled evenly. Then the setup is covered by a layer of cow dung and is left undisturbed for a period of 3 to 4 weeks. Now cracks start developing in its above layer at that time earthworm is introduced into its cracks. The top surface is covered with a layer of polythene bag and is checked periodically and water is sprinkled above it to avoid dryness. After a period of 4 to 5 weeks the earthworm digest all the degradable waste and turns it into manure and the corresponding manure is segregated from earthworm using a sieve and is packed and stored in a cool dry place. The casting analysis revealed that cow dung slurry along with paper and organic waste is converted into manure that is used to enrich the soil value by a small amount and reduction in C: N ratio make the plant to uptake quire people on duty.

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I. INTRODUCTION

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2.Vermi Composting,
3.Bokashi Composting

But the first two has the following drawback. The biodegradable trash thus obtained is again segregated into GREEN AND BROWN trash and mixed up in a 50:50 ratio. They must be exposed to air whenever needed and needs sunlight at times. There is a chance of forming anaerobic bacteria which might be harmful to live beings. Due to all these complications, advised to adopt the BOKASHI COMPOSTING technique. Where an alternate layer of BOKASHI POWDER and trash is mixed up and placed in an airtight container and it is left undisturbed for 2 weeks. The extract thus obtained can be sprayed onto the crop which act as a natural fertilizer and increases the crop yield by 40%

II. LITERATURE SURVEY

In the former adopted methods, there was a hole dug inside, above which a polythene bag was covered. The biodegradable waste followed by a layer of cow dung and phosphate powder is sprinkled evenly. Then the setup is covered by a layer of cow dung and is left undisturbed for a period of 3 to 4 weeks. Now cracks start developing in its above layer at that time earthworm is introduced into its cracks. The top surface is covered with a layer of polythene bag and is checked periodically and water is sprinkled above it to avoid dryness. After a period of 4 to 5 weeks the earthworm digest all the degradable waste and turns it into manure and the corresponding manure is segregated from earthworm using a sieve and is packed and stored in a cool dry place. The casting analysis revealed that cow dung slurry along with paper and organic waste is converted into manure that is used to enrich the soil value by a small amount and reduction in C: N ratio make the plant to uptake quire people on duty.

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Volume & Issue no: Volume 9, Issue 1, January - February 2020

Title:	Automatic Traffic Signal for Ambulance and VIP Vehicles
Author Name:	Mrs A Kaviya, Dr.M.Varatharaj, A. Arun kumar, V .Gayathri, S. Nivetha , S .Thamarai selvan
Abstract:	ABSTRACT: Normally, the traffic light signals are programmed for a particular time interval. But in this project the traffic light signals are programmed and generated based on the traffic level on the road. This type of traffic light signaling is used in all metropolitan cities. This particular project is designed to control the heavy traffic in required time. Most of the time the traffic will be at least for one hour. In this distance the traffic police can't hear the siren and the ambulance has to wait until the traffic is cleared. Sometimes the traffic clearance takes at least 30 minutes.so this leads to critical position. If the traffic density is high when the ambulance is arrived on the particular road, highest priority is given for that direction and the traffic is cleared immediately and provides way for ambulance and VIP vehicles. The RF sensors continuously send the signal to the receiver in the signal post to give way for ambulance immediately. Keywords: Traffic light controller, RF Sensor, Microcontroller, speed checker, GSM, sound sensor
Cite this article:	Mrs A Kaviya, Dr.M.Varatharaj, A. Arun kumar, V .Gayathri, S. Nivetha , S .Thamarai selvan , " Automatic Traffic Signal for Ambulance and VIP Vehicles", International Journal of Emerging Trends & Technology in Computer Science (IJETTCS), Volume 9, Issue 1, January - February 2020 , pp. 006-009 , ISSN 2278-6856.
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HIGH LEVEL WING

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Abstract: *The main focus of this project is to develop and design the mechanism of high level wing for lifting. It is controlled by an Arduino Uno microcontroller which accepts the input data's from the user. This high level wing working prototype is made up of a motor, camera accessed by ip webcam, gripper with a two relays and a Arduino board. These are connected together and are operated by ubidots software. In line with the human hand motion robotic arm additionally circulate and reacts the same. This will be accomplished from anywhere, we decided to overcome the positive difficulty approach by means of accessing the arm using an external joystick, in order that it is far easier than the preceding method. By the usage of the camera we able to stumble on the goal speedy and it enable to attain the target with the aid of the usage of this arm that is managed externally via a person. As machines develop even greater sensible, they're emerging no longer simply as a effective tools, but close companion. The control assignment of this is to govern the movement of robot arm from source to the destination spot. This could be done by the way of controllers within the Arduino which include certain specifications*

Keywords: *Gripper, Stepper Motor, WEMOSD1, RF Module, Wi-Fi Module.*

1. INTRODUCTION

Robotics may be a current emerging technology within the field of science. A number of universities in the world are working in this field. Robotics is that the new emerging booming field, which can be of great use to society in the upcoming years. Nowadays many sorts of wireless robots are being developed and are put to varied applications and uses.

The developed robotic arm, with learning and resources, which is operated & controlled wirelessly with the help of accelerometers which uses Rf module to transmits signals to the robot through an auto device manually through the hand and leg movement [3]. The Robot moves and acts in the manner depending on the gestures made by the hand and leg. The robot moves in up, down, left or right directions and picks up objects from one place and keeps at another desired place as directed by the movements of human. It is a TYPE — C Robot, servo controlled with continuous or point to point trajectories. The pre-defined arm are working in the form of wrapping a detectors in the arm of a human being [3].

By discussing the brand new frontiers of robot physical interplay with people, describing motivations and packages of safe pHRI (bodily human-robot interplay). The technical challenges to increase new robot structures for secure and powerful collaboration with people are mentioned, Sub-dividing the exposition into palms-off and fingers-on pHRI (physical human-robot interaction) systems [9]. We present a summary of the applicable safety standards and their ongoing development. It can be very useful when the arm is controlled externally, so that it can be make the movements according to the need and by using this technique it can make the needful for the human beings [3]. This can be done with the help of the Arduino boards connected to the hands which are programmed in order to do the favor. Hence, with the use of this, the desired result can be obtained. To make the life better than creating a modern world, we make use of the technology to develop the nation as well as the life of a being.

2. LITERATURE SURVEY

In the wireless gesture technique, microcontrollers accelerometers, degree of freedom, IP, RF modules are used. One accelerometer is mounted on the human hand and another on a leg from which the arm can be moved according to the movement of the human hand and leg, where hand movement captures the behavior and leg movement shows the platform movement

Intelligent Load Power Manager for Solar Powered Portable Devices

N.Vijayalakshmi, Dr.P.Maruthupandi

Abstract

The performance of real time solar energy converters and solar energy scavenging devices depends solely upon the speed and efficiency of the power management among the input, output and conversion ends. Hence this paper concentrates on designing of reconfigurable, reprogrammable, efficient Intelligent Load Power Manager (ILPM) system depicting low power, high precision and zero lag operation. (FPGA) Field Programmable Gate Arrays prove to be robust, low cost, high efficient methodology that works well in analog as well as in digital platform. Hence, FPGA based implementation of an Intelligent Load Power Manager (ILPM) is proposed for solar energy harvesting portable / remote devices. The input renewable power is stepped up with help of the DC DC Converter and the boosted voltage is given as input to the portable load. Since the harvested energy is not regular throughout the load requirement, a storage setup is made to meet up the lad needs. FPGA based ILPM proves to be an energy efficient module which controls the connectivity of the load needs and operation of the converter.Simulation and implementation of the Proposed FPGA based ILPM is done with Xilinx software 12.1 version.The dynamic power consumption of the proposed ILPM is found to be low. The obtained simulation output shows a comparative higher efficiency (96.2%), a decrease in chip area usage 130 $\mu m^2$and reduction in operation time as 4.283ns.

Keywords: Solar Energy Scavenging, Power Manager, FPGA, chip area, DC-DC Converter.

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An Investigation into the Tribological Properties of Bidirectional Jute/Carbon Fiber Reinforced Polyester Hybrid Composites

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ABSTRACT

In this work, the tribological performance of bidirectional jute/carbon fiber reinforced polyester composites was investigated using response surface methodology. The effects of three factors namely fiber weight fraction, load, and sliding velocity on the wear and friction values were examined. The composites were fabricated by using compression molding technique and the dry sliding test was conducted using pin-on-disk machine. The response surface methodology coupled with three factors – three-level Box-Behnken design was employed to examine the interactive effects of process variables on wear loss and coefficient of friction. Moreover, Analysis of Variance technique was used to inspect the statistical significance of the developed model. The outcomes revealed that the wear loss increased with the increase in sliding velocity and load and decreased with the increase in weight volume fraction due to diminishing contact between the polyester matrix and rotating disk. However, the coefficient of friction decreased with the increase in process variables. Furthermore, the morphology of worn-out samples was examined using scanning electron microscopy to understand wear mechanisms.

KEYWORDS

Natural/synthetic fibers; wear loss; coefficient of friction; RSM; ANOVA; wear mechanism

关键词

天然/合成纤维; 穿损失; 摩擦系数; 磨损机制

摘要

采用响应面法对黄麻/碳纤维双向增强聚酯复合材料的摩擦学性能进行了研究. 考察了纤维质量分数、载荷和滑动速度三个因素对摩擦磨损值的影响. 采用压缩成型工艺制备了复合材料，并在盘式针机上进行了干滑动试验. 采用响应面法结合三因素三水平Box-Behnken设计，研究了工艺变量对磨损损失和摩擦系数的交互影响. 采用方差分析技术对所建立的模型进行统计显著性检验. 结果表明，由于聚酯基体与转盘之间的接触减小，磨损量随滑动速度和载荷的增加而增大，随重量体积分数的增加而减小. 但随着工艺变量的增加，其系数逐渐减小. 此外，用扫描电子显微镜观察磨损样品的形貌，以了解磨损机理.

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Introduction

The light weight structural members of automobiles, aerospace and other commercial fields are manufactured using fiber reinforced polymer composite materials due to their superior mechanical properties combined with high strength to weight ratio (Nagarjun, Kanchana, and Rajesh Kumar 2020). These polymer composites are usually developed by reinforcing the synthetic fibers like carbon, glass, aramid, and Kevlar in to the thermosetting and thermoplastic polymers which gives good overall performance (Nagaraja et al. 2020). However, in recent day the new legislations and growing environmental awareness boosted the use of natural fiber reinforced composites in various applications, because these natural fibers are biodegradable, light weight

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Bending analysis of generalized thermoelastic waves in a multilayered cylinder using theory of dual phase lagging

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Abstract. In this present problem, we construct the analytical model for wave propagation in a generalized thermoelastic multilayered composite hollow cylinder construct of inner and outer viscothermo layer fastened together by linear Elastic materials with voids (LEMV). To uncouple the equation of motion, and heat conduction equations, displacement potential functions are introduced. The frequency equations are derived for longitudinal and flexural modes of vibration and are studied numerically for heat conducting viscothermoelastic material. The computed dimensionless frequency is presented in the form of scattering curves against various physical variables. Adhesive layer LEMV is compared with Carbon Fiber Reinforced Polymer (CFRP).We found that the frequency wave characteristics are finite in physical variables in the presence of thermal parameter.

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1. Introduction

The thermoelasticity applications are used in various branches of science and technology, so a reasonable consideration has been built since last few centuries. It is acknowledged that the postulate of coupled thermoelasticity deteriorate from physical defect that the thermal signal grow with the boundless speed.In order to the extensive use of materials under high temperature in current technology and with the modern development of polymer and plastic industry,the investigation of viscoelastic materials playing a vital role in solid mechanics.

The extended history of thermoelastic damping investigation established from Zener [1] and other authors Nayfeh and Yuxin Sun [[2],[3]] for dissimilar structures like plate,shaft, cylindrical panel etc.Bland and Christensen[[4],[5]] describes a long analysics of viscothermoelacity.Viscothermoelastic vibrations in micro-scale beam resonators with linearly varying thickness and adducent analysis of circular micro-plate resonators by using generalized viscothermoelasticity theory of DPL model are briefly described by Grover [6],[7].The generalized thermoelasticity theory with the dual phase lag effect has been developed by Da Yu Tzou [8].Naggar,Abd-Alla,Fahmy and Ahmed [9] study about thermal stresses in a rotating non-homogeneous orthotropic hollow cylinder.Guo,Wang and Rogerson[10] analysis of thermoelastic damping in micro-and nanomechanical resonators based on DPL generalized thermoelasticity theory.Sharma,Grover and Sangal [11] statistically studied viscothermoelastic waves.Sharma,Mohinder Pal and Dayal Chand[12] investigated three-dimensional vibration analysis of a piezothermoelastic cylindrical panel.Paul and

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Assessment of Hydrostatic Stress and Thermo Piezoelectricity in a Laminated Multilayered Rotating Hollow Cylinder

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KEYWORDS

Initial hydrostatic stress
Thermoelasticity
Longitudinal waves
Bessel function

ABSTRACT

In this paper, we built a mathematical model to study the influence of the initial stress on the propagation of waves in a hollow infinite multilayered composite cylinder. The elastic cylinder assumed to be made of inner and outer thermo piezoelectric layer bonded together with Linear Elastic Material with Voids (LEMV) layer. The model described by the equations of elasticity, the effect of the initial stress and the framework of linearized, three-dimensional theory of thermo elasticity. The displacement components obtained by founding the analytical solutions of the motion's equations. The frequency equations that include the interaction between the composite hollow cylinders are obtained by the perfect-slip boundary conditions using the Bessel function solutions. The numerical calculations carried out for the material PZT-5A and the computed non-dimensional frequency against various parameters are plotted as the dispersion curve by comparing LEMV with Carbon Fiber Reinforced Polymer (CFRP). From the graph, it is clear that those are analyzed in the presence of hydrostatic stress is compression and tension.

1. Introduction

Composite materials are generally utilized in en-gineering structures because of their predominance over the basic materials in applications requiring high quality and solidness in lightweight parts. Thusly, the portrayal of their mechanical conduct is taking imperative part in basic plan. Procedures that incite transversely isotropic flexible properties in them make most cylindrical parts, for example, poles, wires, cylinders, funnels and strands. Displaying the proliferation of waves in these parts is significant in different applications, including ultrasonic nondestructive assessment systems, progression of room explore and numerous others. Smart materials are normally prestressed during the assembling procedure. As initial stresses are indivisible in surface acoustic wave gadgets and resonators, investigation of such impacts has been finished with various methodologies. A few creators have considered wave engendering in prestressed piezoelectric structure.

Soniya Chaudhary et al. [1] derived secular equation of SH waves propagating in prestressed and rotating piezo-composite structure with imperfect interface. Abhinav Singhal et al. [2] analyticaly analysed interfacial imperfection study in pres-stressed rotating multiferroic cylindrical tube with wave vibration. Lotfy and El-Bary [3] discussed photothermal excitation for a semiconductor medium due to pulse heat flux and volumetric source of heat with thermal memory. Lotfy [4] discovered a novel model for photothermal excitation of variable thermal conductivity semiconductor elastic medium subjected to mechanical ramp type with two-temperature theory and magnetic feld. Soniya Chaudhary et al. [5] studied anatomy of flexoelectricity in micro plates with dielectrically highly/weakly and mechanically complaint interface. Ebrahimi et al. [6] discussed Magneto-electro-elastic analysis of piezoelectric-flexoelectric nanobeams rested on silica aerogel foundation. Abhinav Singhal et al. [7] investigate mechanics of 2D Elastic Stress Waves Propaga-

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Bending analysis of generalized thermoelastic waves in a multilayered cylinder using theory of dual phase lagging

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Abstract. In this present problem, we construct the analytical model for wave propagation in a generalized thermoelastic multilayered composite hollow cylinder construct of inner and outer viscothermo layer fastened together by linear Elastic materials with voids (LEMV). To uncouple the equation of motion, and heat conduction equations, displacement potential functions are introduced. The frequency equations are derived for longitudinal and flexural modes of vibration and are studied numerically for heat conducting viscothermoelastic material. The computed dimensionless frequency is presented in the form of scattering curves against various physical variables. Adhesive layer LEMV is compared with Carbon Fiber Reinforced Polymer (CFRP).We found that the frequency wave characteristics are funct in physical variables in the presence of thermal parameter.

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1. Introduction

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Synthesis and characterization of cobalt-doped cadmium oxide thin films prepared by sol–gel spin coating method

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Abstract–In this work, cobalt-doped Cadmium oxide thin films are prepared by sol-gel spin coating technique on the glass substrate. The effects of anncaling temperature and Co concentration on Structural, optical properties of the thin films are studied. XRD pattern indicates that a CdO single phase with a cubic polycrystalline structure is formed in all the samples. Prepared thin film samples were revealed by EDX analysis. Optical measurements show that the optical transmission of the layer is reduced and the optical-band gap decreases due to the increase in molar concentrations. The optical-band gap is decreasing while increasing of Co concentration and annealing temperature.

Keyword: Thin films, Cadmium oxide, Sol-gel, Spin coating, annealing

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1. Introduction

In recent years, Oxide based materials such as ZnO, CdO, SnO_2, TiO_2 and In_2O_3 have attracted increasing interest [1]. Due to the optical, physics and electron properties including excellent transmission of visible light and electrical conductivity CdO thin films have gives more attracted amid the numerous metal oxides [2]. In solid-state devices, Cadmium Oxide (CdO) makes an important semiconductor material for developing of various technologies. In visible and NIR spectral regions CdO thin films are transparent [3]. At 540 nm it is transparent in the solar spectrum. In the field of optoelectronic devices like solar cells, transparent electrodes, and photodiodes CdO have wide applications among others. To fabricate CdO/CdTe heterostructure solar cells with 9.1% efficiencies, CdO transparent conducting oxide with optical-band gap of 2.3 eV and an electron affinity of 4.5eV were used in DC magnetron sputtering [4].

The properties like structural, morphological and optical were affected by changing annealing temperature in successive ionic layer adsorption and reaction (SILAR) method. The optical-band gap was changed due to change in annealing temperature of 300 °C and 400 °C [5]. In thermal annealing method hydroxide phase with the structural transformation can be achieved.

CdO thin films were prepared in different methods like sol-gel [6], pulsed laser deposition [7], spray pyrolysis [8], sputtering [9], chemical bath deposition (CBD) [10], e-beam evaporation technique [11], pulsed filtered cathodic arc deposition (PFCAD) [12], successive ionic layer adsorption and reaction (SILAR) method [13,14],. Sol-gel spin coating method add more advantage to process high smoothness of the films, simplicity, low sintering temperature, the possibility for coating over the large-area substrate, high smoothness of the films, reliability, controllability, reproducibility, etc [15–20]. Moreover, some parameters are optional for coating like spin, speed, ambient, solution morality, drying, and annealing process [21].

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Influence of Organic Additive Benzene Sulfamide on the Magnetic Behavior of Electrodeposited CoMnP Thin Film Alloys

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Electro deposition of CoMnP thin films was carried out for different concentrations of organic additive Benzene sulfamide at a constant bath pH value and for various current density. Magnetic properties such as coercivity, saturation magnetization and the surface morphology were investigated for electrodeposited CoMnP thin films. The characteristics of the CoMnP thin films were found to attain enhanced values, because of the variation in the concentration of the bath solution. The Scanning Electron Microscope (SEM) micrographs of the CoMnP thin films for various bath compositions and additive concentration exhibited different micro cracks. From the X-ray diffraction pattern, structure of the CoMnP alloy films was analyzed and it was found to be Hesagonal Close Packed (HCP) structures with the dominant microstructure and all the co-deposited thin films were found to exhibit Nano crystalline structure. The magnetic properties of the specimens were characterized using Vibrating Sample Magnetometer (VSM). Adhesion and hardness of the electroplated films influenced by organic additive Benzene Sulfamide were also investigated. The magnetic properties were highly influenced by the addition of the organic additive Benzene Sulfamide for various bath composition and bath conditions. Under best condition involving addition of 0.2 M of NaH_2PO_2 and 2 g/L of Benzene Sulfamide acid at current density 5 mA/cm^2 and time of deposition 60 Minutes, the thickness of the film was found to be 4.6 micrometer with coercivity 1500 Oe.

Keywords: CoMnP ALLOY FILMS; ENERGY DISPERSIVE X-RAY; ORGANIC ADDITIVE BENZENE SULFAMIDE; SCANNING ELECTRON MICROSCOPE (SEM); SPECTROSCOPY (EDS); VIBRATING SAMPLE MAGNETOMETER (VSM); X-RAY DIFFRACTOMETER (XRD)

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Influence of Organic Additive Benzene Sulfonic Acid on the Magnetic Behavior of Electrodeposited COMNP Thin Film Alloys

M.RM. Krishnappa, K.V. Kannan Nithin

Abstract: ***CoMnP alloy films were synthesized by Electrodeposition Technique. The Electrochemical deposition technique is especially interesting due to its low cost and high quality of deposit. Thin Magnetic films are extensively used in various electronic devices including high density recording media and micro electromechanical systems (MEMS). Electrodeposition being cost effective, in the present work cobalt based magnetic films was deposited electrochemically and characteristics features of the deposited film were studied. Effect of organic additives Benzene sulfonic acid in the presence of the sodium hypophosphite was studied. Structural and magnetic properties were investigated and reported. The hysteresis loops of the CoMnP alloy films were measured and studied. The result shows that organic additive Benzene sulfonic acid has altered the magnetic properties of the films. Among the different compositions, CoMnP compound exhibit good hard magnetic properties, Under the best condition involving addition of 0.2M of NaH2PO2 and 4 gL-1 of Benzene Sulfonic Acid at a current density of 7 mA-cm-2 and time of deposition 60 minutes, the thickness of the film was found to be 3.5 micrometer with coercivity 1410 Oe and remanent 0.12 emu.The reason for the change in magnetic properties and structural characteristics because of the additive were discussed.***

Keywords—CoMnP thin films, organic additive Benzene sulfonic acid, Magnetic properties.

I. INTRODUCTION

Different actuation mechanisms for microactuators include electrostatic [1], Piezoelectric[2], thermopneumatic[3], bimetallic[4], electromagnetic[5], electrochemical[6] and shape memory alloys [7]. At present hard and soft magnetic material gains increasing interest in micro electro mechanical systems and micro optical electrochemical system devices, for example microaculators and sensors. In particular hard magnetic materials are advantageous to bidirectional actuation, which is needed in bidirectional actuation. The importance of electrodeposition as a fabrication technology in the electronic industry is large and growing. [8]. Development of microelectromechanical system [MEMS] requires hard magnetic films with both high coercivity and remanence [9]. Electrodeposited thin magnetic films are important in computer read/ write heads and MEMS because of their fiexibility, capability, quality and low cost. With the current trend towards miniaturization, high performance packaging, cost-competitiveness and electro deposition has become the dominant manufacturing technology in many new applications and remains firmly established in others. For example in micro electro mechanical system (MEMS) devices, data storage media, magnetic recording head and reading heads [8]. In addition to the above, Electrodeposition has been recognized as a preparation method characterized by remarkable degree of reproducibility. The electro deposition technique is especially interesting due its cost-effectiveness, quality deposits and easy maintenance. As CoMnP ternary alloy films are having hard magnetic properties various studies have been carried out to develop these thin magnetic films. Electro-deposition provides an easy way to produce these thin films with high quality[10]. As of now, various Co-based permanent- magnet materials have been electrodeposited because of the crystalline structure of cobalt is highly anisotropic. Numerous studies have been carried out to investigate binary and ternary Co based iron group magnetic films[11]. They mostly focused on the mechanism of anomalous codeposition, effect of plating, the effect of various additives and the corrosion properties. To our knowledge, there have been a few detailed studies on Co based magnetic films prepared using electro deposition [12]. The purpose of the present work was to study the influence of bath parameters (current density, pH, and time duration of deposition) mainly on the magnetic properties of electro deposited CoMnP thin films. CoMnP films were characterized using Vibrating sample Magnetometer (VSM), energy dispersive X-Ray Spectroscopy (EDS), X-Ray diffractometer (XRD) and the influence of the bath parameters on the film structure , composition, and magnetic properties were discussed. The influence of the organic additive Benzene Sulfonic Acid on the magnetic properties was also studied.

II. EXPERIMENTAL DETAILS

All the CoMnP films were electrodeposited at constant pH value 3.00 The CoMnP films were electro deposited on Copper substrates of size: breath; 20 mm X Length ;120 mm X Thickness 0.1 mm. Pure Cobalt of the same size was used as anode. Current for electrodeposition was passed from a regulated direct current (DC) unit. Analytical reagent grade chemicals were used to prepare baths Solution. Each and every

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Idle Vehicle Detection and Traffic Symbol Analysis using Artificial Intelligence and IoT

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ABSTRACT

The emerging development in smart vehicles has improved transportation seamlessly. This paper deals with incorporating the modern technologies like Artificial Intelligence and Internet of Things(IoT) with the traditional transportation system. It states how AI algorithms can be integrated with IoT powered vehicles to manage and avoid crashing with idle vehicles on a speedway and assists for safer driving using the traffic symbol analysis to reduce accidents. Several communication standards for data transmission between the vehicle and control system has been stated. It also provides additional features like emergency or assistance for vehicles in speedway. It uses complex learning and analysis algorithms to improve the efficiency of driving and reduce rear-end collisions. This paper hence gives a comprehensive survey of the enabling technologies, protocols, and architecture for IoT powered transport.

Keywords: Internet of things, Wireless Sensor Network(WSN) , IR sensor, Wireless data transmission, Radio frequency Identification, traffic symbol analysis, idle vehicle.

1. INTRODUCTION

The increases in number of vehicles have led to new problems in the aspect of transportation. Traditional traffic monitoring and control systems fail to meet the great demands of the current scenario. To handle such critical situations we use Artificial Intelligence algorithms with the support of IoT powered devices to monitor and take necessary actions. In particular, the rear-end collisions are a major problem in any highway. These occur majorly due to idle vehicles or vehicles that are parked at the leftmost lane. The misconception of drivers is the major cause for rear end collisions which stands 3rd in the index of accidents. There is no proper method to prevent or control such accidents. Almost every year 40% percentage accidents occur due to this. The proposed system reduces such accidents by continual vehicle monitoring. Another cause for accidents is the unawareness of traffic symbols. Out of 600 drivers 500 of them never mind the traffic symbols which not only cause accidents but may also end in fatal injuries and vehicular damage. All such defects in driving can be assisted by intelligent systems which assist in driving. The automation in transport has been approved by several countries and their governments. For example, Germany Federal Highway Research Institute And US National Traffic Safety Association promote 2-level automation, which allows the driver to analyse several driving and safety factors of the vehicle.

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Data Analysis in Trade

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ABSTRACT

Data Warehousing is arisen in order to overcome the issues faced by the excel file. When several database is maintained by the excel file a conflict will arise such that which source file belongs to which excel sheet. In order to overcome the problem a data warehousing is used and a new technique used in data warehousing is soft concatenation mapping which depicts a relationship between column during transformation and concatenation .At that time many redundancy and loss of data may occur in order to overcome the issue an efficient method is used that is used to derive an approximate algorithm. This approximation is used both in real time and synthetic data sets.

Keywords-Database management, data profiling, data integration, data analysis, Concatenation

1. INTRODUCTION

A Data Warehouse is a form of central repository which stores the data that are collected from various internal and external source file .Data Warehousing that emphasizes and capture the data for processing in an legitimate manner. Typically a Data Warehousing is a form of relational database which is mounted on an enterprise main framework. Dataset from various online transaction process and other online system they are selectively extracted in order for efficient analysis on Business activities ,for better decision support and also enhance the growth of easy analysis task. The process of collecting all the required data about the small or large scale organisation and storing in the central repository and by the use of data analysis task using the certain tools an enhanced analysis process can be taken out from the output of the data analysis an better decision can be taken out or that make an intimate for users as kind of awaréness before proceeding the process.

1.1 EXISTING SYSTEM

The Data are stored in the form of excel where the searching process and their performance is very low. Since the data is stored in the form Excel sheets and Spreadsheet the data is information that is stored in any spreadsheet program such as Excel or Google Sheets or any other format. The Data stored in cells in a worksheet can be used in calculations, displayed in graphs, or sorted and filtered to find specific information. The maintenance of the Excel sheet for collection of storage of all amount data in an large database is that the performance is very low and issue will arise such that which data belongs to which data source .similarly the maintenance of the collection of huge data in the Excel sheet will result in an many redundancy and loss of data.



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Online Job and Candidate Recommendation System

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ABSTRACT

To develop an enhanced web application, using web services for both online job and candidate recommendation system. By using Professional Social Recommender (PSR) and Text field filtering the recommendation of jobs and candidates will be classified. Three tier architecture designs have been implemented for efficient data retrieval and data transfer. They are Job seeker interface, Candidate recruitment interface and Recommendation database will be the architecture taken for developing this application. The primary architecture will be the job seeker interface, in followed with candidate recruitment interface and Recommendation database will be interconnected. The professional social recommender will works as a third party agent and the agent will retrieves all the recommended job and candidate profiles. A panel will be designed for displaying the recommended job and candidate details. All the displayed jobs will be more relevant to the user's profile. The generated user and candidate profile will be encrypted in order to overcome the privacy breaches.

Keywords: Professional Social Recommender (PSR), online job, Candidate recommendation

1. INTRODUCTION

Generally, data mining (sometimes called data or knowledge discovery) is the process of analysing data from different perspectives and summarizing it into useful information - information that can be used to increase revenue, cuts costs, or both. Data mining software is one of a number of analytical tools for analysing data. It allows users to analyse data from many different dimensions or angles, categorize it, and summarize the relationships identified. Technically, data mining is the process of finding correlations or patterns among dozens of fields in large relational databases.

Data mining, the extraction of hidden predictive information from large databases, is a powerful new technology with great potential to help companies focus on the most important information in their data warehouses. Data mining tools predict future trends and behaviors, allowing businesses to make proactive, knowledge-driven decisions. The automated, prospective analyses offered by data mining move beyond the analyses of past events provided by retrospective tools typical of decision support systems. Data mining tools can answer business questions that traditionally were too time consuming to resolve. They scour databases for hidden patterns, finding predictive information that experts may miss because it lies outside their expectations.

Most companies already collect and reference massive quantities of data. Data mining techniques can be implemented rapidly on existing software and hardware platforms to enhance the value of existing information resources, and can be integrated with new products and systems as they are brought online. When implemented on high performance client/server or parallel

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Traffic Accident Evaluation using MATlab

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ABSTRACT

The main aim of this paper is to analyze the road traffic accidents in metro-politian city level at all intersection points. Analysis shows that the distribution of road accidental deaths and injuries in cities varies according to age, month and time. To develop the system that would avoid the accident by sending the notification whether the area is most traffic and there are so many accidents occurred in that place .The most accident precaution systems are available but those are not enough to users, so this new system may bring comfort zone to the users. Already know that high number of accidents is happened because of hightraffic at peak hours.Reason of traffic was no of vehicles are increased.so the main concept of the system has to be done using the no of vehicles at every zone. And we use some clustering methods to denote that which zone was in active and un-active state .The userwho travelling in the night that should be most useful for them.

Keywords: Traffic accidents, Clustering, Flash board, MATLAB, number of vehicles.

1. INTRODUCTION

Road accidents are higher in extreme weather and during working hours .The Analysis of road accident scenario at state and city level shows that there is a huge variation in fatality risk across states and cities. Fatality risk in 16 out of 35 states and union territories is higher than the all India .Although, burden of road accidents in India is marginally lower in its metropolitan cities, and almost 50% of the cities face higher fatality risk.In general, while in many developed and developing countries, road safety situation is generally improving, India faces a worsening situation. There is thus an urgent need to recognize the worsening situation in road deaths and injuries and to take appropriate action.We are developing the system that can be used to avoid the accidents in intersection of roads and major traffic areas .Using clustering methods, merging the all intersection the roads. For this system we develop a manual report of particular four zones.That report containing number of vehicles about north ,west ,east , and south.Using the report we have drawing the graph that showing the number of accidents occurred and number of vehicles in current location.From the graph which location has the high percentage of Accidents and vehicles at a time the Flash board that show the alert message to the drivers.

2. EXISTING SYSTEM

Previous works are contain only about traffic risks, high risky location and some precaution methods. Some works have collected the reasons of those accidents like drivers unawareness , inproper driving experience and their age. Other systems are tried to collect the fatality ,injury types and compare them using some classifiers. Several studies related to traffic data mining have



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Electronic Health Record System using Blockchain

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ABSTRACT

This paper deals with the Electronic Health Records for storing information of the patient which consist of the medical reports. Electronic Health Records (EHRs) are entirely controlled by Hospitals instead of patients, which complicates seeking medical advices from different hospitals. In the existing system of storing details of the patients are very dependent on the servers of the organization. In the proposed all the information of the patient are stored in the blockchain by using the Metamask and these details are stored in the block chain as a blocks of data. Each block consists of the data which is encrypted data. Electronic Health Record (EHR) systems record health-related information on an individual so that it can be consulted by clinicians or staff for patient care. The data is encrypted by the algorithm known as SHA-256 which is used to encrypt all the data of the patients into a single line 256 bit encrypted text which will be stored in the block at etherscan. These records for not only useful for the consultation but also for creation of historic family health information tree that keeps track of genetic health issues and diseases it can also be used for any health service with the authorization from both the patient and medical organization.

Keywords: Blockchain, SHA 256 algorithm, Encryption of data, Metamask.

1. INTRODUCTION

The objective of this project is to provide the application which is user friendly and cost effective. The major advantage of this project is security. A securable system is more important to be reliable. Electronic Health Records (EHRs) provide a convenient health record storage service, which promotes traditional patient medical records on paper to be electronically accessible on the web. This system was designed to allow patients to possess the control of generating, managing and sharing EHRs with family, friends, healthcare providers and other authorized data consumers. Moreover, provided that the healthcare researcher and providers of such service access these EHRs across-the aboard, the transition program of healthcare solution is expected to be achieved. However, in the current situation, patients scatter their EHRs across the different areas. During life events, causing the EHRs to move from one service provider database to another. Therefore, the patient may lose control of the existing healthcare data, while the service provider usually maintains the primary stewardship. Patient access permissions to EHRs are very limited, and patients are typically unable to easily share these data with researchers or providers.

Blockchain is a decentralized database whose data block is connected chronologically. In the healthcare industry, there are many different parties who need to collaboratively manage personal EHRs blockchain (in a model of consortium blockchain), such as medical specialists, hospitals, insurance departments, etc. Electronic Record Systems are proprietary that is centralized by

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Detaching and Reproducting of Data in a Cloud for Excellent Performance and Security

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ABSTRACT

Cloud computing is third party administrative control so our data is outsourced it gives rise to security concerns.security is one of the important aspect of any technology. Therefore high security measures are required to protect our data. In this paper, we propose Detaching and Reproducting of Data in a cloud for excellent performance and security that collectively approaches security issues and data sharing protectively. In this methodology, we divide the file into fragments and replicated over cloud nodes. Files are fragmented and shuffled like (1-2,2-3,3-4,4-1)in sequential order and stored in multiple servers. Moreover nodes sharing fragments are separated with certain distance by using T-colouring graph to prohibit an attacker by guessing the location of fragments. This methodology does not rely on traditional cryptography techniques.

Keywords: cloud security, fragmentation, replication, T-colouring graph, data splitting

1. INTRODUCTION

Cloud computing is one the top most technology in our world. Cloud computing is innovative technology that uses advanced computational power and enhancing storage capabilities. Cloud computing is mainly used for storage and management of information technology framework. Cloud computing are characterized by

- On-demand self-services
- Ubiquitous network accesses
- Resource pooling
- Elasticity
- Measured services.

Cloud security issues may stem due to the core technologies implementation (virtual machine (VM) escape, session riding, etc.), cloud service presenting (structured query language injection, weak authentication schemes, etc.), and arising from cloud computing characteristics (data recovery vulnerabilities, Internet protocol vulnerabilities, etc.). Some benefits of cloud are

- Minimum cost
- Negligible management
- Greater elasticity
- Cost savings



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Mathematical modeling and analysis of elastic waves in a thermo piezoelectric multilayered rotating composite rod with LEMV/CFRP interface

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Abstract: In this present paper, we form the mathematical model for wave propagation in a thermo piezoelectric multilay rotating composite rod made of inner and outer piezoelectric layer bonded together by Linear Elastic Materials with v (LEMV).To uncouple the equation of motion, electric and heat conduction equations, displacement potential functions introduced. The frequency equations are obtained for longitudinal and flexural modes of vibration and are studied numeric for heat conducting PZT-5A material.The computed non-dimensional frequency is presented in the form of dispersion cu against various physical quantities. Adhesive layer Linear Elastic Materials with Voids (LEMV) is compared with Carbon F Reinforced Polymer (CFRP).We found that the frequency wave characteristics are more stable and realistic in the presenc thermal, electrical and the rotation parameters

Keywords: Piezoelectric cylinder, Thermal cylinders, Rotating rod, Vibration, Stress analysis, LEMV, CFRP, multilay structures, Composite cylinder.

1 Introduction

Solid state materials in engineering is hovering to provide significant inputs to the areas of constructive design of struct components as well as creating trends of its own. The cross disciplinary fields of mechanical materials and interfacial compor are shows potential developments. Further interdisciplinary materials research will likely to continue to acquiesce materials v improved properties for application that is both common place and specialized. piezoelectric polymers allow their use in a mas amount of compositions and geometrical shapes for a huge variety of applications from transducers in acoustics, ultrasonics hydrophone applications to resonators in band pass filters, power supplies, delay lines, medical scans and some industrial r destructive testing instruments.The frequency responses of rotating cylindrical structures has numerous applications in a var of fields of science and technology, specifically, submarine structures, pressure vessel, bore wells, ship building industries have many other engineering applications.

Honarvar et al. (2007) developed a wave propagation model for a transversely isotropic cylinders and verified their phys characteristics. Thermo-piezoelectric materials are intelligent materials that display individual electro-mechanical couplin view of this, Paul and Raman (1991) studied wave propagation in a hollow pyroelectric circular cylinder of crystal c 6.Mindlin (1974)analyzed equations of high frequency vibrations of thermopiezoelectric crystal plates.Also Paul and Ra (1993) discussed wave propagation in a pyroelectric cylinder of arbitrary cross section with a circular cylindrical cavity.Storo (2013),investigated propagation of electro elastic waves in multilayer piezoelectric cylinders with a sector notch.Nelson Karthikeyan (2008a) discussed axisymmetric vibration of pyrocomposite solid cylinder.Nelson and Karthikeyan (2008b)stu axisymmetric vibration of pyrocomposite hollow cylinder.Shulga (2002) observed Propagation of harmonic waves in anisotr piezoelectric cylinders:Compound waveguides.Hua et al. (2013) observed guided wave propagation and focusing in multi-l pipe with viscoelastic coating and infinite soil media.Tasdemirci et al. (2004) discussed Stress wave propagation effects in two- three-layered composite materials.Singh and Saxena (1995) discussed axisymmetric vibration of a circular plate with double li variable thickness.Presented clear statement for modal shapes and natural frequencies of materials into account the effect length, shear deformation, and rotary inertia.Abd-Alla and Mahmoud (2010) observed magneto-thermoelastic problem in rota non homogeneous orthotropic hollow cylindrical under the hyperbolic heat conduction model.El-Naggar et al. (2002) discu thermal stresses in a rotating non-homogeneous orthotropic hollow cylinder.Abd-Alla et al. (2000) examined thermal stresses non-homogeneous orthotropic elastic multilayered cylinder.Abd-All et al. (1999) observed transient thermal stresses in a rota non-homogeneous cylindrically orthotropic composite tubes. Selvamani (2015) has discussed wave propagation in a rotating of polygonal cross-section immersed in an inviscid fluid.Several researches are performedto incorporate the thertacial materi analysis of composite multilayered mechanical structure.Among that, the study of Gewin and Nunziato (1983) with Linear El Materials with Voids as interface bonding materialis noted. However, the rotational effect on the thermo-electro-mechar

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An optimal low power digital controller for portable solar applications

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ABSTRACT

The design of controllers for solar energy harvesting systems plays the key role in deciding the efficiency of the energy utilized. In applications of energy scavenging, the harvested power is consumed for about 70% in the operation of the converter and controller blocks before being supplied to the load. The proposed optimal Field Programmable Gate Array based Load Predictive Maximum Power Point Tracking (LP_MPPT) Digital Controller is used for low power, speedy, and decisive energy scavenging systems for a long run in applications of wireless or remote sensing or portable. LP_MPPT helps to predict the need of the load and generate the converter output as buck/boost/buck_boost mode power in comparison to the input from solar panels for every clock cycle. The power consumption of the controller section is comparatively reduced as the buck_boost mode of operation utilizes the no operation state. The proposed methodology is simulated and implemented using Xilinx ISE Design Suite 12.1 which is supported by the family SPARTAN 3E. The simulation results thus obtained show an increase in efficiency (94.39%) with trade off factors, namely, speed and area.

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CFD AND EXPERIMENTAL ANALYSIS OF SAVONIUS VERTICAL AXIS WIND TURBINE

T. Sivakumar, K. Sivakumar, B. Sivaraman, C. Sivan Raj and A. Kuppu Raj

Abstract

This paper presents the study of flow over Savonius Wind Turbine consisting two bladed and three bladed configurations and its performance. For this kind of wind turbine, axis of rotation is almost perpendicular to relative wind. Due to continuous variation of flow angle with respect to pitch angle, strong unsteady effects like flow separation, vortex shedding, etc., are observed, in order to evaluate the performance. Comparison and investigation are carried out to appraise the performance on two bladed Savonius Wind Turbine of with three bladed configurations through CFD Analysis. For this purpose, Two bladed VAWT (Vertical Axis Wind Turbine) and Three bladed VWAT are designed with Aspect Ratio (D/H) as one. Numerical Simulation using Ansys-Fluent is carried out to two bladed and three bladed configurations, which provides a lot of insight about three dimensional unsteady flow over it. It confirms the ability of numerical approach, to evaluate and compare the efficiency of VAWT against each other.It has been observed that two blaces Savonius wind turbine is more efficient, it has higher power coefficient under the same condition than that of three blades Savonius wind turbine.

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EXPERIMENTAL INVESTIGATION OFWEAR PROPERTIES OF UNI-DIRECTIONAL JUTE / CARBON FIBER REINFORCED HYBRID POLYESTER COMPOSITE

Journal: Journal of the Balkan Tribological Association 24 (3) (2018) Pages: 507 - 520

▼ Authors

RAVI KUMAR, P. ; GIRIRAJ, B. , SENTHIL KUMAR, AP

▼ Abstract

Hybrid polymer composites are widely used in many engineering applications such as construction, automotive and aviation due to their superior properties. In the present experimental study, hand-layup followed by compression molding process were used to fabricate the Unidirectional jute / carbon fiber reinforced polyester composites (UDJCFRPC) in three different (10, 20 and 30) wt {\%} in the polyester matrix. Wear tests under dry sliding condition were conducted with the sliding velocity in the range of 2.62 - 4.7 m / s and with the loads in the range of 20 - 60N. Wear tests were conducted using Pin-on-Disc apparatus (PoD) and to optimize the combination of fiber weight fraction, sliding velocity and load conditions for relevant applications, Box Behnken (BB) method of Response Surface Methodology (RSM) of Design of Experiments was used. It was observed that Coefficient of Friction (COF) decreases with the increase in load and wear increases with the increase in the load of the composites. Frictional Force was found to be increasing with the increase in the load. The morphology of wear composite specimens has been examined by scanning electron microscopy (SEM) to understand the wear mechanisms.

▼ Keywords

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Design and analysis of a portable friction stir welding machine

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Abstract

Friction stir welding is a mechanism to combine two solid metals without melting. This technique is much preferred for its flexibility, energy efficient, and also environment friendly as it results in high quality welding with low shrinkage. But these machines are giant and also consume more power. In order to address this problem, a portable friction stir welding machine has been designed and analysed. In this study, a machine has been designed to weld plates of 2mm thickness at low power consumption. This could be very much beneficial for the onsite welding processes and also to weld materials of less thickness. The design was done in four stages and the fourth stage was finally analysed for 2 tonne load and the plots are also shown in results and discussion for stress, displacement, strain and factor of safety. The analysis of overall factor of safety of the portable friction stir welding machine shows that all the components are safe except the transverse drive with a Factor of safety 1.431e-001 which is considered to be safe because the applied load is double to that of the required load. The Structural static analysis also was successfully completed using Solid Works by applying 2 tonne load and the results of various parameters such as stress, displacement, strain were plotted and tabulated.

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Keywords: Portable FSW machine; Stress and strain analysis; 2mm plate;

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1. Introduction

Friction stir welding is a solid state welding process that is used to join metals like aluminium, nickel, titanium etc, just by the heat that is produced by the rotating tool[1]. This welding was invented by W.Thomas and E Nicholas at The Welding Institute in UK at 1991[1,2]. The term friction welding has been existing for more than 100 years and it is commonly used for joining rod or pipe shaped materials.

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CHARACTERISATION OF ALUMINUM METAL MATRIX COMPOSITES AND EVALUATION OF THERMAL PROPERTIES

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Abstract

Aluminium Metal Matrix Composite (AMMC) to minimise defects usually associated in stir casting for materials during experimental evaluation. SiC and Flyash were added in the composites in varying levels of 6%, 12% & 18%. Specimens were stir cast in six different compositions. The chosen matrix material was LM 30 which is a popular light aluminium alloy used for casting small sized automobile engine cylinders. The elastic modulus and hardness of the AMMC was found to be increasing to a certain level of the content of the SiC in the composite and then found to be decreasing. Thermal characteristics are studied in detail to determine the properties. Thermal property analysis will be useful for the fix the exact design parameters to develop the product and to check the dimensions range for further analysis.

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Keywords: Aluminium Metal Matrix Composite(AMMC), Stir casting, SiC, Flyash ,thermal coductivity, k value

1. Introduction:

To overcome the problems faced in conventional materials, studies are going on to replace them with alloys/composites. Aluminium materials are found to be the best alternative with its characteristics like high strength to weight ratio low density and low cost. In this study lightweight Aluminium based material LM30 is used to prepare composites with silicon carbide and fly ash as reinforcements. Fly ash is one of the inexpensive and low

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STUDY OF MECHANICAL PROPERTIES OF JUTE/CARBON FIBER REINFORCED POLYMER HYBRID COMPOSITES FOR AUTOMOTIVE APPLICATIONS

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▼ Authors

KUMAR, R.; GIRIRAJ, B.; KUMAR, S.; SURESH, A. R.

▼ Abstract

High strength to weight ratio is an important criteria in aerospace and automobile applications for performance. The lightweight structure that uses a novel design and advanced materials is one of the keys to improve the fuel efficiency and re- duction of the environmental issues of automotive vehicles. Carbon fiber rein- forced polymer matrix composite (CFRPMC) materials are being used in such ap- plications for manufacturing structural components due to their light weight and high strength. To reduce the cost of CFRPMC, hybrid Jute/Carbon (JC) fiber rein- forced polymer composite materials (HJCFRPMC) are processed and mechanical characterization was done to find tensile, flexural, impact, water absorption and the fatigue properties of composites are studied in this work. The composites are fabricated up to a maximal weight fraction of fiber 30{\%} by hand layup method and followed by compression moulding process. It has been found out that there is significant improvement in tensile strength, tensile modulus, flexural strength, flexural modulus, impact strength and fatigue strength by 56{\%}, 50{\%}, 41{\%}, 47{\%},113{\%} and 41{\%} respectively in HJCFRPMC. The fractography analysis of the frac- tured test specimens has also been carried using Scanning Electron Microscopy (SEM).

▼ Keywords

▼ Cite this article

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Investigations on Deep Cryogenically Treated Low Alloy Steel Impregnated with WS_2

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Abstract

The effect of 'Deep Cryogenic Treatment' (DCT) on the Powder Metallurgy processed Low Alloy (PMLA) steel impregnated with solid lubricant WS_2 in four different weight proportions (0, 2.5, 5 and 10%) was investigated. Precipitation of Ni was observed after DCT in PMLA steel impregnated with 0% WS_2. Finer needle-like martensitic regions, marginal precipitation of carbides and uniformly-distributed precipitation of Ni in the micro-structure and improved wear resistance were seen after DCT in PMLA steel with 2.5% WS_2. Higher porosity was found to be detrimental to dry sliding in PMLA steel impregnated with 5 and 10% WS_2.
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Keywords: Deep cryogenic treatment; Powder metallurgy; Low alloy steel; Solid lubricant; Wear resistance;

1. Introduction

Wear resistant materials and suitable material combination for the sliding pair are of great interest to engineers and researchers. Materials used in sliding applications undergo demanding service conditions with multiple complex environmental factors due to the effects of mechanical, thermal, chemical including tribological loading. Recently, extensive research works are reported showing the effect of low temperature (cryogenic) treatment on the performance of materials. The low temperature treatment, down to -196°C with liquid nitrogen is known as 'Deep Cryogenic Treatment' (DCT). Usually, cryogenic treatment is used as a supplementary heat treatment process and

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EXISTENCE OF SOLUTIONS OF DOUBLE PERTURBED IMPULSIVE NEUTRAL FUNCTIONAL INTEGRODIFFERENTIAL EQUATIONS

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Abstract: In this paper, we establish a set of sufficient conditions for the Existence of solutions for double perturbed impulsive neutral functional integrodifferential equations of the form

$$\frac{d}{dt}\big(x(t) - h(t, x_t)\big)$$
$$= A(t)x(t) + F\left(t, x_t, \int_0^t a(t,s)K_1\big(s, x_\tau, g_1(x_\tau)\big)d\tau\right)$$
$$+ G\big(t, x_t, \int_0^t b(t,s)K_2\big(s, x_\tau, g_2(x_\tau)\big)d\tau$$
$$x_0 = \varphi \in B,$$
$$\Delta x(t_i) = I_i\big(x(t_i)\big), \quad i = 1,2,\dots,n, \ a.e.\, t \in J = [0,a],$$

The results are established by using semigroup theory and Schauder fixed point theorem.

Keywords: Integrodifferential equation, Semigroup theory, Fixed point theorem, Equicontinuous, Banach space.

1. INTRODUCTION

In recent years, the theory of impulsive differential equations has become an important area of investigation stimulated by their numerous applications to problems arising in mechanics, electrical engineering, medicine, biology, ecology, etc,. Relative to this matter, we refer the reader to Bainov and Simeonov[5], Rogovchenko [30, 31]. For other contributions on the impulsive problems see [2, 16]. Dong [19, 20, 18], Guedda [22], Bans [11], Runping [32, 33] and Xue [36] studied some functional differential equations under the conditions in respect of the measure of noncompactness.

Neutral integrodifferential equations arise in many areas of applied mathematics and for this reason these equations have received much attention in the last decades. The literature relative to ordinary and partial neutral functional differential equations is very extensive and we refer the reader to [3, 7, 8, 10, 14, 15] and the references therein.

Recently Selma Baghli et al. [4] studied the existence of mild solutions of partial perturbed evolution equation with infinite delay in Frechet spaces described in the form

$$y'(t) = A(t)y(t) + f(t, y_t) + g(t, y_t), \quad a.e.\, t \in J = [0, \infty),$$

$y_0 = \varphi \in B,$

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Advanced Representations of Graph Theory in Engineering Systems

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Abstract— The discrete mathematical representations of graph theory, augmented by theorems of Metroid theory, were found to have elements and structures isomorphic with those of many different engineering systems. The properties of the mathematical elements of those graphs and the relations between them are then equivalent to knowledge about the engineering system, and are hence termed "embedded knowledge". The use of this embedded knowledge is illustrated by several examples: a structural truss, a gear wheel system, a mass-spring-dashpot system and a mechanism. Using various graph representations and the theorems and algorithms embedded within them, provides a fruitful source of representations which can form a basis upon which to extend formal theories of reformulation.

Keywords— Graph theory, Isomorphic structures, Flow graph representation, Knowledge representation, Metroid theory

I. INTRODUCTION

When a human analyses or synthesizes an engineering system by using the mathematical representation governing its behavior, he or she creates a mathematical model of the engineering system, and then manipulates the equations using knowledge about them and their relation with the physical reality. In usual engineering practice, one uses a model that is known to be suitable for the system at hand and the aim of the computation. Reformulation of the problem into another formally understood mathematical system [1,2] to the extent that it is done for engineering analysis, usually uses continuum mathematics. This paper shows that representations of graph theory for engineering problems can be useful as a basis upon which to extend formal theories of reformulation.

Research in engineering analysis usually starts with an understanding of the physical system, then the adoption of a suitable mathematical model for the system. In the work reported here a different approach was adopted. Rather than starting with the physical system itself or the mathematical representations historically used for the behavior of engineering systems, many other mathematical approaches were investigated to find those which can be useful representations of engineering systems. Representations were sought for which knowledge of the mathematical properties of those representations and the relations between them can be used to provide augmented understanding of the physical engineering system.

Graph theory is a useful representation because on the one hand the elements of the graph can be defined so as to have a one-to-one correspondence with the elements of many kinds of engineering systems. On the other hand, the theorems and algorithms of graph theory allow one also to represent behavioral properties of the system, such as deformations and forces, or velocities and movements, as properties of the vertices or edges of the graph.

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$\psi\hat{g}$ -CLOSED SETS IN BI˘CECH CLOSURE SPACES

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Abstract

In this paper, we introduce the concepts of $\psi\hat{g}$-closed (resp. $\psi\hat{g}$ - open) sets in bi ˘ Cech closure space and some characterizations and properties are investigated. Further, the concept of ${}_{\psi\hat{g}}C_0$ bi ˘ Cech spaces and ${}_{\psi\hat{g}}C_1$ bi-˘Cech spaces are introduced and their basic properties are studied.

Keywords: bi˘Cech closure operator, bi˘Cech closure spaces, bi˘Cech-$\psi\hat{g}$ - closed sets, bi˘Cech-$\psi\hat{g}$ - open sets, $\psi\hat{g}$ C_0 bi˘Cech spaces and $\psi\hat{g}$ C_1 bi-˘Cech spaces

Subject Classification: 54A01

Introduction

˘Cech closure spaces were introduced by ˘Cech [1] and then studied by many authors, see e.g. [2,2,5,7]. In ˘Cech's approach operator satisfies idempotent condition among Kuratowski axioms. This condition need not hold for every set A of x when this condition is also true, the operator becomes topological closure operator. Thus the concept of closure space is the generalization of a topological space. Ramya and Parvathi [7] introduced the concept of $\psi\hat{g}$-closed set in topological spaces and to investigate some topological properties. This paper deals with the concept of bi˘Cech - $\psi\hat{g}$ - closed sets, $\psi\hat{g}$ C_0 bi-˘Cech spaces and $\psi\hat{g}$ C_1 bi- ˘ Cech spaces in bi-˘Cech closure spaces and some of their properties.

2. Preliminaries

Definition 2.1. Two functions k_1 and k_2 from power set of X to itself

are called bi- ˘ Cech closure operators (simply biclosure operator) for X if they satisfy the following properties.

(i) $k_1(\phi) = \phi$ and $k_2(\phi) = \phi$

(ii) $A \subset k_1(A)$ and $A \subset k_2(A)$ for any set $A \subset X$

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Vibration of thermo lemv composite multilayered hollow pipes

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Abstract. The present paper is concerned the effects of thermo elastic waves in a composite multilayered hollow pipes which contain inner and outer zinc layers bonded by Linear Elastic Material with Voids (LEMV) is considered.The equation of movement is derived by means of the constitutive equations of linear thermo elasticity.The equation of movement and heat conduction models are decoupled by the displacement of potentials which are constructed based on equilibrium equations of elasticity.The dispersion equation are acquired by means of traction free boundary conditions and are numerically analyzed for Zinc material.The enumerated frequency,phase velocity are presented graphically for LEMV and CFRP layers.

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1. Introduction

The thermo pliant material contains various utilization in many extent of science,Engineering and Technology, by the propagation of waves namely study of modern engineering, thermal power station, sub marine framework, pressure thin and thick shells vessels,aircraft,oil and gas pipes and metallurgy.To replace components with classical materials such as, steel and concrete made by fiber reinforced materials.There are many attempts in engineering fields to use composites typically for the light-weight structures,on the modeling and analysis of multilayered composite.

Denos Gazis[1] investigated three dimensional wave propagation in hollow circular cylinders.Jinyoung so and Leissa[2] discussed the free vibrations of thick hollow circular cylinders from three-dimensional analysis.Farhang Honarvar[3] analyzed the wave propagation in transversely isotropic cylinders.Chau[4] studied about the vibrations of transversely isotropic finite circular cylinders.Farhang Honarvar et al.[5] carried out the results for asymmetric and axisymmetric vibrations of finite transversely isotropic circular cylinders.JaiLue Lai et al.[6] studied Propagation of harmonic waves in a composite elastic cylinder.Xi et al.[7] developed the study of dispersion of waves in immersed laminated composite hollow cylinders.Paul and Nelson [8] derived the frequency of equation and numerical solution for asymmetric vibration of piezoelectric composite cylinders.Nelson and Karthikeyan [9] analyzed the axisymmetric vibration of pyro composite hollow cylinders.Haines and Lee [10] carried out approximate theory of torsional wave propagation in elastic circular composite cylinders. Green and Lindsay [11] obtained an explicit version of the constitutive equations.Gei, Bigoni and Franceschin [12] studied the results for propagation of thermoelastic waves in layered structures.Erbay and Suhubi [13] discussed about longitudinal wave propagation in a generalized thermoelastic cylinder.They revealed that the elastic behavior dominates in mechanical and thermal modes.EliLeinov et al. [14, 15] investigated guided wave propagation and attenuation in pipe buried in sand and guided wave propagation in pipes fully and partially embedded in concrete.

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Carbon Nanotubes from Plant Derived Hydrocarbon - An Efficient Renewable Precursor

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Abstract

The present work aspire to explore cost effective a natural renewable Eco-friendly green precursor for the synthesis of Multi-walled carbon nanotubes (MWCNTs) using methyl ester of Moringa oleifera oil over Fe-Co impregnated Alumina support at 650 °C under N_2 atmosphere. The characterization of the as-grown carbon materials were analyzed by Scanning electron microscopy (SEM), High resolution transmission electron microscopy (HRTEM), XRD and Raman spectroscopic analysis. The bimetallic catalyst of Co and Fe supported on alumina gel particles improves the quality and uniformity in diameters of CNTs. The diameters of as-synthesized nanotubes are in the range of 19 nm to 22 nm

Keywords: *Carbon nanotubes; Moringa oleifera oil; Raman & XRD spectroscopic analysis; Spray-pyrolysis; SEM.*

1. INTRODUCTION

Carbon nanotubes (CNTs) are now well into their teenage years. Earlier on, theoretical predictions and various experimental evidence showed that CNTs possess chemical and physical properties that surpass those of many other nanosized materials. This has activated intense research into CNTs world wide. The vital publication of Iijima (Iijima, 1991) made carbon nanotubes (CNTs) one of the key component in nanoscience and technology. as the numerous new applications are being proposed, so is the rapid rise in demand for its large production. This is due season to explore new environment friendly natural renewable precursors.

In general, CNTs are synthesized by arc discharge, laser ablation, and CVD or spray Pyrolysis. Among these methods CVD or spray pyrolysis method is regarded as a promising method to synthesize carbon nanotubes (CNTs) because of its benefits to achieve a high yield of CNTs and can be easily scaled up for the production of CNTs at a relatively low cost (Karthikeyan *et al.* 2008). Several papers have been published and describe a simple routine for synthesizing low-cost CNT arrays in large scale from petroleum-based precursors such as benzene, xylene and hexane (Sadeghian *et al.* 2009). These carbon precursors are related to fossil fuels and there may be a crisis for these precursors in the near future. There are few reports on the synthesis of CNTs from plant based precursors such as camphor (Kumar *et al.* 2003), turpentine oil (Afre *et al.* 2005), eucalyptus oil (Ghosh *et al.* 2007), palm oil (Suriani *et al.* 2009), neem oil (Kumar *et al.* 2011), coconut oil (Paul *et al.* 2011), pine oil (Karthikeyan *et al.* 2008), and reports from plant derived methyl esters *Oryza sativa oil* (Kalaiselvan *et al.* 2015; 2016), *Cymbopogen flexuosus* oil (Mageswari *et al.* 2014), *Helianthus annuus* oil (Angulakshmi *et al.* 2012; 2013), *Glycine Max* Oil (Angulakshmi *et al.* 2013), *Madhuca Longifolia* Oil (Kalaiselvan *et al.* 2013 ; 2014) and *Brassica Juncea* Oil (Kalaiselvan *et al.* 2014 ; 2016). The advantages of the plant derived carbon precursor are that it is a renewable biomaterial, and abundantly available and owing to these two factors, it has a huge potential to be used as the carbon source for the synthesis of CNTs, and therefore, the resulting product can be commercialized at a lower cost (Kalaiselvan *et al.* 2014).

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Application of Box Behnken design to Optimize the Reaction Conditions on the Synthesis of Multiwalled Carbon Nanotubes

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Abstract

This paper describes the use of Box Behnken design approach to plan the experiments for turning the yield of Multiwalled Carbon nanotubes (MWCNTs) synthesis by spray pyrolysis method using Citrus limonum oil as carbon precursor and Fe/Co supported on silica as catalyst. Reaction temperature, composition of catalyst and feed rate of precursor were the chosen parameters to optimize the process. A total of 17 runs were required to achieve the optimum conditions. Characterization of as grown CNTs were done by scanning electron microscopy, Transmission electron microscopy and Raman Spectroscopy. This work resulted in identifying the optimized set of turning parameters for spray pyrolysis to achieve high yield of CNTs.

Keywords: *Box-Behnken design, Carbon nanotube, Spray pyrolysis.*

1. INTRODUCTION

Carbon nanotubes are members of the fullerene structural family that was discovered by Iijima in 1991(Iijima, 1991). These incredible structures have enthralling mechanic, electronic and magnetic properties (Langer *et al.* 1996; Yu *et al.* 2000; Dressel Haus *et al.* 2001). These peculiar properties makes the material potentially applied in solar cells, nanoelectronic devices, field emitters, gas storage, biosensors and as catalyst supports (Suzuki *et al.* 2003; Brattas *et al.* 2008; Yoon *et al.* 2005; Dillon *et al.* 1997; Oh *et al.* 2009 ; Pan *et al.* 2006). There are several methods for synthesis of CNTs, most widely used among them are Arc discharge, Laser ablation, Chemical vapour deposition and spray pyrolysis method (Song *et al.* 2007, Guo *et al.* 1995; Suriani *et al.* 2009; Ghosh *et al.* 2007; Kalaiselvan *et al.* 2014). Spray pyrolysis is similar to CVD and the only difference it is a single step process, whereas in CVD it is two step processes (Kalaiselvan *et al.* 2013; 2016). Catalysts such as Fe, Co or Ni catalysts were widely used for the synthesis of singlewalled and multiwalled CNTs (Kalaiselvan *et al.* 2016). Synergetic effect of the metals involved in the catalyst found to enhance the catalyst activity (Ghosh *et al.* 2008). Li *et al.* have studied the effect of temperature on growth and structure of carbon nanotubes (Li *et al.* 2002). Natural hydrocarbons have been utilized as carbon precursor for the synthesis of CNTs such as camphor, turpentine oil, pine oil, *Cymbopogen flexuous* oil and *Helianthus annuus* oil (Afre *et al.* 2006; Kumar *et al.* 2007; Karthikeyan *et al.* 2010; Mageswari *et al.* 2014; Angulakshmi *et al.* 2013). These natural precursors are very cheap, renewable and ample of its availability. Recently, process optimization with the aid of design of experiments is rapidly gaining popularity in various field related to nanotechnology. Nourbakhsh studied the effect of process parameters on the diameter of carbon nanotubes utilizing RSM (Nourbakhsh *et al.* 2007). Statistical design of experiment is the science of statistically analyzing the largest possible amount of information with the smallest number of experiments (Goh *et al.* 2001). Liu etal., optimized the reaction conditions for the synthesis of single-walled carbon nanotubes using reponse surface methodology (Liu *et al.* 2012). Box-Behnken designs were introduced in order to reduce the sample size as the number of parameters grows. Box-Behnken is based on a spherical, revolving design. It has been applied for the

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Hardware Implementation of Bidirectional Full Bridge Isolated DC- DC Converter

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Abstract — **This paper presents the design and development of an ultra-high efficiency bidirectional isolated full bridge DC-DC converter. To achieve ultra-high efficiency, synchronous rectification and high efficiency magnetics are used. The proposed bidirectional converter allows a power flow in both directions using the same power components; this increases power density and reduce the cost. The converter operates at a switching frequency of 50 kHz with a voltage of 130 volts at one side and 52 volts at the other side of the converter. The fast switching speeds of the switching devices are utilized to achieve extremely high conversion efficiency thus reducing the total volume of the converter. The high power DC-DC converter has attained an extremely high efficiency of 80% in both the directions. The performance of a 1.7 kW bidirectional converter is validated in both forward direction (buck mode) and backward direction (boost mode) using MATLAB simulation.**

Keywords— *DC-DC Converter, Switching Device, buck mode, high efficiency, switching speeds.*

I. INTRODUCTION

Bidirectional DC-DC converters are used in applications where bidirectional power flow may be required. In Hybrid Electric Vehicles (HEVs) and Electric Vehicles (EVs), these bidirectional converters charge a low voltage (12 V) battery during normal operation (buck mode) and charge or assist the high-voltage (400V/600V) battery or bus in emergency situations like when a high-voltage battery has discharged to a very low energy or capacity level (boost mode). A typical system consists of a full-bridge power stage on the High-Voltage (HV) side, which is isolated from a full-bridge or a current-fed push-pull stage on the Low Voltage (LV) side.

The world's rapidly expanding population and increasing levels of consumerism have given rise to significant environmental issues that must be confronted. Firstly, there is a great reliance on fossil fuels to provide energy, of which a large part is consumed by transportation systems. While shale oil recovery by the hydraulic fracturing process has provided a temporary increase in production, it is only extending the point in time at which demand exceeds supply.

The second, and interrelated, major problem is that of environmental damage in general, and specifically that of air pollution. Aside from the contentious issue of global warming, there is a requirement for a reduction in the burning of hydrocarbons to achieve adequate air quality. The basis for a solution to both problems is in the sustainable use of resources, and considerable effort is being expended investigating forms of renewable, or green, energy [Kaminski.N, 2009]. Two of the more promising alternative energy sources are from wind and solar farms.

These allow for distributed and localized generation, which offers the advantages of reduced distribution costs and improved network security. However, the supply of energy from these sources is variable in nature, due to the dependency on the weather conditions, and results in grid planning and stability issues. Furthermore, the problems caused by these source variations are exacerbated by the wide variations in electrical energy demand, even on an hourly basis within modern societies. Electric vehicles (EVs) are a part of the solution to the energy problem.

Silicon has been used as a power semiconductor material for many decades. The material properties of Silicon have reached its maximum theoretical limit. For power devices, wide band gap materials such as Silicon carbide (SiC) and Gallium Nitride (GaN) are also promising because of their high switching speed and lower switching Figure of Merit (FOM). QossxRDS(ON). Compared to conventional silicon devices, for the same breakdown voltage, GaN devices have smaller area for the same on-resistance.

This paper presents a novel bi-directional isolated DC-DC converter which may be used in the V2G or DG applications discussed above. It has hardware that is similar to that of a Conventional Dual Active Bridge Converter (CDAB), except that the latter's inductor is replaced with a resonant network to reduce the converter's conduction losses.

II. BIDIRECTIONAL DC-DC CONVERTER

A PSFB converter consists of four power electronic switches (like MOSFETs or IGBTs) that form a full bridge on the primary side of the isolation transformer and diode rectifiers or MOSFET switches for Synchronous Rectification (SR) on the secondary side. This topology let's all the switching devices to switch with Zero-Voltage Switching (ZVS), resulting in lower switching losses and an efficient converter.

For such an isolated topology, signal rectification is required on the secondary side. For systems with low output voltage and/or high-output current ratings, implementing synchronous rectification achieves the best performance by avoiding diode rectification losses. In this work, synchronous rectification is implemented on the secondary side with various switching schemes to achieve optimum performance under varying load conditions. The circuit

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FPGA BASED BL-CSC CONVERTER-F MOTOR DRIVE WITH POWER FACTOR C

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Abstract — **This paper presents a Power Factor Correction (PFC) based Bridge Less Canonical Switching Cell (BL-CSC) converter-fed Brushless DC (BLDC) motor drive. The BL-CSC converter operating in a discontinuous inductor current mode is used to achieve a 0.99 power factor at the AC mains. The speed of the BLDC motor is controlled by varying the DC bus voltage using PI controller, where proportional and integral gains were tuned by conventional method. In order to reduce the switching losses of BLDC motor electronic commutation, Voltage Source Inverter (VSI) operates at fundamental frequency. Moreover, the bridgeless configuration of CSC converter offers low conduction losses due to partial elimination of diode bridge rectifier at the front end. The proposed configuration shows a considerable increase in efficiency.**

Keywords— ***BLDC Motor, VSI, CSC, BL-CSC, sensor-less, diode bridge rectifier.***

I. INTRODUCTION

Brushless DC (BLDC) motors are recommended for many low- and medium-power drives applications because of their high efficiency, high flux density per unit volume, low maintenance requirement, low Electromagnetic Interference (EMI) problems, high ruggedness, and a wide range of speed control. Due to these advantages, they find applications in numerous areas such as household application transportation (hybrid vehicle) aerospace heating, ventilation and air conditioning, motion control and robotics renewable energy applications etc.

The BLDC motor is a three-phase synchronous motor consisting of a stator having a three-phase concentrated windings and a rotor having permanent magnets. It does not

THD of supply current and v
achieved which is not accepta

These switching losses are
variable DC-link voltage for s
This utilizes the VSI to opera
required for electronic com
hence reduces the switching
front end SEPIC AND CUK
using a variable voltage contr
the cost of two current sensor

This paper presents the de
–based BLDC motor drive fo
motor is also referred as
motor since an electronic co
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commutation.

These types of PQ indi
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DECENTRALIZED VOTING SYSTEM USING ETHEREUM BLOCKCHAIN

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ABSTRACT:

Electronic voting systems are proprietary, that is centralised by design. This means that, there's a single supplier that controls the code base, database and the system outputs and supplies the monitoring tools at the same time. It is difficult for centralised systems to gain trust from voters and election organisers. Open source, independently verifiable systems solves this issue. Voters can vote freely without even visiting the poll, also they can verify their own votes. All votes are recorded publicly on the Ethereum Blockchain and can be viewed and audited by anyone. This kind of decentralised voting systems are significantly advanced and are secure enough to prevent attacks like Man in the Middle, DDoS, eavesdropping etc. and no vote can be manipulated by intruders. Since the system is decentralised, there is no single point of failure. And, this also prevents the web pages from disappearing leaving us with 404 not found error. Though this is more advanced than the traditional system of voting, this does not completely replace the voting polls but can provide a much needed complementary voting method.

I INTRODUCTION

Bitcoin demonstrated that through the power of the default consensus mechanisms and voluntary respect of the social contract it's possible to enhance our preferred network to make the decentralised application of value-transfer system. Democracy providing an immutable, verifiable and secure online voting system to leverage the availability of blockchain as a secure transaction database. From this public ledger, voters will be able to independently audit the inclusion of their vote and the outcome of the election as a whole, while being sure that the results cannot be changed due to immutability of the blockchain.

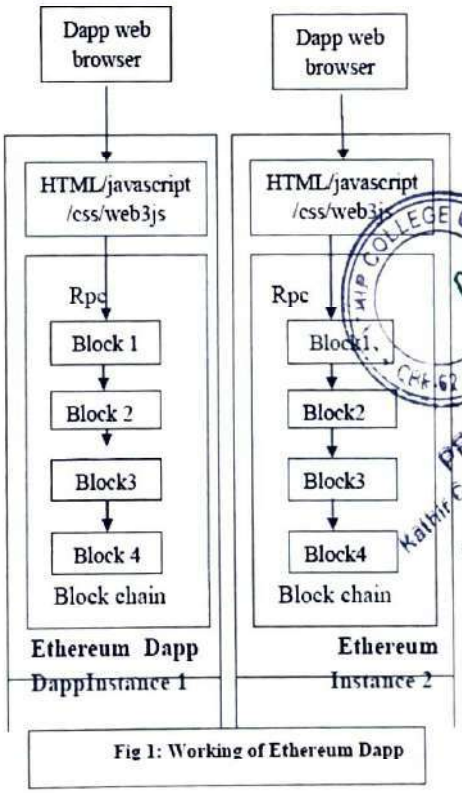


Fig 1: Working of Ethereum Dapp

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IMPLEMENTING INTELLIGENT TRAFFIC CONTROL SYSTEM FOR AMBULANCE CLEARANCE USING RFID

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Abstract

The proposed system presents an intelligent traffic control system to pass emergency vehicles without hassle. Vehicles are equipped with special radio frequency identification (RFID) tag, which cannot be removed or destroyed. We use RFID reader, Arduino and PIC16F877A system-on-chip to read the RFID tags attached to the vehicle. It determines the network congestion, and hence the green light duration for that path is adjusted. When an ambulance is approaching the junction, it will communicate to the traffic controller in the junction to turn ON the green light. This module uses ZigBee modules on CC2500 and PIC16F877A system-on-chip for wireless communications between the ambulance and traffic controller. The prototype was tested under different combinations of inputs in our wireless communication laboratory and experimental results were found as expected.

Index Term: *ZigBee, CC2500, GSM, SIM300, PIC16F877A, ambulance vehicle, stolen vehicle, congestion control, traffic junction.*

I. INTRODUCTION

INDIA is the second most populous Country in the World and it is a fast growing economy. It is seeing terrible road congestion problems in its cities. Infrastructure growth is slow as compared to the growth in number of vehicles, due to space and cost constraints [1]. Also, Indian traffic is non-lane based and chaotic. It needs a traffic control solutions, which are different from the developed Countries. Intelligent management of traffic flows can reduce the negative impact of congestion. In recent years, wireless networks are widely used in the road transport as they provide more cost effective options . Technologies like ZigBee, RFID and GSM can be used in traffic control to provide cost effective solutions. RFID is a wireless technology that uses radio frequency electromagnetic energy to carry information between the RFID tag and RFID reader. Some RFID systems will only work within the range inches or centimeters, while others may work for 100 meters (300 feet) or more. The ZigBee operates at low-power and can be used at all the levels of work configurations to perform predefined tasks. It operates in ISM bands (868 MHz in Europe, 915 MHz in USA and Australia, 2.4 GHz in rest of the world). Data transmission rates vary from 20 Kilobits/second in the 868 MHz frequency band to 250 Kilobits/second in the 2.4 GHz frequency band . The ZigBee uses 11 channels in case of 868/915 MHz radio frequency and 16 channels in case of 2.4 GHz radio frequency. It also uses 2 channel configurations, CSMA/CA and slotted CSMA/CA [5]. The whole paper is grouped into 5 parts. Sections II talks about the literature survey. Section III discusses about the current problems that

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An Android Based Automatic Irrigation System Using Bayesian Network with SMS and Voice Alert

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ABSTRACT

This paper presents an automatic irrigation system to provide water to the farms based on water level conditions using an android application, WSN and GPRS modules. Methods/statistical Analysis: An algorithm is developed such that sensor values are continuously fed to ARDUINO microcontroller. The sensor information is compared with the threshold values and based on that, decision will be taken to water the crops. The system is equipped with the photovoltaic panels and dual communication is established based on cellular-internet interface for continuous inquiry of data by the user. We have also developed an android mobile application for intercepting the data generated and voice alert generated. Findings: Because of system's energy sovereignty, low cost and relatively more amounts of underground water saving, this system is preferable at water scarcity locations like desert areas. Conclusion: This irrigation system has been working with high efficiency and top speed. This system sends message to the user whenever sensors exceed there threshold value, by this system every user can understand the soil conditions and controls the system too manually, if needed.

Keywords: Automatic Irrigation, Arduino UNO, GSM Module, Soil Moisture Sensor, Temperature Sensor, Humidity Sensor

I. INTRODUCTION

Internet of Things (IoT) is the emerging paradigm, which contains huge amount of smart object and smart devices connected to the internet for communicating with each other. IoT devices are used in many fields which make the users' day to day life more comfortable. In recent years, the growth of internet is tremendous and has been further extended to connecting things through internet. All devices are connected to one another with various smart technologies to create worldwide ubiquitous network called IoT. The development of technologies such as IoT generates huge amount of data, leads to new age of information. At the present we are facing many challenges in the real world, which have to deal realistically. By the use of IoT challenges are rehabilitate, which consumes more time, resources and manpower. Efficient water management plays an important role in irrigated agricultural cropping systems. Irrigation is an essential component of crop production in many areas of the world. The measurement of the soil water content (u) through in situdielectric methods are being used more frequently because they are non-destructive, provide almost instantaneous measurements, require little or no maintenance, can remain in the soil during the winter time, can provide continuous readings, they are nonradioactive, accurate measurements may be made near the soil surface, and their cost has decreased substantially in recent years. Self-propelled center pivot and linear-move irrigation systems generally apply water quite uniformly; however, substantial variations in soil properties and water availability exist across most fields.

In these cases, the ability to apply site-specific irrigation management to match spatially and temporally variable conditions can increase application efficiencies, reduce environmental impacts, and even improve yields. The development of a distributed in-field sensor-based site-specific irrigation system offers the potential to increase yield and quality while saving water, but the seamless integration of sensor fusion,

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FPGA Based Real Time Wireless Communication for Tele Health Using Android Phone

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ABSTRACT

In order to enhance the people's health, real time wireless communication system is introduced to monitor the patient's pulse by using an Android OS through FPGA. The end user receive the monitored data by means of GPRS, a wireless communication device. This paper presents the design and implementation of real time monitoring using GPRS between FPGA based embedded system and Android smart phones. This system offers a maximum performance, minimum power and 24 hours real time remote monitoring for tele health.

Keywords : FPGA, GPRS, Android Phone, Sensor, Wireless Communication

I. INTRODUCTION

Due to compatibility and mobility, smart phones have become people's personal assistance. This lead to the revolution of interfacing smart phones with other electronic devices, for example, pulse monitoring equipment. Wireless capability of a smart phone enables the user to control and monitor a wide array of sensors remotely. Android applications are easy to develop, open source and also offers flexibility.

As human health is unpredictable, an alert is required at the time of emergency. Remote medical monitoring allows to collect and view the health related data at the right time. This data is then easily accessed by the health care providers as smart phones are easily synchronized with online database that hosts a Content Management System(CMS).

This paper establishes a wireless communication between the FPGA and Android operating system running on a smart phone via GPRS connection. This design offers a real time monitoring of data such as pulse rate and instantaneously communicating the measured values. For this purpose, sensors are synchronized with FPGA along with a GPRS connector for communicating with the Android application. This system offers long distance connectivity at lower maintenance cost.

II. METHODS AND MATERIAL

1. Architecture

A. Hardware Tools

The FPGA used as the platform for the embedded system is Xilinx Spartan 3E. This extensible processing platform enables the developers to apply a combination of serial and parallel processing to the embedded systems.

The GPRS interface supports the communication between FPGA and Android phone. The board has a SIM connector which is used to connect the SIM with the module and give access to the network.

B. Software Tools

Any Android smart phone with internet access capability can run the application, provided it is compiled for the OS version the phone is running.



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VIDEO CODING BY SCALABLE APPROXIMATE DCT WITH HEVC

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Abstract *- The discrete cosine change (DCT) of length 4 is gotten from the 4 point DCT of estimated part and it's characterized by the High Efficiency Video Coding (HEVC) standard. It is for the most part utilized that for the calculation of DCT and inverse DCT (IDCT) of force of 2 lengths. It permits to ascertain DCTs of length 4, 8, 16 itemized by HEVC. DCTs produced by 4 point DCT include bring down many-sided quality as well as offer better pressure execution. A reconfigurable design is proposed where 8 point DCT utilized for a couple of 4 point DCTs. Utilizing a similar reconfiguration plot 32 point DCT could be designed for parallel calculation of two 16 point DCTs or four 8 point DCTs or eight 4 point DCTs. It offers preferred PSNR over existing. The request of portable associated gadgets has been encountering marvelous development, and by 2019 it is normal that there will be about 1.5 cell phones for every capita Small keen frameworks associated with Internet of Things (IoT) is additionally going to be universal. Coding, deciphering, downloading, and showing of video substance are the most usually utilized functionalities in little versatile associated gadgets. The aggregate power utilization to run these applications has two noteworthy parts: (i) the power utilization in coding (or translating) which is identified with the video codec multifaceted nature, and (ii) the power expended in transmitting or downloading of video which is a component of the bit-rate and relies on upon the pressure productivity of the codec. The proposed concept can perform HEVC video coding with DCT of length 32 point which can be configured by parallel computation of two 16 point DCTs.*

Index Terms—Discrete cosine change (DCT), DCT guess, High Efficiency Video Coding (HEVC)

1.INTRODUCTION

1.1 GENERAL:

The discrete cosine change (DCT) is famously utilized As a part of picture and video pressure. Since the DCT is computationally Intensive, a few calculations have been proposed In the writing to process it proficiently. As of late, huge Work has been done to infer rough of 8-point DCT for decreasing the computational many-sided quality [4]–[7]. The Main target of the guess calculations is to dispose of augmentations which devour the greater part of the power and calculation Time, and to get important estimation of DCT also. Haweel has proposed the marked DCT (SDCT) for 8 Blocks where the premise vector components are supplanted by their Sign, i.e, 1. Bouguezel-Ahmad-Swamy (BAS) have proposed[3] A progression of strategies. They have given a decent estimation of The DCT by supplanting the premise vector components by 0, 1/2, 1. In a similar vein, Bayer and Cintra have proposed Two changes got from 0 and 1 as components of change Kernel[4], and have demonstrated that their strategies perform superior to The strategy in, especially for low-and high-pressure Ratio situations. The need of estimation is more vital for higher-measure DCT since the computational multifaceted nature of the DCT develops Nonlinearly. Then again, present day video coding guidelines Such as high effectiveness video coding (HEVC) [1] utilizes DCT Of bigger square sizes (up to 32) keeping in mind the end goal to accomplish higher Compression proportion. In any case, the augmentation of the outline methodology utilized As a part of H264 AVC for bigger change sizes, for example, 16-point and 32-point is unrealistic. Plus, a few picture handling Applications, for example, following and synchronous pressure And encryption require higher DCT sizes. In this unique circumstance, Cintra has presented another class of

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EXPERIMENTAL INVESTIGATION IN SINGLE CYLINDER VCR MULTIFUEL ENGINE USING DIESEL

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ABSTRACT

VCR Engine is a technology in which the internal combustion engines's compression ratio could be varied. This variation in the compression ratios could bring out a difference in the performance of engine as well as the emission characteristics. This could be done to increase the fuel efficiency. Usually these tests are done with biodiesel which emits very less pollutants based on the raw material used. This study investigates the performance of a Variable compression ratio engine with diesel at 2 compression ratios varying the load from 0kg to 10kgs The results show that the Efficiency obtained with the compression ratio 18:1 gives a better value in terms of its performance when compared to that of 16:1

Key words: VCR Engine, Multi Fuel, Fuel Efficiency.

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1. INTRODUCTION

A VCR engine has been widely tested these days to bring out the best fuel efficiency and also to minimize the pollutants[1-2]. Various tests have been made these days by the researchers using this VCR engines to bring out the comparison results using petrol or diesel. This works investigates on a single cylinder multi fuel VCR Engine at 2 compression ratios 16:1 and 18:1 respectively. Petrol engines have the tendency to limit the max pressure during a compression stroke which would result in detonation rather than burning, and hence to achieve this max

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Location Based Travel Route Recommendation

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Abstract: Trajectory search has long been an attractive and challenging topic which blooms various interesting applications in spatial-temporal databases. In this work, we study a new problem of searching trajectories by locations. in which context the query is only a small set of locations with or without an order specified, while the target is to find the k Best-connected Trajectories (k-BCT) from a database such that the k-BCT best connect the designated locations geographically. Different from the conventional trajectory search that looks for similar trajectories w.r.t. shape or other criteria by using a sample query trajectory, we focus on the goodness of connection provided by a trajectory to the specified query locations. This new query can benefit users in many novel applications such as trip planning.

Keywords: Location, Route, Travel, Recommendation, Trajectories

I. INTRODUCTION

In our work, we firstly define a new similarity function for measuring how well a trajectory connects the query locations, with both spatial distance and order constraint being considered. Upon the observation that the number of query locations is normally small (e.g. 10 or less) since it is impractical for a user to input too many locations, we analyze the feasibility of using a general-purpose spatial index to achieve efficient k-BCT search, based on a simple Incremental kNN based Algorithm (IKNN). The IKNN effectively prunes and refines trajectories by using the devised lower bound and upper bound of similarity. Our contributions mainly lie in adapting the best-first and depth-first k-NN algorithms to the basic IKNN properly, and more importantly ensuring the efficiency in both search effort and memory usage. An in-depth study on the adaption and it efficiency is provided. Further optimization is also presented to accelerate the IKNN algorithm. Finally, we verify the efficiency of the algorithm by extensive experiments.

We study a new problem of searching the k Best-Connected Trajectories from a database by using a set of locations with or without an order constraint. Since the number of query locations is typically small, it enables us to adopt a spatial method for answering a similarity search query. We start the study based on a simple IKNN algorithm and then analyze the efficiency of different variants. As a conclusion, we would say that the BF-O achieves the best query performance although involving a risk of high memory usage. The pure DF-C algorithm, although guarantees a low memory consumption, performs poorly in efficiency. Therefore, we further devise the DF-D-M and DF-D-M-O to improve the DF-C for less R-tree node access and shorter query time, and finally their performance are theoretically and experimentally confirmed to be close to that of the BF.

The massive amount of trajectory data collected from GPS has emerged in recent year. Many researchers proposed trajectory queries such as top-k query. They focused to solve them based on distance and text relevance. However, the weight of these queries is unknown. Therefore, we plan to handle the trajectory skyline query based on distance and activity keywords. Furthermore, with the huge amount of keyword semantic trajectories, user may put the wrong activity keyword to search its trajectory. Therefore, it's hard to extract the trajectory based on the exact keyword activity. In this paper, we focused to handle the trajectory fuzzy problem based on edit distance and activity weight. To accelerate the query processing, initially, we used a Distributed Mining Trajectory based on R-tree DMTR-Tree to organize the big trajectory data, then we developed an efficient algorithm to handle the trajectory skyline query. Also, for a rapid computation of the algorithm, we used the cluster computing framework of Apache Spark with Map Reduce as programming model. Theoretical analysis and the experimental results show that query-processing algorithm is efficient and achieve the scalability.

II. DOMAIN OVERVIEW

Researches on Location-Based Service (LBS) have been emerging in recent years due to a wide range of potential applications. One of the active topics is the mining and prediction of mobile movements and associated transactions. Most of existing studies focus on discovering mobile patterns from the whole logs. However, this kind of patterns may not be precise enough for predictions since the differentiated mobile behaviors among users and temporal periods are not considered. In this paper, we propose a novel algorithm, namely, Cluster-based Temporal Mobile Sequential Pattern Mine (CTMSP-Mine), to discover the Cluster-based Temporal Mobile Sequential Patterns (CTMSPs). Moreover, a prediction strategy is proposed to predict the subsequent mobile behaviors. In CTMSP-Mine, user clusters are

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Secure Logging as a Service In Cloud

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ABSTRACT

Data and authorization security are needed everywhere. In case dealing with huge number of data in a cloud server, secured logging is must. This is because cloud servers are easily accessible and any one can access anywhere at any time. This is because intruders may have knowledge about the network where they are going to intrude. So data should be preserved well for intruders, hackers and unauthorised user. The main objective of this paper is to develop a secured logging as a service in cloud architecture. So in the proposed method, privacy and preservation methods are implemented. The secured logging contains six major functionalities to ensure more securities: Correctness, Confidentiality, data logs, Privacy, Preservation and VPS (Virtual proxy server). Confidentiality deals with sensitive information not displaying during search. Data logs deals with the data history for identifying appropriate users. Privacy scheme deals with file linking and data access history. So that secured logging as a service is much important for all kind of cloud server environment in order to provide proper login for authorized user and triggers out the unauthorized users.Preservation deals with enhanced colour code. Hackers can be avoided and intruders are can't be avoided.

Keywords : Secure Logging, Cloud Server, Virtual Proxy Serve, Network Security, Cloud Computing, SLAS, IaaS, PaaS, NAT

I. INTRODUCTION

Cloud Computing is a type of Internet-based computing that provides shared computer processing resources and data to computers and other devices on demand. It is a model for enabling ubiquitous, on-demand access to a shared pool of configurable computing resources (e.g., computer networks, servers, storage, applications and services),which can be rapidly provisioned and released with minimal management effort.

Network Security consists of the policies and practices adopted to prevent and monitor unauthorized access, misuse, modification, or denial of a computer network and network-accessible resources. Network security involves the authorization of access to data in a network, which is controlled by the network administrator. Users choose or are assigned an ID and password or other authenticating information that allows them access to information and programs within their authority.

II. METHODS AND MATERIAL

OBJECTIVE

Primary Objective

- The primary objective of this project is creating a secured data access with Secured Logging as a Service.
- The Secured Logging as a service will be enabled for both admin and user.
- The motivation is to find out the difference between User, Intruder, and Hackers. From the way of logging in to their networks

Secondary Objective

- Even thou admin login is more secured user should mention the security level of the uploading file.
- Improved Gaussian Mixture and Keystroke password enabled.
- Even keystroke value got leaked, the another security level of colour code was enabled.
- Log will records each activities of the user logging in
  - Last Accessed date
  - Last Accessed file

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Incremental Query Processing by Relevance Feedback Using Big-Data Streams

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ABSTRACT

This paper presents deals social network in large scale distributed server data storing and retrival process is more complex.There has been an explosive increase in media data,such as images,videos and social media in the internet,mobile devices, and desktops.Engineers and researches are dealing with data sets of petabyte scale in the cloud computing paradigm.Thus, the demand for building a service stack to distribute,manage and process massive data sets has risen drastically.Data collection has become easy due to the rapid development of both mobile devices and wireless networks.During the processing of image queries. Many factor are affecting quality of the retrievel system. Image searching and ranking , indexing are the insufficient factors to affect the quality of image search results. There are many factors which affect the quality of image search results.The learning of the model is from the image output extracts the designed with the evolutionary feedback system to perform the image retrievel by processing the image search query.

Keywords : Query Optimiztion using Feedback Processing, Backtracking Process.

I. INTRODUCTION

Data mining is a developing science and it can be defined and categorized in a number of ways depending on the specific knowledge domain. For example, this has manifest in the domain of biological science where the technology of data mining has been applied successfully and categorized as bioinformatics. Various techniques have been employed within bioinformatics to filter out the useful data to gain valuable information. High dimensional big Media data like audios, images and videos are growing rapidly nowadays. Emerging with this increasingly growing volume of data is the need to retrieve relevant contents from such large databases. The fundamental scientific problem behind this need is the nearest neighbor search problem. Typical graph applications include predicting biological activity of molecules, identifying errors in computer programs, and categorizing scientific publications. Unlike traditional vector data, graphs are only characterized by node-edge representation and no features are readily available for training prediction models. Taxonomies are the key to developing successful applications in a domain, such as information retrieval, knowledge searching and classification. In particular, considering the ever-growing amount of text digital data per year, taxonomy learning from text is a primary research area for developing such applications nowadays. Kernel methods have emerged as a versatile mechanism to handle generic data. The growing interest in kernels is mainly motivated by the positive impact they have in important applications such as data clustering and classification.

II. METHODS AND MATERIAL

A. Proposed System

The idea of the project is to implement the query optimization using the Feedback collection such as positive & negative Feedback.The Learning process is made by Supervised Learning in this we know the result which is going to produce.For this Ranking and Learning Process is used.

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Analysing the Social Data Opinion through Public User Raw Information

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ABSTRACT

The social network perspective provides a set of methods for revealing the structure of social networks as well as a variety of hypothesis explaining the patterns discovered in these structures. The study of these structures uses social network discovering to recognizing local and global patterns: locate influential entities, and proficiency network dynamics. Millions of users share their opinions on Social Networks, making it a valuable platform for tracing and analyzing public sentiment. Such tracking and analysis can provide critical information for decision making in various domains. Therefore it has captivated attention in both academia and industry. This approach needs Sentimental data analysis model using Neural Networks. Both positive and negative also comments will be calculated here. To further enhance the readability of the mined reasons, we select the most representative tweets for foreground topics and develop another generative model called Reason Candidate and Background LDA (RCB-LDA) to rank them with respect to their popularity within the variation period. Experimental results show that our methods can effectively find foreground topics and rank reason candidates.

Keywords : LDA, RCB-LDA, KDD, CVS, SVN, ANY, ANN

I. INTRODUCTION

Data mining for software engineering techniques consists of gathering software engineering data, extracting some knowledge from it and, if possible, use this knowledge to improve the software engineering process, in other words "operationalize" the mined knowledge. For instance, researchers have extracted usage patterns from millions of lines of code of the Linux kernel in order to find bug. In essence, data mining for software engineering can be decomposed along three axes: the goal, the input data used, and the mining technique used.

Data engineering at large consists of many tasks from specification, design, development, monitoring at runtime, etc. Each task is itself decomposed in many smaller scale tasks. For example, a programmer constantly switches between tasks, such as navigating code, reading documentation, writing code, debugging, etc. During the last decade, it has been shown that most software engineering tasks can benefit from data mining approaches, the tasks being whether technical or more people oriented. Data mining is to discover structure inside unstructured data, extract meaning from noisy data, discover patterns in apparently random data, and use all this information to better understand trends, patterns, correlations, and ultimately predict customer behavior, market and competition trends, so that the company uses its own data more meaningfully to better position itself on the new waves. The term Knowledge Discovery in Databases (KDD) is generally used to refer to the overall process of

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A Shoulder Surfing Resistant Graphical Authentication System

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ABSTRACT

People enjoy the convenience of on-line services, but online environments may bring many risks. We propose a virtual password and QR code concept involving a small amount of human computing to secure users' passwords in on-line environments. We adopted user-determined randomized linear generation functions to secure users' passwords based on the fact that a server has more information than any adversary does. We propose differentiated QR code mechanisms in which a user has the freedom to choose a virtual password scheme ranging from weak security to strong security, where a virtual password requires a small amount of human computing to secure users' passwords. A functionis used to implement the virtual password concept with security for complexity requiring a small amount of human computing. For user-specified functions, we adopt secretlittle functions in which security is enhanced by to generate QR CODE.

Keywords : Graphical Passwords, Authentication, Shoulder Surfing Attack.

I. INTRODUCTION

Today, the Internet has entered into our daily lives as more and more services have been moved online. Besides reading the news, searching for information, and other risk-free activities online, we have also become accustomed to other risk-related work, such as paying using credit cards, checking / composing emails, online banking and soon. While we enjoy its convenience, we are putting ourselves at risk. Most current commercial websites will ask their users to input their user identifications (IDs) and corresponding passwords for authentication. Once a user's ID and the corresponding password are stolen by an adversary, the adversary can do anything with the victim's account, which can lead to a disaster for the victim. As a consequence of increasing concerns over such risks, protecting users' passwords on the web has become increasingly critical. In this paper, we present a password protection scheme that involves a small amount of human computing in an Internet-based environment or an ATM machine, which will be resistant to phishing scams, Trojan horses, and shoulder surfing attacks. We propose a virtual password concept involving small amount of human computing to secure users 'passwords in online environments. The trade-off is that stronger schemes are more complex. Among the schemes, we have a default method (i.e., traditional password scheme), a system recommended function, a user-specified function, a user-specified program and so on. A function/program is used to implement the virtual password concept by trading security for complexity by requiring small amount of human computing. We analyse how the proposed schemes defend against phishing, key logger, shoulder surfing and multiple attacks. In user-specified functions, we adopt secret little functions in which security is enhanced by hiding secret functions/algorithms.

II. METHODS AND MATERIAL

1. Existence Approaches

In the Existing system, the access code will be sent to the mobile using that user login to the website. Access code security is not there. We present a password protection scheme that involves a small amount of human computing in an Internet-based environment or an ATM machine, which will be resistant to phishing frauds, Trojan horses, and shoulder surfing attacks.



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DIRECT GROWTH OF VERTICALLY ALIGNED CARBON NANOTUBES ON SILICON SUBSTRATE BY SPRAY PYROLYSIS OF *GLYCINE MAX* OIL

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ABSTRACT. Vertically aligned carbon nanotubes have been synthesized by spray pyrolysis from *Glycine max* oil on silicon substrate using ferrocene as catalyst at 650 °C. *Glycine max* oil, a plant-based hydrocarbon precursor was used as a source of carbon and argon as a carrier gas. The as-grown vertically aligned carbon nanotubes were characterized by scanning electron microscopy, high-resolution transmission electron microscopy, X-ray diffraction, thermogravimetric analysis, and Raman spectroscopy. Scanning electron microscopic images reveal that the dense bundles of aligned carbon nanotubes. High resolution transmission electron microscopy and Raman spectroscopy observations indicate that as-grown aligned carbon nanotubes are well graphitized.

KEY WORDS: Spray pyrolysis, Vertically aligned CNT, Ferrocene, Silicon substrate

INTRODUCTION

Vertically aligned carbon nanotubes are quasi-dimensional carbon cylinders that align perpendicular to a substrate [1]. Aligned carbon nanotubes represent an important architecture of CNTs because they can be used directly as field emitters in flat panel displays as reinforcing agents in composite materials [2, 3]. Furthermore, vertically aligned carbon nanotubes also exhibit a high capability to produce high current densities under low operating voltages [4]. Aligned carbon nanotubes possessing larger surface area and higher electrical conductivity over entangled CNTs, are ideal electrode material for DNA biosensor [5], energy storage device [6], sensors for glucose [7], pH [8] as well as NO_2 [9]. Jung *et al.* demonstrated laser transmission welding of vertically aligned carbon nanotube arrays for joining polymer sheets [10]. Aligned carbon nanotubes reported by Thess *et al.* were able to bundle 70% of the volume of nanotubes into crystalline ropes in 1996 [11]. Fan *et al.* introduced position controlled growth of vertically aligned CNT on porous and plain silicon substrate [12]. CNT arrays have successfully grown on different substrates such as quartz substrate [13], planar silicon substrate [14]. Ferrocene and its derivatives are significant as regards biological applications [15]. Ferrocene has been shown to be a good precursor of iron nanoparticles suitable to catalyze CNT growth [16-17]. Conventionally hydrocarbons such as methane, ethane, ethylene, acetylene, xylene and ethanol were used as a carbon source for the synthesis of CNTs [18-23]. The number of studies utilizing low-cost carbon sources for the synthesis of CNTs such as botanical hydrocarbon is very limited [24-28]. Afre *et al.* have used spray pyrolysis method and prepared aligned carbon nanotubes from ferrocene and turpentine oil mixture on quartz and silicon substrates [29]. Instead of using conventional petro chemicals, we rather use a natural precursor – *Glycine max* oil. From our previous study it is proved that *Glycine max* oil have been found to be an efficient precursor of

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Hybrid compression scheme using precoding block and fast stationary wavelet transformation

Cite

Article type: Research Article

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Abstract: In this paper a hybrid compression using precoding block and Fast Stationary Wavelet Transformation have been proposed for standard and compound images. The proposed method is the extension of transformation based compression process. It has two operations 1. precoding, 2. transformation. The first process is precoding in which the original image is divided into (n×n) non overlapping blocks then each block is combined with the precoding block, which have different level of gray values. When the original pixel value is nearer to the precoding block element, then the original pixel value is rounded near the precoding element data. Secondly the precoded image data has been transformed by FSWT (Fast Stationary Wavelet Transformation) and got the energy compaction.The proposed technique is dually reduce the size of the information by precoding block and transformation. So it is very much suitable for compressing all types of images.

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Efficient FPGA Implementation of AES 128 Bit for IEEE 802.16e Mobile WiMax Standards

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Abstract

In the present era of high speed communication, wireless technology plays a predominant role in data transmission. In the timeline of wireless domain, Wi-Fi, Bluetooth, ZigBee are some of the standards used in today's wireless medium. In addition, WiMax is introduced by IEEE as IEEE 802.16 standard for long distance communication, and mobile WiMax as 802.16e. WiMax is an acronym of worldwide interoperability for microwave access. It helps to provide wireless transmission with high quality of service in a secured environment. Privacy across the network and access control is the predominant goal in the wireless protocol. In the wireless environment one of the most widely used security algorithms in MAC layer is Advanced Encryption Standard (AES). Especially Medium Access Control (MAC) sub layer should be evaluated in the security architecture. AES is used in the MAC layer that consumes more power and involves high cost. So, in this paper an optimized architecture of AES 128 bit counter mode security algorithm for MAC layer of 802.16e standard is proposed. The SBOX and MixColumn transformation are modified in the architecture of AES to achieve optimized power and delay. The design has been implemented in Xilinx virtex5 device and power has been analyzed using XPower analyzer. It is compared with two standard existing architectures. The simulation results revealed a power reduction of 41% compared to existing one.

Keywords

AES Encryption/Decryption, Galois Field, Low Power Architecture, Electronic Code Book Mode, FPGA Implementation

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Autonomous Control of Interlinking Converter with Energy Storage in Hybrid AC-DC Microgrid

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Abstract— Due to the decade of fossil fuels, renewable energy plays an important role to supply the power to meet our load requirements. The main drawback of renewable energy system is its installation cost is very high and renewable energy sources are mainly unpredictable. To eliminate the drawbacks in renewable energy, hybrid system plays a major role. Hybrid system is an interconnection of two or more sources. In this project solar energy and battery are used as a two different sources. Power from the solar energy is boosted by boost converter and boost converter act as a impedance matching network. When internal impedance of solar is matched with the boost converter impedance power will be transfer from source to load. Battery power is boosted by boost converter and output of solar and battery added together and given as a input to the inverter. To connect the 3 phase line to the microgrid it is necessary to find 3 phase network. Hence BLDC motor is used as load because it is used to verify the 3 phase network. The proposed design has an advantage i.e., battery bank and solar panel acts as a source, hence the uninterrupted power obtained to run the system

Key words: component; formatting; style; styling; insert (key words)

I. INTRODUCTION

The Smart residential units are often connected to a non-conventional energy sources to provide smart energy. Due to the complexity of the space allocation, these dedicated energy sources are highly localized and have low terminal power and voltage ratings. The power ranges typically, on the order of a hundred watts. Conventional designs involve two separate converters, a DC–DC converter such as boost converter (e.g., boost) and a voltage source inverter (VSI), connected either in cascade or in parallel manner, supplying DC and AC outputs at VdcOut and VacOut, respectively. Depending upon the requirements, topologies providing higher gains may be required to achieve step-up operation .This project investigates the use of single boost-stage architecture to supply hybrid loads.

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The Need for Renewable Energy

Renewable energy is one of the resources it comes from the natural resources such as wind energy, solar energy, water and geothermal heat energy. These resources are renewable and it maybe recycles and uses it for further use. Therefore it is used for all practical purposes, these resources can be considered to be inexhaustible, because the other important resources like conventional fossil fuels leads to damage or highly risky state composition. The global energy crunch has provided a renewed impetus to the growth and development of Clean and Renewable Energy sources. Apart from the rapidly decreasing reserves of fossil fuels in the world, another major factor working against fossil fuels is the pollution associated with their combustion.

II. DIFFERENT SOURCES OF RENEWABLE ENERGY

A. Wind Power:

Wind turbines can be used to harness the energy available in airflows. Current day turbines range from around 600 kW to 5 MW of rated power. Since the power output is a function of the cube of the wind speed, it increases rapidly with an increase in available wind velocity. Recent advancements have led to aero foil wind turbines, which are more efficient due to a better aerodynamic structure.

B. Solar Power:

The tapping of solar energy owes its origins to the British astronomer John Herschel who famously used a solar thermal collector box to cook food during an expedition to Africa. Solar energy can be utilized in two major ways. Firstly, the captured heat can be used as solar thermal energy, with applications in space heating. Another alternative is the conversion of incident solar radiation to electrical energy, which is the most usable form of energy. This can be achieved with the help of solar photovoltaic cells or with concentrating solar power plants.

C. Small Hydropower:

Hydropower installations up to 10MW are considered as small hydropower and counted as renewable energy sources These involve converting the potential energy of water stored in dams into usable electrical energy through the use of water turbines. Run-of-the-river hydroelectricity aims to utilize the kinetic energy of water without the need of building reservoirs or dams.

D. Biomass:

Plants capture the energy of the sun through the process of photosynthesis. On combustion, these Plants release the trapped energy. This way, biomass works as a natural battery to store the suns Energy and yield it on requirement.

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Structural and thermo-optic studies on linear double hydrogen bonded ferroelectric liquid crystal homologous series

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ABSTRACT

A novel series of supramolecular hydrogen bonded ferroelectric liquid crystal (HBFLC) is formed through hydrogen bonding interaction between nonmesogenic dextro-levo tartaric acid (DLTA) and mesogenic p-n-alkyloxy benzoic acids (nBAO, where n = 7 to 12). The formation of hydrogen bond in the complex is confirmed through Fourier transform infrared spectroscopy (FTIR) studies. Optical and thermal behaviors for mesomorphic phases of individual complex in the series are meticulously studied by means of differential scanning calorimetry (DSC) and polarizing optical microscopy (POM). Computation of the enthalpy values in the homologous series of complex during both heating and cooling cycles is proved that thermal equilibrium exhibited by the complex system. Extended thermal span width and rich liquid crystallinity is observed in the present complex due to the presence of aromatic ring with chiral center. Thermal stability factor and thermal equilibrium are also discussed. Presence of alkyloxy chain on either side of chiral molecules hinder the abundant reduction in phase transition temperature and lowered melting point compared to the individual mesogens. Optical tilt angle for smectic C* phase is determined and the same is fitted to a power law.

KEYWORDS

Smectic; POM; DSC; thermal stability factor

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1. Introduction

Liquid crystals (LCs) exhibiting the intermediate phases between isotropic liquid and solid crystal during their phase transitions which have both liquid and crystal properties [1]. Molecular orientation and self-assembly systems are the basic requirements for exhibiting these interesting properties. A single LC may not satisfy all the requirements of our day-to-day life applications. Usually, supplement/compliment properties of multicomponent LC mixture is more useful for industrial applications. In particular more than two LCs are mixed with each other in definite molar ratio, it gives major effect on intermolecular hydrogen bonding and results in diversity of thermodynamic and optical properties [2–4]. In the recent decade, various research groups all around the world interesting to work on the synthesis of liquid crystal complexes through intermolecular hydrogen bonding [5–7]. The variety

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Color versions of one or more of the figures in the article can be found online at www.tandfonline.com/gmcl.
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Prof. Kannan Moudgalya
Principal Investigator
TLC(ICT) PMMMNMTT

Prof. Prabhu Ramchandran
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Institute ID: IR-1-E-E-C-36988
Institute Name: KATHIR COLLEGE OF ENGINEERING
Full Report

Sanctioned (Approved) Intake

Academic Year	2016-17	2015-16	2014-15	2013-14	2012-13	2011-12
UG [4 Years Program(s)]	540	540	540	660	---	---
PG [2 Years Program(s)]	216	216	---	---	---	---

Total Actual Student Strength (Program(s) Offered by Your Institution)

(All programs of all years)	No. of Male Students	No. of Female Students	Total Students	Within State (Including male & female)	Outside State (Including male & female)	Outside Country (Including male & female)	Economically Backward (Including male & female)	Socially Challenged (SC+ST+OBC Including male & female)	No. of students receiving Freeships / Scholarships from the State and Central Government	No. of students receiving Freeships / Scholarships from Institution Funds	No. of students receiving Freeships / Scholarships from the Private Bodies	No. of students who are not receiving any Freeships / Scholarships
UG [4 Years Program(s)]	1103	260	1363	1333	30	0	1179	184	765	50	0	548
PG [2 Years Program(s)]	92	37	129	119	10	0	84	45	23	0	0	106

Placement & Higher Studies

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UG [4 Years Program(s)]: Placement & higher studies for previous 3 years

Academic Year	No. of first year students intake in the year	No. of first year students admitted in the year	Academic Year	No. of students admitted through Lateral entry	Academic Year	No. of students graduating in minimum stipulated time	No. of students placed	Median salary of placed graduates (Amount in Rs.)	No. of students selected for Higher Studies
(2011-12)	420	364	(2012-13)	61	(2014-15)	249	228	168000 (ONE LAKHS SIXTY EIGHT THOUSAND)	21
(2012-13)	540	428	(2013-14)	61	(2015-16)	408	234	192000 (ONE LAKH NINTY TWO THOUSAND)	1
(2013-14)	660	442	(2014-15)	69	(2016-17)	304	271	192000 (ONE LAKH NINTY TWO THOUSAND)	5

PG [2 Years Program(s)]: Placement & higher studies for previous 3 years

Academic Year	No. of first year students intake in the year	No. of first year students admitted in the year	Academic Year	No. of students graduating in minimum stipulated time	No. of students placed	Median salary of placed graduates (Amount in Rs.)	No. of students selected for Higher Studies
(2013-14)	216	153	(2014-15)	106	25	192000 (ONE LAKH NINTY TWO THOUSAND)	0
(2014-15)	216	87	(2015-16)	54	10	204000 (TWO LAKH FOUR THOUSAND)	0
(2015-16)	216	75	(2016-17)	39	28	192000 (ONE LAKH NINTY TWO THOUSAND)	0

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Ph.D Student Details

Ph.D (Student pursuing doctoral program till 2016-17; Students admitted in the academic year 2017-18 should no be entered here).

	Total Students
Full Time	0
Part Time	0

No. of Ph.D students graduated (including Integrated Ph.D)

	2016-17	2015-16	2014-15
Full Time	0	0	0
Part Time	0	0	0

Financial Resources: Utilised Amount for the Capital & Operational expenditure for previous 3 years

Financial Year	2016-17	2015-16	2014-15

Financial Year	2016-17 Utilised Amount	2015-16 Utilised Amount	2014-15 Utilised Amount
Annual Capital Expenditure on Academic Activities and Resources (excluding expenditure on buildings)	Utilised Amount	Utilised Amount	Utilised Amount
Library	218605 (Two Lakh Eighteen Thousand Six Hundred and Five)	1179587 (ELEVEN LAKH SEVENTY NINE THOUSAMS FIVE HUNDRED AND EIGHTY SEVEN)	702227 (SEVEN LAKH TWO THOUSAND TWO HUNDRED AND TWENTY SEVEN)
New Equipment for Laboratories	679730 (Six Lakh Seventy Nine Thousand Seven Hundred And Thirty)	1126318 (ELEVEN LAKH TWENTY SIX THOUSAND THREE HUNDRED AND EIGHTEEN)	1738180 (SEVENTEEN LAKH THIRTY EIGHT THOUSAND ONE HUNDRED AND EIGHTY)
Engineering Workshops	0 (Zero)	0 (Zero)	0 (Zero)
Studios	0 (Zero)	0 (Zero)	0 (Zero)
Other expenditure on creation of Capital Assets (excluding expenditure on Land and Building)	661700 (Six Lakh Sixty One Thousand and Seven Hundred)	150350 (ONE LAKH FIFTY THOUSAND THREE HUNDRED AND FIFTY)	149864 (ONE LKAH FOURTY NINE THOUSAND EIGHT HUNDRED AND SIXTY FOUR)
Annual Operational Expenditure			
Salaries (Teaching and Non Teaching staff)	44592067 (Four Croce Fourtyy Five Lakh Ninty Two Thousand And Sixty Seven)	59903102 (FIVE CROCE NINTY NINE LAKH THREE THOUSAND ONE HUNDRED AND TWO)	55774700 (FIVE CROCE FIFTY SEVEN LAKHSEVENTY FOUR THOUSAND AND SEVEN HUNDRED)
Maintenance of Academic Infrastructure or consumables, other running expenditures etc. (excluding maintenance of hostels and allied services)	39832063 (Three Croce NInty Eight Lakh Thiry Two Thousand and Sixty Three)	3828502 (THIRTY EIGHT LAKH TWENTY EIGHT THOUSAND FIVE HUNDRED AND TWO)	27684948 (TWO CROCE SEVENTY SIX LAKH EIGHTY FOUR THOUSAND NINE HUNDRED AND FOURTY EIGHT)
Seminars/Conferences/Workshops	275718 (Two Lakh Seventy Five Seven Hundred and Eighteen)	489483 (FOUR LAKH EIGHTY NINE THOUSAND FOUR HUNDRED AND EIGHTY THREE)	861250 (EIGHT LAKH SIXTY ONE THOUSAND TWO HUNDRED AND FIFTY)

Earning From Patents(IPR)

Financial Year	2016-17	2015-16	2014-15
Earning From Patents (Amount in Rupees)	0	0	0
Enter Amount in Words	Zero	Zero	Zero

Sponsored Research Details

Financial Year	2016-17	2015-16	2014-15
Total no. of Sponsored Projects	0	0	2
Total no. of Funding Agencies	0	0	2
Total Amount Received (Amount in Rupees)	0	0	137000
Amount Received in Words	Zero	Zero	One Lakh Thirty Seven Thousand

Consultancy Project Details

Financial Year	2016-17	2015-16	2014-15

Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
Principal
Easwari Engineering College
Ramapuram, Chennai - 600 089.

Financial Year	2016-17	2015-16	2014-15
Total no. of Consultancy Projects	62	38	57
Total no. of Client Organizations	38	21	19
Total Amount Received (Amount in Rupees)	983080	552930	1237455
Amount Received in Words	NINE LAKH EIGHTY THREE THOUSAND AND EIGHTY	FIVE LAKH FIFTY TWO THOUSAND NINE HUNDRED AND THIRTY	TWELE LAKH THIRTY SEVEN THOUSAND FOUR HUNDRED AND FIFTY FIVE

PCS Facilties: Facilities of physically challenged students

1. Do your institution buildings have Lifts/Ramps?	Yes, in all the buildings
2. Do your institution have provision for walking aids, includingwheelchairs and transportation from one building to another for handicapped students?	Yes, in all the buildings
3. Do your institution buildings have specially designed toilets for handicapped students?	Yes, in some of the buildings

Faculty Details

Srno	Name	Age	Designation	Gender	Qualification	Experience (In Months)	Is Associated Last Year	Currently working with institution?	Joining Date	Leaving Date	Association type
1	A ASHOTHAMAN	27	Assistant Professor	Male	M.E.	49	No	Yes	19-06-2017	---	Regular
2	A GOKULAKRISHNAN	27	Assistant Professor	Male	M.E.	49	Yes	Yes	14-06-2013	---	Regular
3	A JESU	33	Assistant Professor	Male	M. Phil	103	Yes	No	18-01-2013	06-07-2017	Regular
4	A KAVIYA	26	Assistant Professor	Female	M.E.	63	Yes	Yes	18-06-2014	---	Regular
5	A KUPPURAJ	28	Assistant Professor	Male	M.E.	52	Yes	Yes	02-06-2015	---	Regular
6	A MUTHU KUMAR	31	Assistant Professor	Male	M.E.	99	Yes	No	12-06-2015	16-03-2017	Regular
7	A NITHYAKALYANI	35	Assistant Professor	Female	M. Phil	107	No	No	01-06-2012	09-05-2016	Regular
8	A R SURESH	51	Professor	Male	Ph.D	359	Yes	Yes	23-05-2016	---	Regular
9	A RADHIKA	35	Assistant Professor	Female	M. Phil	93	No	Yes	21-08-2017	---	Regular
10	A RAJAAMBIKA	25	Assistant Professor	Female	M.E.	27	Yes	Yes	29-06-2015	---	Regular

Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
Principal
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"Wisdom Park", Avinashi Road,
Neelambur, Coimbatore - 641 062.

11	A RAMESHKUMAR	28	Assistant Professor	Male	M.E.	49	Yes	Yes	14-06-2013	---	Regular
12	A VIJIYAKUMAR	29	Assistant Professor	Male	M.E.	59	Yes	Yes	14-06-2013	---	Regular
13	AKILA T	24	Assistant Professor	Female	M.E.	7	Yes	Yes	05-01-2017	---	Regular
14	ARUN M	26	Assistant Professor	Male	M.E.	13	Yes	Yes	01-07-2016	---	Regular
15	ARUNRAJKUMAR B	29	Assistant Professor	Male	M.E.	41	Yes	No	01-07-2016	03-01-2017	Regular
16	B PRASAD	28	Assistant Professor	Male	M.E.	26	Yes	Yes	02-06-2015	---	Regular
17	B SHANMUGAPRIYA	30	Assistant Professor	Female	M. Phil	71	No	No	14-06-2010	07-05-2016	Regular
18	B VAIKUNDASELVAN	44	Associate Professor	Male	Ph.D	288	Yes	Yes	27-05-2011	---	Regular
19	C KARTHIKEYAN	27	Assistant Professor	Male	M.E.	6	Yes	No	01-07-2016	02-01-2017	Regular
20	C SIVANRAJ	30	Assistant Professor	Male	M.E.	80	Yes	No	04-07-2014	16-03-2017	Regular
21	C VIGNESHWARAN	35	Assistant Professor	Male	M. Phil	113	Yes	Yes	25-08-2015	---	Regular
22	D DAVID BABU RAJ	45	Assistant Professor	Male	MBA	206	Yes	Yes	25-07-2016	---	Regular
23	D GOVINDASAMY	28	Assistant Professor	Male	M. Phil	29	No	Yes	03-07-2017	---	Regular
24	D MOHANA PRIYA	30	Assistant Professor	Female	M. Phil	44	Yes	No	18-01-2013	26-09-2016	Regular
25	D RAVI	41	Associate Professor	Male	M.E.	212	Yes	Yes	09-02-2011	---	Regular
26	DANIELDICKSON JEYAKUMAR	29	Assistant Professor	Male	M.E.	21	Yes	No	01-07-2016	08-05-2017	Regular
27	E DEEPARAJ	27	Assistant Professor	Male	M.E.	49	No	Yes	19-06-2017	---	Regular
28	E KRISHNAKUMAR	30	Assistant Professor	Male	M.E.	66	Yes	Yes	08-06-2015	---	Regular
29	ELDHOSE MATHEW	27	Assistant Professor	Male	M.E.	12	Yes	Yes	01-07-2016	---	Regular
30	G DORAISWAMY	69	Professor	Male	Ph.D	491	Yes	Yes	28-08-2008	---	Regular
31	G MUTHUPRIYA	29	Assistant Professor	Female	M.E.	22	Yes	Yes	23-12-2016	---	Regular
32	G NIVETHA	25	Assistant Professor	Female	M.E.	20	Yes	No	29-01-2016	29-05-2017	Regular
33	G R GNANA KING	32	Assistant Professor	Male	Ph.D	98	Yes	No	27-06-2015	30-11-2016	Regular

34	G shanthi	35	Assistant Professor	Female	M. Phil	96	No	No	20-04-2012	10-05-2016	Regular
35	GANESHAMOORTHY M	24	Lecturer	Male	B.E	13	Yes	No	11-07-2016	29-07-2017	Regular
36	GOPINATH P	27	Lecturer	Male	B.E	72	Yes	No	11-07-2016	29-07-2017	Regular
37	GOWTHAM S	30	Assistant Professor	Male	M.E.	24	Yes	Yes	15-06-2015	---	Regular
38	GUNASEELAN N	65	Assistant Professor	Male	MBA	485	Yes	Yes	02-04-2012	---	Regular
39	HARIPRASAD R S	25	Assistant Professor	Male	M.E.	13	Yes	No	01-07-2016	29-07-2017	Regular
40	HEMAPRIYA M	30	Assistant Professor	Female	M.E.	82	Yes	Yes	03-10-2011	---	Regular
41	I SARLIN	31	Assistant Professor	Male	M. Phil	93	Yes	No	10-08-2015	29-04-2017	Regular
42	[illegible]LLAKKIYA R	26	Assistant Professor	Female	M.E.	24	Yes	Yes	19-06-2015	---	Regular
43	INDUMATHI S	27	Assistant Professor	Female	M.E.	40	Yes	Yes	01-03-2014	---	Regular
44	J BALAJI PRAVEEN	24	Assistant Professor	Male	M.E.	15	Yes	Yes	01-07-2016	---	Regular
45	J DIVYA LAKSHMI	24	Assistant Professor	Female	MBA	28	Yes	Yes	01-06-2015	---	Regular
46	J SANJUNATH	24	Assistant Professor	Male	M.E.	2	No	Yes	19-06-2017	---	Regular
47	JITHIN JOY	25	Assistant Professor	Male	M.E.	13	Yes	No	11-07-2016	29-07-2017	Regular
48	K BRINDHA	26	Assistant Professor	Female	M.E.	27	Yes	No	04-07-2014	16-03-2017	Regular
49	K DEEPA	34	Assistant Professor	Female	MBA	68	Yes	No	01-02-2016	07-06-2017	Regular
50	K DEEPAN RAJ	30	Assistant Professor	Male	M.E.	58	Yes	No	14-06-2013	29-04-2017	Regular
51	K KARTHIKA	28	Assistant Professor	Female	M.E.	21	Yes	No	29-06-2015	16-03-2017	Regular
52	K KOKILAMANI	24	Assistant Professor	Female	M. Phil	4	No	Yes	16-08-2017	---	Regular
53	K KUMAR	35	Assistant Professor	Male	M. Phil	75	Yes	No	02-05-2011	06-07-2017	Regular
54	K R N MANOJ	26	Lecturer	Male	M.E.	49	Yes	No	16-02-2016	10-11-2016	Regular
55	K S RAMESH	37	Assistant Professor	Male	M.E.	152	No	Yes	19-06-2017	---	Regular
56	K T DHIVYA	26	Assistant Professor	Female	M.E.	36	Yes	Yes	15-06-2015	---	Regular

M.E.,Ph.D.,
Engineering
Kadhir College of Engineering
"Wisdom Tower", Adhanur Road,
Neelambur, Coimbatore - 641 062.

57	K V KANNAN NITHIN	37	Associate Professor	Male	Ph.D	151	Yes	Yes	23-06-2008	---	Regular
58	KARTHIKAI SANKAR T	22	Lecturer	Male	B.E	13	Yes	No	01-07-2016	29-07-2017	Regular
59	KARTHIKEYAN T	27	Assistant Professor	Male	M.E.	47	Yes	Yes	01-07-2016	---	Regular
60	KUMARESAN C	24	Assistant Professor	Male	M.E.	13	Yes	Yes	01-07-2016	---	Regular
61	LOGESH M	26	Assistant Professor	Male	MBA	31	Yes	No	02-01-2015	29-07-2017	Regular
62	M ARUN PRAKASH	26	Assistant Professor	Male	M.E.	39	Yes	Yes	18-06-2014	---	Regular
63	M ARUN PRANESH	27	Assistant Professor	Male	M.E.	39	Yes	Yes	03-07-2014	---	Regular
64	M GOMATHI	25	Assistant Professor	Female	M.E.	27	Yes	Yes	22-06-2015	---	Regular
65	M JEYABHARATHI	28	Assistant Professor	Female	M.E.	38	Yes	Yes	23-12-2016	---	Regular
66	M KANNAN	44	Associate Professor	Male	Ph.D	250	Yes	Yes	01-01-2014	---	Regular
67	M KARTHIKEYAN	33	Assistant Professor	Male	M.E.	51	Yes	No	08-06-2015	29-04-2017	Regular
68	M MARY SHARMILA	37	Assistant Professor	Female	M.E.	96	Yes	Yes	23-12-2016	---	Regular
69	M NAGARAJAN	30	Assistant Professor	Male	M.E.	75	Yes	No	14-06-2013	16-03-2017	Regular
70	M NAVEEN RAJ	27	Assistant Professor	Male	M.E.	48	Yes	No	14-06-2013	05-05-2017	Regular
71	M RAMKUMAR	31	Assistant Professor	Male	M.E.	98	Yes	Yes	16-06-2010	---	Regular
72	M SASIREKA	29	Assistant Professor	Female	M.E.	71	Yes	No	14-06-2013	16-03-2017	Regular
73	M VENGATESH	26	Assistant Professor	Male	M.E.	26	Yes	No	03-06-2015	29-04-2017	Regular
74	MANIBHARATHI M	24	Assistant Professor	Male	M.E.	15	Yes	No	02-06-2015	30-09-2016	Regular
75	MANOJ KUMAR R	29	Assistant Professor	Male	B.E	8	Yes	Yes	05-12-2016	---	Regular
76	MAREESWARAN M	27	Assistant Professor	Male	M.E.	33	Yes	Yes	01-07-2016	---	Regular
77	MOHANAPRIYAA M	27	Assistant Professor	Female	M.E.	1	No	Yes	21-06-2017	---	Regular
78	N KARTHICK	25	Assistant Professor	Male	M.E.	26	Yes	Yes	08-06-2015	---	Regular
79	N MAHESWARI	33	Assistant Professor	Female	M. Phil	63	Yes	Yes	01-07-2013	---	Regular

M.E.,Ph.D.,
Principal
Kathir College of Engineering,
"Western Bypass" Arasoor Road,
Neelambur,Coimbatore - 641 062.

80	N RAMYA	30	Assistant Professor	Female	Ph.D	49	Yes	Yes	04-05-2015	---	Regular
81	N VIJAYALAKSHMI	33	Assistant Professor	Female	M.E.	124	Yes	Yes	23-05-2012	---	Regular
82	NAREN KUMAR R	22	Lecturer	Male	B.E	13	Yes	Yes	01-07-2016	---	Regular
83	NAVEEN S	27	Assistant Professor	Male	M.E.	8	Yes	Yes	01-12-2016	---	Regular
84	NITHYA G	32	Assistant Professor	Female	M.E.	106	No	Yes	21-06-2017	---	Regular
85	P BANUMATHI	44	Professor	Female	Ph.D	273	Yes	Yes	15-09-2008	---	Regular
86	P DEVIPRIYA	27	Assistant Professor	Female	M. Phil	7	No	Yes	16-08-2017	---	Regular
87	P JANANI	23	Assistant Professor	Female	M.E.	15	Yes	Yes	01-07-2016	---	Regular
88	P MURTHI	53	Dean / Principal / Director / Vice Chancellor	Male	Ph.D	306	Yes	No	28-05-2015	15-06-2017	Regular
89	P RAVI KUMAR	37	Associate Professor	Male	M.E.	199	Yes	Yes	14-06-2013	---	Regular
90	P SATHISH	31	Assistant Professor	Male	M. Phil	94	Yes	No	02-08-2013	06-07-2017	Regular
91	P THANGAMUTHU	26	Assistant Professor	Male	M.E.	38	Yes	No	03-06-2015	29-04-2017	Regular
92	P VIVEK KARTHIK	27	Assistant Professor	Male	M.E.	48	Yes	No	24-06-2013	29-04-2017	Regular
93	PRASHANTHI V	24	Assistant Professor	Female	M.E.	8	Yes	Yes	05-12-2016	---	Regular
94	PRATHAP P	26	Assistant Professor	Male	M.E.	35	Yes	Yes	01-07-2016	---	Regular
95	R ELAKKYA	26	Assistant Professor	Female	M.E.	39	Yes	No	01-07-2016	29-04-2017	Regular
96	R MONICKA GOVINDHINI	24	Assistant Professor	Female	M.E.	15	No	Yes	01-07-2016	---	Regular
97	R POONGOTHAI	31	Assistant Professor	Female	M. Phil	80	Yes	No	23-08-2012	13-06-2017	Regular
98	R PRIYANKA	26	Assistant Professor	Female	M.E.	27	Yes	Yes	19-06-2015	---	Regular
99	R PUNITHA GOWRI	27	Assistant Professor	Female	M.E.	35	Yes	Yes	18-06-2014	---	Regular
100	R RAMU	30	Assistant Professor	Male	M.E.	76	Yes	Yes	14-06-2013	---	Regular
101	R S PRAKASH	29	Assistant Professor	Male	M.E.	75	Yes	No	08-06-2015	29-04-2017	Regular
102	R SARANYA	26	Assistant Professor	Female	M. Phil	18	Yes	No	01-08-2016	13-03-2017	Regular

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"Wisdom Park" Perundurai Road,
Nellambu,Coimbatore - 641 062.

103	R SHANMUGAM	42	Assistant Professor	Male	M.E.	258	Yes	Yes	19-12-2012	---	Regular
104	RAJENDRAN M	55	Assistant Professor	Male	M.E.	297	Yes	No	08-07-2016	10-05-2017	Regular
105	RAJESH M	26	Lecturer	Male	B.E	13	Yes	Yes	01-07-2016	---	Regular
106	RUBHASHREE M	29	Assistant Professor	Female	M.E.	73	Yes	Yes	21-12-2016	---	Regular
107	S DHIVYA BHARATHI	26	Assistant Professor	Female	M.E.	25	Yes	Yes	14-08-2015	---	Regular
108	S ELANGO	32	Assistant Professor	Male	MBA	79	Yes	No	26-12-2015	03-06-2016	Regular
109	S GANESHKUMAR	24	Assistant Professor	Male	M.E.	15	Yes	Yes	01-07-2016	---	Regular
110	S KALAIVANI	31	Assistant Professor	Female	M.E.	102	Yes	Yes	08-08-2009	---	Regular
111	S KALPANA	26	Assistant Professor	Female	M.E.	23	Yes	Yes	14-08-2015	---	Regular
112	S MAHESH	28	Assistant Professor	Male	M. Phil	60	Yes	Yes	17-04-2013	---	Regular
113	S N SATHYA	39	Assistant Professor	Female	M.E.	164	Yes	Yes	14-06-2013	---	Regular
114	S P VIDHYA PRIYA	27	Assistant Professor	Female	M.E.	51	Yes	Yes	14-06-2013	---	Regular
115	S PRIYANGA	25	Assistant Professor	Female	M.E.	10	Yes	Yes	01-07-2017	---	Regular
116	S R THATCHANADEVI	24	Assistant Professor	Female	M.E.	2	No	Yes	19-06-2017	---	Regular
117	S R VENUPRIYA	26	Assistant Professor	Female	M.E.	11	No	No	15-06-2015	09-07-2016	Regular
118	S RAJKUMAR	29	Assistant Professor	Male	M.E.	80	Yes	Yes	11-01-2011	---	Regular
119	S SARAVANAN	29	Assistant Professor	Male	M. Phil	61	Yes	Yes	21-09-2012	---	Regular
120	S SUMATHI	32	Assistant Professor	Female	M. Phil	24	Yes	No	01-02-2016	05-07-2016	Regular
121	S VIGNESH	27	Lecturer	Male	B.E	47	Yes	No	01-07-2016	07-01-2017	Regular
122	S YASODHARAN	27	Assistant Professor	Male	M.E.	38	Yes	No	18-06-2014	31-01-2017	Regular
123	SANGEETHA D	36	Assistant Professor	Female	M. Phil	122	Yes	No	01-08-2016	20-05-2017	Regular
124	SANGEETHA M	24	Assistant Professor	Female	M.E.	6	Yes	Yes	06-02-2017	---	Regular
125	SARANYA R	27	Assistant Professor	Female	M.E.	30	No	Yes	19-06-2017	---	Regular

Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
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Neelambur,Coimbatore - 641 062.

126	SATHEESH KUMAR K	32	Assistant Professor	Male	M. Phil	61	No	Yes	07-07-2017	---	Regular
127	SATHEESHKUMAR N	27	Assistant Professor	Male	M.E.	36	Yes	No	01-07-2016	29-07-2017	Regular
128	SIVACHANDRAN K G	30	Assistant Professor	Male	M.E.	60	Yes	Yes	01-07-2016	---	Regular
129	SIVAKUMAR S	28	Lecturer	Male	B.E	13	Yes	Yes	11-07-2016	---	Regular
130	SIVARAJA S	30	Assistant Professor	Male	M.E.	8	Yes	Yes	05-12-2016	---	Regular
131	SRINIVAASA KUMAR R	33	Assistant Professor	Male	M.E.	115	Yes	No	01-07-2016	03-01-2017	Regular
132	SUGANYA S	26	Assistant Professor	Female	MBA	28	Yes	No	02-03-2015	29-07-2017	Regular
133	SURYA P	25	Assistant Professor	Male	M.E.	8	Yes	Yes	01-12-2016	---	Regular
134	GOKUL	24	Assistant Professor	Male	M.E.	2	No	Yes	19-06-2017	---	Regular
135	T K P RAJAGOPAL	43	Associate Professor	Male	M.E.	225	Yes	Yes	14-06-2010	---	Regular
136	T KARTHICK	27	Assistant Professor	Male	M.E.	32	Yes	Yes	01-05-2015	---	Regular
137	T KAYALVIZHI	27	Assistant Professor	Female	M.E.	28	Yes	No	01-07-2016	29-04-2017	Regular
138	T MAHALINGAM	41	Assistant Professor	Male	M. Phil	204	Yes	No	11-06-2009	06-07-2017	Regular
139	T PRADHEEP	26	Assistant Professor	Male	M.E.	26	Yes	Yes	02-06-2015	---	Regular
140	T SAKTHI SREE	34	Associate Professor	Female	M.E.	108	Yes	Yes	24-08-2011	---	Regular
141	UTHAMARAJAN R	36	Assistant Professor	Male	MBA	8	Yes	No	02-12-2016	29-07-2017	Regular
142	V C NATHIYA	32	Assistant Professor	Female	M.Tech	78	Yes	Yes	24-06-2013	---	Regular
143	V KARPAGAM	38	Assistant Professor	Female	M. Phil	135	Yes	No	03-08-2010	04-07-2017	Regular
144	V RAJESWARI	23	Lecturer	Female	B.E	22	Yes	No	24-06-2015	29-04-2017	Regular
145	V RAMYA SREE	26	Assistant Professor	Female	M.E.	27	Yes	Yes	19-06-2015	---	Regular
146	V S ANGUAKSHMI	35	Assistant Professor	Female	Ph.D	139	Yes	Yes	23-06-2008	---	Regular
147	V SHARMILA	26	Assistant Professor	Female	M.E.	39	Yes	Yes	18-06-2014	---	Regular
148	V VIDHYAPRIYA	28	Assistant Professor	Female	M.E.	40	Yes	Yes	04-07-2014	---	Regular

Dr. R. UDAIYAKUMAR, ME., Ph.D.,
Principal
Karpagam College of Engineering
"Vi-Ion, Tiruv" Avinashi Road,
Neelambur, Coimbatore - 641 062.

149	VARALAKSHIMI A	27	Assistant Professor	Female	M.E.	8	Yes	Yes	05-12-2016	---	Regular
150	VINUTHARANI T	23	Assistant Professor	Female	MBA	8	Yes	No	05-12-2016	29-07-2017	Regular

I agree

Submit

Dr. P. UDAIYAKUMAR, ME.,Ph.D.
Principal
...neering
...Avinashi Road,
Neelambur,Coimbatore - 641 062.

Ministry of Human Resource Development

Government of India

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DCS Full Report ENGINEERING

IR17-ENGG-1-12160

KATHIR COLLEGE OF ENGINEERING

Submitted Edited

Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
Principal
Kathir College of Engineering
Neelambur, Coimbatore - 641 062.

Sanctioned (Approved) Intake

Academic Year	2015-16	2014-15	2013-14	2012-13	2011-12
UG [4 Years Program(s)]	540	540	660	540	---
PG [2 Years Program(s)]	216	216	---	---	---

Total Actual Student Strength (Program(s) Offered by Your Institution)

(All programs of all years)	No. of Male Students	No. of Female Students	Total Students	Within State (Including male & female)	Outside State (Including male & female)	Outside Country (Including male & female)	Economically Backward (Including male & female)	Socially Challenged (SC+ST+OBC Including male & female)
UG	1384	370	1754	1722	32	0	118	1636
PG	113	49	162	145	17	0	20	142

Placement & Higher Studies

UG [4 Years Program(s)]: Placement & higher studies for previous 3 years

Academic Year	No. of first year students admitted in the year	Academic Year	No. of students admitted (Lateral Entry)	Academic Year	No. of students graduating in minimum stipulated time	No. of students placed through campus placement	Median salary of placed graduates (Amount in Rs.)	No. of students selected for Higher Studies
(2010-11)	311	(2011-12)	49	(2013-14)	218	195	180000 (ONE LAKH eIGHTY THOUSAND)	7
(2011-12)	364	(2012-13)	61	(2014-15)	249	228	168000 (ONE LAKH SIXTY EIGHT THOUSAND)	21
(2012-13)	428	(2013-14)	61	(2015-16)	408	234	192000 (ONE LAKH NINTY TWO THOUSAND)	1

PG [2 Years Program(s)]: Placement & higher studies for previous 3 years

Academic Year	No. of first year students admitted in the year	Academic Year	No. of students graduating in minimum stipulated time	No. of students placed through campus placement	Median salary of placed graduates (Amount in Rs.)	No. of students selected for Higher Studies
(2012-13)	117	(2013-14)	91	47	180000(ONE LAKH eIGHTY THOUSAND)	0
(2013-14)	153	(2014-15)	106	25	168000(ONE LAKH SIXTY EIGHT THOUSAND)	0
(2014-15)	87	(2015-16)	54	10	192000(ONE LAKH NINTY TWO THOUSAND)	0

Entrepreneurship

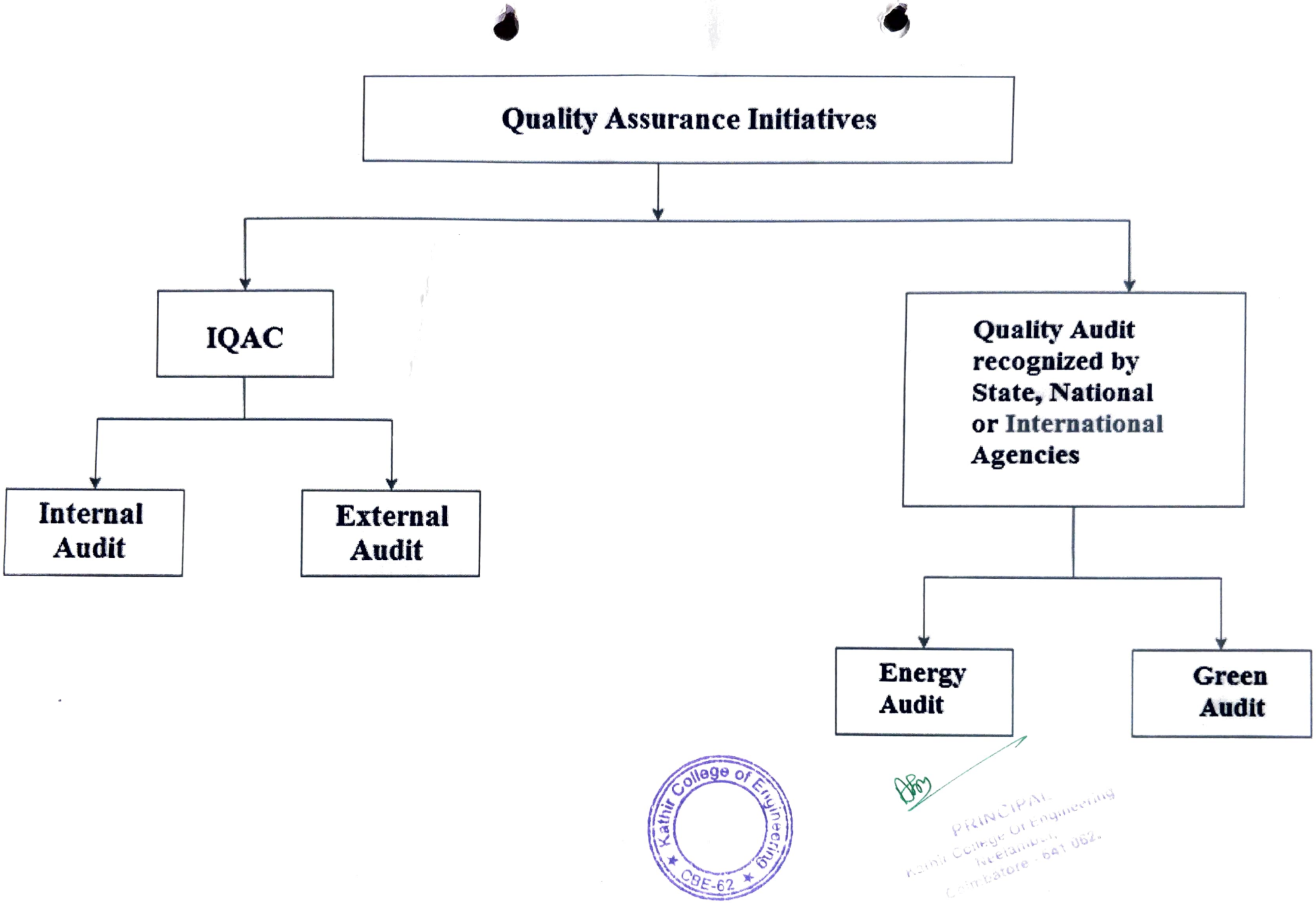
No. of sustained spin-off companies set up over the previous 5 years (2011-2016)(Companies started by the Students/Alumni/Faculty in the institutions business incubators): 2

Top University Admission Data

No. of graduating students from your institution who were admitted into Top University/Institution to pursue higher studies in the year 2015-16: 1

No. of PG students admitted into your institutions from Top Institution in the year 2015-16: 0

No. of Ph.D students admitted into your institutions from Top Institution in the year 2015-16: 0



Kathir College of Engineering
CBE-62
PRINCIPAL
Kathir College Of Engineering
Neelambur
Coimbatore - 641 062.

राष्ट्रीय मूल्यांकन एवं प्रत्यायन परिषद

विश्वविद्यालय अनुदान आयोग का स्वायत्त संस्थान

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

An Autonomous Institution of the University Grants Commission

Certificate of Accreditation

The Executive Committee of the
National Assessment and Accreditation Council
on the recommendation of the duly appointed
Peer Team is pleased to declare the
Kathir College of Engineering
Neelambur, Coimbatore, affiliated to Anna University,
Tamil Nadu as
Accredited
with CGPA of 2.59 on four point scale
at B grade
valid up to May 24, 2021

Date : May 25, 2016

Dr. R. UDAIYAKUMAR, ME., Ph.D.,
Principal
Kathir College of Engineering
"Wisdom Tree", Avinashi Road,
Neelambur, Coimbatore - 641 062.

Director

Certificate

Standard	**ISO 9001:2008**
Certificate Registr. No.	**01 100 127903**
Certificate Holder:	**Kathir College of Engineering** **"Wisdom Tree", Avinashi Road, Neelambur,** **Coimbatore - 641 062, India.**
Scope:	**Providing Educational Services Leading to Bachelor's and Master's Degree in Engineering.** **Providing Educational Services Leading to Master's Degree in Business Administration.** Proof has been furnished by means of an audit that the requirements of ISO 9001:2008 are met. The due date for all future audits is 18 - 04 (dd.mm).
Validity:	The certificate is valid from **2015-06-25 until 2018-06-24.** First Certification 2012-06-25.

KATHIR COLLEGE OF ENGINEERING CBE-62

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DAkkS
Deutsche
Akkreditierungsstelle
D-ZM-16031-04-00

2015-06-24

TÜV Rheinland Cert GmbH
Am Grauen Stein · 51105 Köln

The validity of this certificate is subject to timely completion of Surveillance audits as agreed in the Contract.
The Validity of the Certificate can be verified under www.tuv.com with the Identification No. 9105068153

CIN: U72501KA1996PTC020653

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K R ENGINEERING SERVICES, COIMBATORE

Firm Address: 67, Carmel Mount, Vivekananda Street, Nethajipuram, Neelikonnampalayam, Singanallur, Coimabtore-641033

Proprietor: Er. Syril Jenifer Paul K

Mobile No: 9952622978

Email:syrilpl@gmail.com

CERTIFICATE OF ENERGY AUDIT

This is to certify that Kathir College of Engineering, Coimbatore-641062, Coimbatore district, Tamil Nadu (India) has conducted Energy Audit in September 2021 for the year 2020-2021 for knowing present profile of electrical consumption, identification of energy conservation and saving opportunities for implementation to mitigate greenhouse gas emission for environmental protection.

Er. K. Syril Jenifer Paul, M.E.
ENERGY MANAGER (Audit)
Certificate No: 16603/20
K R Engineering Services
Coimbatore - 641033.

Er. Syril Jenifer Paul K

Certified Energy Manager

(Bureau of Energy Efficiency, New Delhi)

Certificate Reg.No:16603/20

Date: 23.09.2021

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Wisdom Tree, Neelambur, Avinashi Road, Coimbatore-62

Criterion – 6 Governance, Leadership and Management

Key Indicator- 6.5 Internal Quality Assurance System

Conferences, Seminar, Workshop on quality conducted

INDEX SHEET

S.No	Description	Link to Document
1.	Academic Year (2020-2021)	View Document
2.	Academic Year (2019-2020)	View Document
3.	Academic Year (2018-2019)	View Document
4.	Academic Year (2017-2018)	View Document
5.	Academic Year (2016-2017)	View Document

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ANNUAL REPORT

INDEX SHEET

S. No	Description	Page. No.
1	Annual Report 2020 - 2021	2 – 14
2	Annual Report 2018 - 2019	15 – 23
3	Annual Report 2017 - 2018	24 – 37
4	Annual Report 2016 - 2017	38 - 40

Kathir College of Engineering

Wisdom Tree, Avinashi Road, Neelambur, Coimbatore 641062

Annual Report

2020-2021

Kathir College of Engineering

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Wisdom Tree, Neelambur, Avinashi Road, Coimbatore-62

ANNUAL REPORT 2020-2021

Honourable Chief Guest, revered Chairman and respected Secretary and Ladies and gentlemen, annual day is an occasion to look back and rejoice at our accomplishments, cherish the fond memories, and to become a better version of ourselves in the forthcoming years.

It's been over a year since educational institutions were forced to close due to the pandemic. Everything around us has changed tremendously in recent years, and teaching and learning has become entirely virtual. I am really proud of my team and students for fast adapting to the difficult circumstances, not only to survive but also to triumph. I'm also grateful to the management for their assistance in making it feasible. I give the annual report, which details our actions and successes from July 2019 to May 2020, with great pride

New Initiatives

I place on record that this academic year is an another feather in our hat. Five start up studios listed below has been launched virtually to benefit students, faculty and other stakeholders

- Aerial Bots
- Trust Greenz
- ASIC Play
- Fresh Story
- Fresh Story

A MoU was signed with M/S Amphisoft technologies for ICT based learning and assessment environment (E-Box). All the students and the members of faculty were trained in Tech Enabled Teaching and Learning through E-Box Platform.

Dr. R. UDAIYAKUMAR, ME.,Ph.D.,
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Neelambur,Coimbatore - 641 062.

Rankings & Recognitions

Our tech enabled online platform and quality teaching have enabled us to secure top academic positions among the engineering colleges. The students of 1st year have secured a pass percentage of 97 in the end semester examination conducted by Anna University, Chennai.

Remote Teaching – Learning- Successful Planning and Execution

In this new normal, change has occurred in all aspects, and our management encouraged us to fast adapt to online teaching. We recognised the need to determine the availability of essential infrastructure among professors and students, and select a Learning Management System (LMS). We emphasised on creating appropriate e-materials and assessment strategy.

- Faculty Members equipped themselves with skills for teaching through E-Box platform quickly and effectively.
- Demo session on conducting virtual lab was arranged.
- The course materials prepared by faculty was reviewed by senior faculty and approved by Principal.

These initiatives helped us to conduct lessons and internal assessment tests for theory and practical courses effectively.

MoU's Signed

We have been signing MoUs with leading industries and institutes for job placement and higher education. This year we signed MoU with,

S No	Organisation with which MoU is signed	Name of the institution/ industry/corporate house	Year of signing MoU	Duration
1	Invenire, Lakshmipuram, Peelamedu, Coimbatore-641 004	Invenire, Lakshmipuram, Peelamedu, Coimbatore-641 004	2019	Valid until expressly terminated
2	International Society For Research And Development,	International Society For Research And Development, South Zone, Coimbatore	2016	2020

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	South Zone,Coimbatore			
3	Amphisoft Technologies Private Limited, Kattoor Rd, P N Palayam, Coimbatore- 641037	EBOX OFFICE, KATTOOR RD, P N PALAYAM, TAMIL NADU- 641037	2020	Valid until expressly terminated
4	Mech Tech Engg Centre, 2/198-C, Muthalipalayam Privu, M. G. Pudhur (PO), Coimbatore	Mech Tech Engg Centre, 2/198-C, Muthalipalayam Privu, M. G. Pudhur (PO), Coimbatore	2018	Valid until expressly terminated (3 Y)
5	Gishnu Gears, S.F No: 796/1 B, C, D, Neelambur, Off Avinashi road, Coimbatore - 641062	Gishnu Gears, S.F No: 796/1 B, C, D, Neelambur, Off Avinashi road, Coimbatore - 641062	2018	2020 (2 Y)
6	NSV Engineering Works, 29, Bakiyamalli Thottam Street, Bharathipuram, Off Avinasi Road, Coimbatore - 641103	NSV Engineering Works, 29, Bakiyamalli Thottam Street, Bharathipuram, Off Avinasi Road, Coimbatore - 641103	2019	Valid until expressly terminated (5 Y)
7	M/s Sree Saradhambal Automobiles Private Limited, Iyer Hospital premises, Trichy Road, Singanallur, Coimbatore - 641005	M/s Sree Saradhambal Automobiles Private Limited, Iyer Hospital premises, Trichy Road, Singanallur, Coimbatore - 641005	2017	2020 (3 Y)
8	SS Technovation, 7th street, GES Complex, Gandhipuram, Coimbatore - 641102	SS Technovation, 7th street, GES Complex, Gandhipuram, Coimbatore - 641102	2016	Valid until expressly terminated (5 Y)
9	MaxCADD, 409C, Dev Regnanat, 1st Floor Crosscut road, Gandhipuram, Coimbatore - 641102	MaxCADD, 409C, Dev Regnanat, 1st Floor Crosscut road, Gandhipuram, Coimbatore - 641102	2017	2020 (3 Y)
10	Golden Engineering Works, S.F.No. 124, Muthalipalayam, Coimbatore - 641407	Golden Engineering Works, S.F.No. 124, Muthalipalayam, Coimbatore - 641407	2018	Valid until expressly terminated (5 Y)

KATHIR COLLEGE OF ENGINEERING

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Research Contributions

1) Journal Publication

S.No	Title of paper	Name of the author/s	Department of the teacher	Name of journal	Year of publication	ISSN number
1.	A fan-beam stacked array X-band radar antenna	Dr. R Udaiyakumar	ECE	Springer: National Academy Science Letters	2020	ISSN 2250-1754
2.	Exploring refractive index ultra compact nano sensor using photonic crystal resonant cavities	Dr. R Udaiyakumar	ECE	American Scientific Publishers: Journal of Computational and Theoretical Nanoscience	2020	ISSN 1546-1955 (Print); ISSN 1546-1963 (Online)
3.	Combustion and emission analysis of hydrogenated waste polypropylene pyrolysis oil blended with diesel	Dr. V.L.Mangesh	Mechanical Engineering	Journal of Hazardous Materialsals(Elsevier)	2020	3043894
4.	Experimental investigation to identify the type of waste plastic pyrolysis oil suitable for conversion to diesel engine fuel	Dr. V.L.Mangesh	Mechanical Engineering	Journal of Cleaner Production (Elsevier),	2020	0959-6526
5.	Clean energy from plastic: production of hydroprocessed waste polypropylene pyrolysis oil utilizing Ni-Mo/Laponite catalyst	Dr. V.L.Mangesh	Mechanical Engineering	Energy&Fuels,	2020	0887-0624 (print) 1520-5029 (web)
6.	Green Energy: hydroprocessing waste polypropylene to produce transport fuel	Dr. V.L.Mangesh	Mechanical Engineering	Journal of Cleaner Production,	2020	0959-6526
7.	COx-free hydrogen generation via decomposition of ammonia over al, Ti and Zr–Laponite supported MoS2 catalysts	Dr. V.L.Mangesh	Mechanical Engineering	International Journal of Hydrogen Energy,	2020	0360-3199
8.	Mg/SiO2–Al2O3 supported nickel catalysts for the	Dr. V.L.Mangesh	Mechanical Engineerin	International Journal of Hydrogen	2020	ISSN 0360-3199

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	production of naphthenic hydrocarbon fuel by hydro-de-oxygenation of eugenol		g	Energy, 2020, Vol 44, 2020, 25607-25620. (Elsevier)		
9.	Platinum incorporated mordenite zeolite modified glassy carbon electrode used for selective electrochemical detection of mercury ions	Dr. V.L.Mangesh	Mechanical Engineering	Microporous and Mesoporous Materials,	2020	1387-1811
10.	Hydrogenation of dicyclopentadiene into endo-tetrahydrodicyclopentadiene over supported different metal catalysts	Dr. V.L.Mangesh	Mechanical Engineering	Microporous and Mesoporous Materal, 2020, Vol 290, 109678. (Elsevier)		1387-1811
11.	Effect of copper on NiCu bimetallic catalyst supported on SBA-16 for the catalytic hydrogenation of 5-hydroxymethylfurfural to 2, 5-dimethylfuran	Dr. V.L.Mangesh	Mechanical Engineering	Biomass and Bioenergy,	2020	9619534
12.	Isomerization of alkanes over ionic liquids supported on SBA15	Dr. V.L.Mangesh	Mechanical Engineering	Energy & Fuels	2020	0887-0624 (print) 1520-5029 (web)
13.	Liquid phase hydrodeoxygenation of furfural over laponite supported NiPMoS nanocatalyst: Effect of phosphorus addition and laponite support	Dr. V.L.Mangesh	Mechanical Engineering	Journal of Solid State Chemistry	2021	0022-4596
14.	Effects of Elasticity Number and Time Constant Ratio on Breakup and Droplet Formation of Viscoelastic Planar Liquid Sheet Co-flowing with Gases of Equal Velocities	Dr. Debayan Dasgupta	Mechanical Engineering	Journal of Fluid Mechanics	2021	0022-1120
15.	Influence of Al2O3, Sic and B4C Covalent Multilayer PVD Coating on Surface Properties	Prof. Manivannan.R	Mechanical Engineering	Materials Today proceedings	2020	2214-7853

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	of HSS Rod					
16.	Performance, Environment and Cost-benefit Analysis of a Split Air Conditioning Unit Using HC-290 and HCFC-22	Dr. A. Lalith Saravanan	Mechanical Engineering	Environmental Progress & Sustainable Energy	2021	1944-7442
17.	Experimental Investigation on the Performance of Condenser for Charge Reduction of HC-290 in a Split Air-Conditioning System	Dr. A. Lalith Saravanan	Mechanical Engineering	Heat Transfer Engineering	2020	1521-0537
18.	Investigations on effect of process parameters on GTAW of aluminium alloy welding using full factorial design technique	Mr.D.Sathishkumar	Mechanical Engineering	Materials Today proceedings (Elsevier)	2020	2214 - 7853
19.	Finite Element Analysis of Glass Fibre Reinforced-Fibre Metal Laminate Composite with Different Stacking Arrangements	Mr.D.Sathishkumar	Mechanical Engineering	SAE International	2020	0148-7191
20.	A Numerical Investigation of Variably Heated Enclosure to Enhance its Heat Transfer Rate using CFD	Mr.D.Sathishkumar	Mechanical Engineering	IOP Conference Series: Materials Science and Engineering	2020	1757-899X
21.	Fabrication of Lumbar Vertebrae by Polymer using Rapid Prototyping	Mr.D.Sathishkumar	Mechanical Engineering	Test Engineering and management	2020	0193-4120
22.	A Numerical Investigation of Automotive Lambda Sensor to Improve the Life Span of the Sensor using CFD	Mr.D.Sathishkumar	Mechanical Engineering	IOP Conference Series: Materials Science and Engineering	2020	1757-899X
23.	Upgrading the Quality of Power Using TVSS Device and PFC Converter Fed SBLDC Motor	Arun Kumar U and Dr.C.S.Ravichandran	EEE	Arabian Journal for Science and Engineering	2021	2193-567X
24.	Power Factor Correction Using Sensorless Brushless DC Motor with Bridgeless	Arunkumar, U.; Radhakrishnan, G.; Boobalan, S.; Kishore, J.	EEE	Journal of Computational and Theoretical Nanoscience	2020	1546-1955

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	Converter Topology					
25.	Upgrading the Quality of Power Using Hybrid Controller Based PFC Converter Fed SBLDC Motor Drive	Arun Kumar U and Dr.C.S.Ravichandran	EEE	Interciencia	2021	0378-1844
26.	Combined phase balancing and reconfiguration for unbalanced distribution system optimization through hybrid fuzzy MFOA	Mahendran. G and C.Govindaraju	EEE	Journal of Ambient Intelligence and Humanized Computing	2021	1868-5137
27.	Two Stage Power Conversion of Photovoltaic-Ultra capacitor Configuration for efficient Operation Two Stage Power Conversion of Photovoltaic-Ultra capacitor Configuration for efficient Operation	M.Ramkumar and Sahla E. Y.	EEE	International Journal of Research in Engineering and Science	2021	2320-9364

2) Book and Conference Publications

Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	Year of publication	ISBN/ISSN number of the proceeding
1	Mr. Nithya Sai S		Development of peanut separator and thruster	International Virtual conference on Robotics, Automation, Intelligent Systems and Energy (IVC-RAISE 2020)	International Virtual conference on Robotics, Automation, Intelligent Systems and Energy (IVC-RAISE 2020)	2020	17578981
2	Mr. U.Arun Kumar	Basic Electrical, Electronics and Instrumentation Engineering	Basic Electrical, Electronics and Instrumentation Engineering			2021	978-93-91405-92-2
3	Mr. U.Arun Kumar	Artificial Intelligence	Artificial Intelligence			2021	978-93-90614-89-9

COLLEGE OF ENGINEERING ★ CBE-641

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4	Mr. U.Arunkumar	Regenerative Braking System of Electric Vehicle Driven By BLDC Motor	Regenerative Braking System of Electric Vehicle Driven By BLDC Motor			2020	978-620-2-52457-5
5	Dr. Prabhakaran Balakrishnan		Fuel cell to reuse hydrogen by sending proton activator	Proceedings of the International Conference on Renewable Energy Utilization (ICREU-2020)		2020	
6	Dr. R Udaiyakumar	An Innovative Extended Method of Optical Pattern Recognition for Medical Images With Firm Accuracy —4f System-Based Medical Optical Pattern Recognition	Machine Vision Inspection Systems, Volume 2: Machine Learning-Based Approaches			2021	9781119786092

Training and Placement

S.No	Name of student placed and contact details	Program graduated from	Name of the employer with contact details	Pay package at appointment
1.	Ashwin S	Electronics and Communication Engineering	Infosys, Mysore, System Engineer Trainee	3.6 LPA
2.	Aathersh	Electronics and Communication Engineering	Byju's Business Development Trainee, Coimbatore	3 LPA
3.	Surender	Electronics and Communication Engineering	Incture Technologies Pvt Ltd, Bangalore	3 LPA
4.	Ramya Nandhini	Electronics and Communication Engineering	KASADARA Technology Solutions Private Limited, AGT Business Park, 25, Avinashi Road,TNHB	1.5 LPA

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Coimbatore - 641 062.

			colony, Indira Nagar, Civil Aerodrome Post,Electronics Estate, Coimbatore-641014	
5.	Divya R	Electronics and Communication Engineering	Zappyworks, Zoho office , Irugur	1.2 LPA
6.	Vasuki Devi	Computer Science and Engineering	RFPIO	4 LPA
7.	Padma priya	Computer Science and Engineering	Cybervault	2.5 LPA
8.	Ramya A	Computer Science and Engineering	Cybervault	2.5 LPA
9.	Vinothini	Computer Science and Engineering	Mobius knowledge services	2 LPA
10.	Nithya shree	Computer Science and Engineering	Acidus Tech	2.4 LPA
11.	Sunu Prasad	Computer Science and Engineering	Capgemini	3.8 LPA
12.	Karthikeyan	Computer Science and Engineering	Ceiyone	2.76 LPA
13.	Saran N B	Computer Science and Engineering	Vallift Tech	2 LPA
14.	Indhumathi R	Computer Science and Engineering	Saucelabs	3.6 LPA
15.	Thabasum	Computer Science and Engineering	Saucelabs	3.6 LPA
16.	K Selvabharathi	Mechanical Engineering	L.G.B	3.25 LPA
17.	G P Abhishek	Mechanical Engineering	L.G.B	3.25 LPA
18.	P Sivasuriya	Mechanical Engineering	L.G.B	3.25 LPA
19.	G P Abhishek	Mechanical Engineering	Linga Technologies	2.75 LPA
20.	S Parthiban	Mechanical Engineering	Linga Technologies	2.75 LPA
21.	M Pugalanthi	Mechanical Engineering	Linga Technologies	2.75 LPA
22.	J Sudharsan	Mechanical Engineering	Linga Technologies	2.75 LPA
23.	S Antony Vinod Babu	Mechanical Engineering	Linga Technologies	2.75 LPA
24.	B Raghu	Mechanical Engineering	Garuda Aerospace	1.8 LPA
25.	M Pugalanthi	Mechanical Engineering	Garuda Aerospace	1.8 LPA
26.	Conciliya	Electrical and Electronics Engineering	Foxconn Technologies	2.5 LPA

KATHIR COLLEGE OF ENGINEERING

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Events Organized

S.No	Year	Name of the workshop/ seminar	Number of Participants	Date From – To
1.	2020-2021	Recent Trends in Applied research	70	29.05.2021
2.	2020-2021	How to write good proposal for Funded Research Projects	70	30.09.2020
3.	2020-2021	Awareness Programme on Intellectual Property rights	40	17.03.2021
4.	2020-2021	One-Day workshop on Applications of Industrial Robotics	50	19.01.2021
5.	2020-2021	Workshop on "Build Your Own Business-An Entrepreneurial Review"	45	17.03.2021
6.	2020-2021	Talk on Industry relation, Research & Development	40	30.09.2020
7.	2020-2021	Seminar on "How to write Research Papers for Journal Publications"	60	06.03.2021
8.	2019-2020	"Understanding angel and venture capital funding - What is there for early stage innovator entrepreneurs (leadership talk)"	45	10.04.2020
9.	2019-2020	Workshop on redhat linux certification	50	15.10.2019
10.	2019-2020	Workshop on Hardware Product design based on Arduino and IOT	44	05.04.2019
11.	2019-2020	One day seminar on Project to product	52	17.9.2019
12.	2018-2019	Workshop on Overview of Intellectual Property rights with relevance to Indian Context	90	22.2.2019
13.	2018-2019	Internet of Things with Artificial Intelligence Seminar	65	18.10.2018
14.	2018-2019	Recent challenges in Mobile Computing-Hands on Training	42	22.02.2019
15.	2018-2019	Youth leadership program	46	08.10.2018
16.	2018-2019	Intellectual Property Rights	50	22.06.2018
17.	2017-2018	Bigdata and hadoop workshop	45	24.1.2018
18.	2017-2018	Intellectual Property Rights and Innovation	44	16.12.2017
19.	2017-2018	One Day Workshop on Research Methodology and Research Projects	50	23.10.2017
20.	2016-2017	Experts Talk on Entrepreneurship Development	52	20.01.2017
21.	2016-2017	Workshop on Importance of Patents and Copyrights in the Modern Era	48	07.09.2016
22.	2016-2017	Workshop on "Entrepreneurship and Innovation as Career Opportunity"	56	18.07.2016

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Extension/Outreach Programmes

S.No	Name of the activity	Organising unit/ agency/ collaborating agency	Name of the scheme	Year of the activity	Number of students participated in such activities
1.	Healthy Sustainable Practices for Women's Health	E-Box Amphisoft Technologies	Out reach programme	2021	50
2.	Being fit	E-Box Amphisoft Technologies	Out reach programme	2020	50
3.	Current Banking trends in Agricultural credit	E-Box Amphisoft Technologies	Out reach programme	2020	60
4.	Let's Learn French	E-Box Amphisoft Technologies	Out reach programme	2020	72
5.	Weave your story	E-Box Amphisoft Technologies	Out reach programme	2021	40
6.	Impact of Behavioral Finance on Capital Allocation	E-Box Amphisoft Technologies	Out reach programme	2020	75
7.	Thiruvalluvar Vizha	E-Box Amphisoft Technologies	Out reach programme	2021	200
8.	Badaga Carnival	E-Box Amphisoft Technologies	Out reach programme	2021	200
9.	Introduction to e-learning and Career guidance program for Government School students	E-Box Amphisoft Technologies	Out reach programme	2021	35

Capacity Building /Skill Enhancement Initiatives

S.No	Name of the capability enhancement program	Date of implementation (DD-MM-YYYY)
1.	Bootcamp on Applications of Python / Series - I and Series - II	22/02/2021 - 26/02/2021
2.	Creative Engineering Design bootcamp	09/12/2020 to 16/12/2020
3.	Bootcamp on Application of Engineering Mathematics Series - I	04/01/2021 to 09/01/2021
4.	Being Fit	27-11-2020
5.	Learn French	04-12-2020
6.	Cloud Computing	11-12-2020
7.	Writing in style	17-12-2020
8.	Impact of Behaviour finance on capital allocation	22-02-2021
9.	Semiconductor Industry technology, trends and opportunities	20-03-2021
10.	Healthy Sustainable Practices for Women's Health Webinar	20-03-2021
11.	Electrical and Electronics Engineering Department Association- GENTRANDIST	17-03-2021

KATHIR COLLEGE OF ENGINEERING

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CSR Initiatives

- **School Connect Programmes**
- **Scholarships & Stipends**

Name of the activity	Name of the Award/ recognition	Name of the Awarding government/ government recognised bodies	Year of award
FREE NEET COACHING FOR GOVT. SCHOOL STUDENTS AND TEACHERS	CERTIFICATE OF APPRECIATION	AMPHISOFT TECHNOLOGIES PRIVATE LIMITED	2020

Conclusion

In the words of Max McKeown, "Adaptability is about the powerful difference between adapting to cope and adapting to win". Although the epidemic has had a significant impact on us, it has also provided us with fresh opportunities. It has equipped us to meet and overcome difficult situations. Let us continue to take use of the opportunities that the epidemic has exposed even after we have defeated it.



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Annual Report

2018-2019

Kathir College of Engineering, Neelambur

Annual Report 2018-2019

Kathir College of Engineering is one of the reputed engineering colleges in Coimbatore. We strive hard at discharging a quality education that motivates the young minds to excel in the field of study as well as in life. The Annual day of the academic year 2018-19 encompasses the wide range of study of the activities conducted throughout the year for the benefit of the students and faculty. The department wise study may give a clear view of the programmes conducted during the period.

The CSE Department conducted various programmes for the students that includes-A One day hands on training on "digital marketing and SEO "was conducted on "29.9.2018. and.A one day workshop on "Grid and Cloud Computing Technologies" was conducted on 01.10.2018 again A one day hands on training on "Ethical Hacking" was conducted by the students Mr. S.Akhil Kumar and Mr. C.Selvakumar of III CSE on 29.12.2018 at Smart Class Rooms of KCE.The staff of the department has excelled in academic activities namely Dr.P.Banumathi. received patent rights for the topic "A Protective Mobile Case", Publication Number: 50/2018 on 14.12.2018. and Dr.P.Banumathi. Prof.T.Sakthisree and Prof. S.P.Vidhyapriya published a text book in the title " Programming in C" published by SASA Publications. The staff had also published papers and presented papers with their updated knowledge. The students of the department had participated in various competitions conducted outside and won prizes too.

The department of ECE Under the banner of E-Spirit De-corps, our ECE students association conducted 3 add-on programs for our II and III ECE students on C, C++ &Embedded programming, PCB Design and Software engineering and embedded system. The faculty of the department had participated in workshops, FDPs and hands on training programmes, Students have won laurels to the department by participating in various competitions.

The Department of EEE organized a conference on ICKCE 2018 organized workshops onMobile Phone Servicing Electrical Auto CADand PLC Programming and SCADA.The faculty have published ten papers in International Journals and presented nine papers in conferences and seminars and also they have got seven awards for their excellence in the field of teaching. The students of the department participated in workshops and hands on training programmes. That gave them the vast knowledge to their subject.

The department of Mechanical Engineering have actively involved in the academic activities in the year, the faculty had published papers in International reputed journals, and presented papers, the students have also participated in various activities especially B.Venkatramanan of III Mech have completed eight week certificate course and Gokul.R of II Mech. have taken classes to school students representing as an ambassadorof Youth Conference 2018.

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The Department of Civil Engineering had organized four seminars in the campus and one day industrial visit had also arranged for the students. The staff have published a book, attended FDPS and workshops and presented papers. The students were encouraged attending workshops to update their knowledge and they have participated too.

The Department of Sciences and Humanities have conducted a Seminar and Ten guest lectures were arranged for the students.The staff have published six papers and presented three papers and also published a book. The students were motivated to participate in various competitions and workshops and the faculty gave motivational speech to the students on various dates.

Faculty Members of KCE attended various workshops/conferences with the financial support provided by the institute.

Academic Year	Name of Faculty	Name of the Event	Amount Funded
2018-2019	Mr A. VIJAYAKUMAR	Fourth National Workshop on RESEARCH METHODOLOGY IN FLUID MECHANICS	2000
2018-2019	Mr. M. VENGATESH	Fourth National Workshop on RESEARCH METHODOLOGY IN FLUID MECHANICS	2000
2018-2019	Mr. S. BALAJI	Fourth National Workshop on RESEARCH METHODOLOGY IN FLUID MECHANICS	2000
2018-2019	Mr. M. ARUN PRAKASH	Faculty Development Program on Fluid Mechanics	2000
2018-2019	Mr. KRISHNAKUMAR	Faculty Development Program on Fluid Mechanics	2000
2018-2019	Mr. J. BALAJI PRAVEEN	Faculty Development Program on Fluid Mechanics	2000
2018-2019	Mr. T.K.P RAJAGOPAL	One Week Faculty Development Program on Outcome Based Education and NBA Process	3000
2018-2019	Mr. R. DEVENDRAN	One Week Faculty Development Program on Outcome Based Education and NBA Process	3000
2018-2019	Mrs. N. SHANTHINI	One Week Faculty Development Program on Outcome Based Education and NBA Process	3000
2018-2019	Ms. M. SASIREKHA	One Week Faculty Development Program on Outcome Based Education and NBA Process	3000
2018-2019	Mr. M.RAMKUMAR	One Week Faculty Development Program on Outcome Based Education and NBA Process	3000
2018-2019	Ms. M. SASIREKHA	One Week Faculty Development Program on Outcome Based Education and NBA Process	3000
2018-2019	Mrs. T. KAYALVIZHI	One Week Faculty Development Program on Outcome Based	3000

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		Education and NBA Process	
2018-2019	Mrs.P. DEVIPRIYA	One Week Faculty Development Program on Outcome Based Education and NBA Process	3000
2018-2019	Mrs. K. GOWTHAMI	One Week Faculty Development Program on Outcome Based Education and NBA Process	3000
2018-2019	Mr. R. MONICKA GOVINDHINI	Workshop on E-Waste and Plastic Waste Management	500
2018-2019	Mr. T. GOKUL	Workshop on E-Waste and Plastic Waste Management	500
2018-2019	Mrs S R THATCHANA DEVI	Workshop on E-Waste and Plastic Waste Management	500
2018-2019	Ms. V. VIDHYAPRIYA	Real Time Applications Using Lab View with Arduino	500
2018-2019	Ms. M. HEMAPRIYA	Real Time Applications Using Lab View with Arduino	500
2018-2019	Ms. R. SARANYA	Real Time Applications Using Lab View with Arduino	500
2018-2019	Mrs. M. GOMATHI	Real Time Applications Using Lab View with Arduino	500
2018-2019	Ms. G. NITHYA	RF System for Satellite	500
2018-2019	Mrs. G. NIVETHA	RF System for Satellite	500
2018-2019	Mr. D. RAVI	International Conference on Research Trends in Computing Technologies - ICRTCT18	1000
2018-2019	Ms. S P VIDHYA PRIYA	International Conference on Research Trends in Computing Technologies - ICRTCT18	1000
2018-2019	Dr. S. SANGEETHA	International Conference on Research Trends in Computing Technologies - ICRTCT18	1000
2018-2019	MS. J. SHIVA BHUVANESHWARI	International Conference on Research Trends in Computing Technologies - ICRTCT18	1000
2018-2019	Ms.SAKTHI SHREE	International Conference on Research Trends in Computing Technologies - ICRTCT18	1000
2018-2019	MS.V C NATHIYA	International Conference on Research Trends in Computing Technologies - ICRTCT18	1000
2018-2019	Mr.S. LOKESH	One day National Workshop on Exploring Image Processing & Its Application using Matlab	700
2018-2019	Ms. M. SANGEETHA	One day National Workshop on Exploring Image Processing & Its Application using Matlab	700
2018-2019	Mrs. M. GOMATHI	One day National Workshop on Exploring Image Processing & Its Application using Matlab	700
2018-2019	Dr. D. TAMILMANI	International Conference on Waste, Energy and Environment - ICWEE 2018	1500

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2018-2019	Mr. T. GOKUL	International Conference on Waste, Energy and Environment - ICWEE 2018	1500
2018-2019	Mr. J. SANJUNATH	International Conference on Waste, Energy and Environment - ICWEE 2018	1500
2018-2019	Ms. V. SHARMILA	Two days Workshop on Intellectual Property Rights & Art of Writing Funding Proposals & Journal Articles	750
2018-2019	Mr. S. LOKESH	Two days Workshop on Intellectual Property Rights & Art of Writing Funding Proposals & Journal Articles	750
2018-2019	Mr. A. GOGULAKRISHNAN	Two days Workshop on Intellectual Property Rights & Art of Writing Funding Proposals & Journal Articles	750
2018-2019	Mr. M. VENGATESH	Two days Workshop on Intellectual Property Rights & Art of Writing Funding Proposals & Journal Articles	750
2018-2019	Ms. P. JANANI	Two days Workshop on Intellectual Property Rights & Art of Writing Funding Proposals & Journal Articles	750
2018-2019	Mr. M. LOGESH	Two days Workshop on Intellectual Property Rights & Art of Writing Funding Proposals & Journal Articles	750
2018-2019	Ms. S. INDUMATHI	FDP on IoT Using Arduino and Raspberry Pi	1000
2018-2019	Ms. A. BERLIN	FDP on IoT Using Arduino and Raspberry Pi	1000
2018-2019	MS. R. PUNITHA GOWRI	FDP on IoT Using Arduino and Raspberry Pi	1000
2018-2019	MS. V V. RAMYASHREE	FDP on IoT Using Arduino and Raspberry Pi	1000
2018-2019	MS. V. PRASHANTHI	FDP on IoT Using Arduino and Raspberry Pi	1000
2018-2019	Mr. S. RAJ KUMAR	National Conference on Technologies for Green Mobility	1000
2018-2019	Mr. S. NAVEEN	National Conference on Technologies for Green Mobility	1000
2018-2019	Mrs. N. VIJAYALAKSHMI	National Conference on Technologies for Green Mobility	1000
2018-2019	Ms. R. SARANYA	National Conference on Technologies for Green Mobility	1000

The IQAC of Kathir College of Engineering organized professional development /administrative training programs for teaching and non teaching staff such as,

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Dates (from-to) (DD-MM-YYYY)	Title of the professional development program organised for teaching staff	Title of the administrative training program organised for non-teaching staff	No. of participants
06-08-2018	One day workshop on Google Class-Room : Creation and Management		62
11-10-2018 to 12-10-2018	Two days workshop on Robotics and Automation in Electrical Engineering		18
03-12-2018 to 05-12-2018	Three Days FDP on "Arduino and Raspberry Pi"		24
07-01-2019 to 09-01-2019	Training Programme on Stress Management and Resilience	Training Programme on Stress Management and Resilience	47
04-03-2019 to 05-03-2019	Two days FDP on Renewable Energy Sources		22
06-04-2019	One day training programme on Components of Life Skills	One day training programme on Components of Life Skills	38
11-04-2019 to 12-04-2019	Training Programme on Time & Task Management	Training Programme on Time & Task Management	28

The faculty members of KCE have also participated in FDP/STTP organized by various reputed institutions.

Name of teacher who attended	Title of the program	Duration (from – to) (DD-MM-YYYY)
MS. S. RAJAAMBIKA	Hands on Workshop in Big Data Stream Analytics	14-05-2018 to 18-05-2018
MS. V. C. NATHIYA	Hands on Workshop in Big Data Stream Analytics	14-05-2018 to 18-05-2018
Mr. T.K.P RAJAGOPAL	Hands on Workshop in Big Data Stream Analytics	14-05-2018 to 18-05-2018
Dr. S. SANGEETHA	Hands on Workshop in Big Data Stream Analytics	14-05-2018 to 18-05-2018)
Mr. P. RAVIKUMAR	Summer training program on ANSYS TOOLS	21-05-2018 to 26-05-2018
Mr. K S. RAMESH	Summer training program on ANSYS TOOLS	21-05-2018 to 26-05-2018
Mr. ELDHOSE MATHEW	Summer training program on ANSYS TOOLS	21-05-2018 to 26-05-2018
Dr. P. BANUMATHI	Faculty Development Program on Modern Pedagogy for Engineering Teachers in Making Digital India	21-05-2018 to 26-05-2018
MS. R. PUNITHA GOWRI	Faculty Development Program on Modern Pedagogy for Engineering Teachers in Making Digital India	21-05-2018 to 26-05-2018
Dr. V. GAJENDRA KUMAR	Faculty Development Program on Modern Pedagogy for Engineering Teachers in Making Digital India	21-05-2018 to 26-05-2018
Mr. S. LOKESH	Faculty Development Program on Modern Pedagogy for Engineering Teachers in Making Digital India	21-05-2018 to 26-05-2018

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DR. T. SIVAKUMAR	Faculty Development Program on Modern Pedagogy for Engineering Teachers in Making Digital India	21-05-2018 to 26-05-2018
Dr. G. DORAISWAMY	Faculty Development Program on Modern Pedagogy for Engineering Teachers in Making Digital India	21-05-2018 to 26-05-2018
Mr. T. PRADEEP	Faculty Development Program on Modern Pedagogy for Engineering Teachers in Making Digital India	21-05-2018 to 26-05-2018
Dr. D. TAMILMANI	Faculty Development Program on Modern Pedagogy for Engineering Teachers in Making Digital India	21-05-2018 to 26-05-2018
Dr. V S ANGULAKSHMI	Faculty Development Program on Modern Pedagogy for Engineering Teachers in Making Digital India	21-05-2018 to 26-05-2018
Ms. J. DIVYA LAKSHMI	Faculty Development Program on Modern Pedagogy for Engineering Teachers in Making Digital India	21-05-2018 to 26-05-2018
Mr. T. GOKUL	Short Term Training Programme on Advance Total Station and Field application	04-06-2018 to 10-06-2018
Mr. C. JAGADEESWARAN	Short Term Training Programme on Advance Total Station and Field application	04-06-2018 to 10-06-2018
Mr. J. BALAJI PRAVEEN	Short Term Training Programme on Advance Total Station and Field application	04-06-2018 to 10-06-2018
Mr. S. RAJ KUMAR	Summer Training Real Time Application Development using Labview	11-06-2018 to 16-06-2018
Mrs. N. VIJAYALAKSHMI	Summer Training Real Time Application Development using Labview	11-06-2018 to 16-06-2018
Ms. S. INDUMATHI	Summer Training Real Time Application Development using Labview	11-06-2018 to 16-06-2018
Mr. R SHUNMUGAM	Summer Training Real Time Application Development using Labview	11-06-2018 to 16-06-2018
Ms. M. HEMAPRIYA	Summer Training Real Time Application Development using Labview	11-06-2018 to 16-06-2018
Mr. M. RAMKUMAR	Summer Training Real Time Application Development using Labview	11-06-2018 to 16-06-2018
Ms. SAKTHI SHREE	Five Days Faculty Development Programme (FDP) on Machine Learning using Python	21-06-2018 to 25-06-2018
MS. S. DHIVYABHARATHI	Five Days Faculty Development Programme (FDP) on Machine Learning using Python	21-06-2018 to 25-06-2018
MS. J. SHIVA BHUVANESHWARI	Five Days Faculty Development Programme (FDP) on Machine Learning using Python	21-06-2018 to 25-06-2018
Mrs. M. GOMATHI	Five Days Faculty Development Programme (FDP) on Machine Learning using Python	21-06-2018 to 25-06-2018
Ms. A. BERLIN	Five Days Faculty Development Programme (FDP) on Machine Learning using Python	21-06-2018 to 25-06-2018
Ms. S. P. VIDHYA PRIYA	Seven Days Anna University Faculty Development Programme on Data Structures	21-06-2018 to 26-06-2018
Ms. V. SHARMILA	Seven Days Anna University Faculty Development Programme on Data Structures	21-06-2018 to 26-06-2018
MS. V. PRASHANTHI	Seven Days Anna University Faculty Development Programme on Data Structures	21-06-2018 to 26-06-2018
Mr. T. POOMPOZHILAN	CAD/CAM/CAE ON CRANK AND CAM SHAFT	25-06-2018 to 29-06-2018
Mr. A. ASHOTHAMAN	CAD/CAM/CAE ON CRANK AND CAM SHAFT	25-06-2018 to 29-06-2018
Mr. N. KARTHICK	CAD/CAM/CAE ON CRANK AND CAM SHAFT	25-06-2018 to 29-06-

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		2018
Mr. T. KARTHICK	CAD/CAM/CAE ON CRANK AND CAM SHAFT	25-06-2018 to 29-06-2018
Mr. B. PRASAD	CAD/CAM/CAE ON CRANK AND CAM SHAFT	25-06-2018 to 29-06-2018
Mr. M. MAREESWARAN	CAD/CAM/CAE ON CRANK AND CAM SHAFT	25-06-2018 to 29-06-2018
Mr. M. ARUN PRAKASH	CAD/CAM/CAE ON CRANK AND CAM SHAFT	25-06-2018 to 29-06-2018
Mr. R. DEVENDRAN	One Week Faculty Development Program on Outcome Based Education and NBA Process	09-07-2018 to 14-07-2018
Ms. M. SASIREKHA	One Week Faculty Development Program on Outcome Based Education and NBA Process	09-07-2018 to 14-07-2018
Mr. M.RAMKUMAR	One Week Faculty Development Program on Outcome Based Education and NBA Process	09-07-2018 to 14-07-2018
Mr. KRISHNAKUMAR	One Week Faculty Development Program on Outcome Based Education and NBA Process	09-07-2018 to 14-07-2018
Mrs. K. GOWTHAMI	One Week Faculty Development Program on Outcome Based Education and NBA Process	09-07-2018 to 14-07-2018
Mrs. N. SHANTHINI	One Week Faculty Development Program on Outcome Based Education and NBA Process	09-07-2018 to 14-07-2018
Mrs. T. KAYALVIZHI	One Week Faculty Development Program on Outcome Based Education and NBA Process	09-07-2018 to 14-07-2018
Mrs. P. DEVIPRIYA	One Week Faculty Development Program on Outcome Based Education and NBA Process	09-07-2018 to 14-07-2018
T.K.P RAJAGOPAL	One Week Faculty Development Program on Outcome Based Education and NBA Process	09-07-2018 to 14-07-2018
Mr. D. RAVI	7 days FDP on "Advance Research Methods and Analytics"	23-07-2018 to 29-07-2018
Mrs. N. SHANTHINI	7 days FDP on "Advance Research Methods and Analytics"	23-07-2018 to 29-07-2018
Ms. S. PRIYANGA	7 days FDP on "Advance Research Methods and Analytics"	23-07-2018 to 29-07-2018
Mr. G. PRABHAKARAN	7 days FDP on "Advance Research Methods and Analytics"	23-07-2018 to 29-07-2018
Ms. P. JANANI	7 days FDP on "Advance Research Methods and Analytics"	23-07-2018 to 29-07-2018
Mrs. A. RADHIKA	7 days FDP on "Advance Research Methods and Analytics"	23-07-2018 to 29-07-2018
Mr. M. LOGESH	7 days FDP on "Advance Research Methods and Analytics"	23-07-2018 to 29-07-2018
Mr. K G. SIVACHANDRAN	FIVE DAYS FACULTY DEVELOPMENT PROGRAMME ON REFERENCE MANAGEMENT & KNOWLEDGE ORGANIZATION FOR JOURNAL WRITING	10-12-2018 to 14-12-2018
Ms. D. MEENAKSHI	FIVE DAYS FACULTY DEVELOPMENT PROGRAMME ON REFERENCE MANAGEMENT & KNOWLEDGE ORGANIZATION FOR JOURNAL WRITING	10-12-2018 to 14-12-2018
Mr. S. SARAVANAN	FIVE DAYS FACULTY DEVELOPMENT PROGRAMME ON REFERENCE MANAGEMENT & KNOWLEDGE ORGANIZATION FOR JOURNAL WRITING	10-12-2018 to 14-12-2018

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Mr. R. MONICKA GOVINDHINI	FIVE DAYS FACULTY DEVELOPMENT PROGRAMME ON REFERENCE MANAGEMENT & KNOWLEDGE ORGANIZATION FOR JOURNAL WRITING	10-12-2018 to 14-12-2018
Mr. J. SANJUNATH	FIVE DAYS FACULTY DEVELOPMENT PROGRAMME ON REFERENCE MANAGEMENT & KNOWLEDGE ORGANIZATION FOR JOURNAL WRITING	10-12-2018 to 14-12-2018
Ms.V. VANI	FIVE DAYS FACULTY DEVELOPMENT PROGRAMME ON REFERENCE MANAGEMENT & KNOWLEDGE ORGANIZATION FOR JOURNAL WRITING	10-12-2018 to 14-12-2018
Ms. S. KALAIVANI	FIVE DAYS FACULTY DEVELOPMENT PROGRAMME ON REFERENCE MANAGEMENT & KNOWLEDGE ORGANIZATION FOR JOURNAL WRITING	10-12-2018 to 14-12-2018
Mr. A. KUPPURAJ	FDP on Research Methodology Tools & Techniques	25-03-2019 to 29-03-2019
Mr. S. NAVEEN	FDP on Research Methodology Tools & Techniques	25-03-2019 to 29-03-2019
Ms. K. KOKILAMANI	FDP on Research Methodology Tools & Techniques	25-03-2019 to 29-03-2019
Ms. S N SATHYA	FDP on Research Methodology Tools & Techniques	25-03-2019 to 29-03-2019
Dr. N. KUPPUSWAMY	FDP on Research Methodology Tools & Techniques	25-03-2019 to 29-03-2019
Mrs. K. GOWTHAMI	FDP on Research Methodology Tools & Techniques	25-03-2019 to 29-03-2019
Dr. M. VARATHARAJ	Faculty Enrichment Programme	08-04-2019 to 12-04-2019
Mr. A. RAMESHKUMAR	Faculty Enrichment Programme	08-04-2019 to 12-04-2019
Mr. S. BALAJI	Faculty Enrichment Programme	08-04-2019 to 12-04-2019
Mr. S. GANESHKUMAR	Faculty Enrichment Programme	08-04-2019 to 12-04-2019
Mrs. N. MAHESWARI	Faculty Enrichment Programme	08-04-2019 to 12-04-2019
Ms. V VIDHYAPRIYA	Faculty Enrichment Programme	08-04-2019 to 12-04-2019
Mr. C. VIGNESHWARAN	Faculty Enrichment Programme	08-04-2019 to 12-04-2019

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Annual Report

2017-2018

Kathir College of Engineering, Neclambur

Annual Report 2017-2018

Happy moments are always coming only once in a year and our Annual Day gives us a chance to recall the memories of our achievement of the entire academic year. Our institution always focuses on the holistic development of the students. The college has conducted various programmes for the students and staff to upgrade their knowledge and skills. In the academic year 2017-18, each and every department have conducted lot many programmes that helped the students to get connected with the technology and updated knowledge in the field of their study. The Department of Civil has Organized "An Awareness Program on TEKLA Software" for the welfare of career Development & Placement Activities. Next, A Guest lecture was organized by Civil Department on the title of "Earthquake Resistant Structures and "A Guest lecture was organized by Civil Department on the title "Remote sensing & GIS". A survey Training program was also conducted for the students to gain practical knowledge about Surveying Techniques. The faculty of the department have published papers in reputed journals and attended eight ·Faculty Development Programmes .In addition the faculty attended three national level Workshops and hands on training Sessions. Two faculties from the department presented their papers in the international conference held ant Malaysia. The students of the department have won laurels in sports activities too.

The Department of Computer Science have organized many programmes for the benefit of the students and staff as follows, Eight-Week Course On "College To Corporate Program [Financial Literacy]" (This Course will be offered in a blended / hybrid mode), Conducted by IIT Bombay, Mumbai From23rd Jan to 19th Feb 2018 .Eight-Week Course on "College To Corporate Program [Technical Skills]" (This Course will be offered in a blended / hybrid mode), Conducted by IIT Bombay, Mumbai From 20thFeb to 18th March 2018 one day Seminar on "Cloud And Grid Computing", organized by mazenet, Coimbatore on 19th August 2017 at Kathir College of Engineering, Coimbatore, Tamil Nadu, India. Eight-Week Course on" COLLEGE TO CORPORATE PROGRAM [SOFT SKILL]" (This Course will be offered in a blended / hybrid mode), Conducted by IIT Bombay, Mumbai From 04thSeptember to 12th November 2017 The Department of Computer Science and Engineering was organized an Eight-Week Course on "College to corporate program [workplace communication]" (This Course will be offered in a blended / hybrid mode), Conducted by IIT Bombay, Mumbai From04thSeptember to 12th November **2017 ,Guest Lectures** on **JAVA, ANDROID** was conducted by XPLORE IT CORPARATION in 2016.

A Motivational talk on YOGA & STRESS RELEASE was conducted at Kathir college of Engineering on 27th July 2016, A Training on CISCO was given to the students by Mr.Amarnath, Avathar Center Erode on 16th August 2016. To add feather to the cap of the department the faculties have published nearly 17 papers and presented, attended workshops and conferences on various topic both national and international level. They have won best faculty awards from reputed organizations.

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The department of ECE has also established its greatness through various activities. Under the banner of E-Spirit De-corps & KCARDS, our ECE students association, we had conducted 3 add-on programs for our II and III ECE students;

- Embedded Systems Design based on Microchip PIC Microcontroller
- PCB DESIGN and Fabrication using Altium Design Explorer
- National Instruments LABVIEW programming basics.

The following technical clubs of the department conducted quiz/debugging competitions among ece students and appropriately awarded.

- Embedded Club, Boolean Club, & VLSI Design club

The faculty of the department presented papers on current topics in both national and International conferences. Students of the department have also participated in many internships, workshops and conferences and also in sports.

The department of EEE have also actively participated in the academic activities as follows, Faculty members of Department of EEE has organized 2 workshops in the academic year 2017-18 and participated in 14 workshops and 8 Faculty development training program in the academic year 2017-18.They have presented and published 2 papers in international conference, workshops and received 2 awards from Society of Engineers & Technicians, Kuala Lumpur, Malaysia and Association with Society of Professional Engineers (India) in the academic year 2017-18.

Students of Department of EEE has participated in 27 workshops and 2 paper presentation in the academic year 2017-18.

During this academic year, MEXOLTZ the association of Department of Mechanical Engineering organized many technical events for the Students and Staff for both in-house and external participants. Fourteen events in total are conducted by MEXOLTZ in 2017-18. Six seminars were conducted which includes eminent speakers from ONGC, Gee DEE Welding Institute, Intek Educational Services, MaxCadd, etc. The topics covered are on upcoming technologies and relevant to the current industrial scenario from career perspective of the Students. To name few topics, "Career Opportunities in Non Destructive Testing ", "Reverse Engineering and Modeling", "Career Opportunities in CREO 3D Modeling Software", "Road Safety", etc.

A total of Four workshops were conducted by the Department of Mechanical Engineering to benefit both in-house and external students. To help students to fast track their career by reducing the time to catch up with the industrial pace, one more work shop on "Geometric Dimensioning & Tolerances" was organized for Mechanical engineering students in association with M/s Arouse Technologies.

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The students have shown lot of interest in aerodynamics as they are fond of futuristic aerodynamic cars, mobility systems, a workshop on "Aerodynamic applications using Supersonic Wind tunnel and Shock tubes" was jointly organized with Department of Aerospace Engineering, Karunya University on 16 February 2018.

In the ODD semester of the academic year 2017-18, GRYFFINDOR - **Intra** College Event was organized by KCE Chapter of ISHRAE. A **rerun** of the same event GRYFFINDOR - **Inter** College Event in Mega scale, with the technical events and contests was held on 06 October 2017 with the participation of the external students as well. Apart from existing MoUs with M/s COINDIA, M/s Gishnu Gears, M/s CaddLeader, etc. during this academic year two more MoUs with M/s MaxxCadd and M/s Arouse Technologies have been signed to benefit the students to derive advantages to the trending technologies in industries.

Our department has two bike racing teams who consistently bring laurels to the college by winning the First prizes in the national racing events conducted by the Colleges which include Bannari Amman Institute of Technology, Hindustan College of Engineering, Sri Krishna College of Engineering and Technology, etc., More than 10 times they have won in such events including Best Rider awards.

Totally Seven Research articles by the faculty from the department of mechanical engineering have been published/accepted in international journals approved by UGC and Anna University Annexure i journals. Totally 5 presentations were done by the faculty from the department of mechanical engineering during the academic year 2017-18.

During this academic year, about 50 students were placed in leading companies in and around Tamilnadu. The companies include Suzlon, Systel, TVS, Arouse Technologies, Euro Castings, WonJin Auto Components etc. with salary package at present industry standards.

The students of the department have participated in technical events in other engineering colleges and won many awards in paper presentation, symposiums and racing events etc.

The Department of Science Humanities have also put forth their effort in making the students updated with their knowledge. With the guidance of the faculties the students have participated in quiz competitions and entrepreneurship programmes and won prizes. The faculty of the department published papers in well known journals, presented papers and attended workshops. Each and every department have contributed to the well being of the student fraternity. The Management and the Principal appreciates the effort put in by the faculty for the holistic development of the college as well as the students.

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Faculty Members of KCE attended various workshops/conferences with the financial support provided by the institute.

Academic Year	Name of Faculty	Name of the Event	Amount Funded
2017-2018	Dr. KARPAGAM R	National Conference on Innovations in Science, Engineering, Technology and Management 2018	1000
2017-2018	Mr. DAVID BABU RAJ D	National Conference on Innovations in Science, Engineering, Technology and Management 2018	1000
2017-2018	Mr. DIVYA LAKSHMI J	National Conference on Innovations in Science, Engineering, Technology and Management 2018	1000
2017-2018	Dr. KANNAN NITHIN KV	National Conference on Innovations in Science, Engineering, Technology and Management 2018	1000
2017-2018	Dr. ANGULAKSHMI VS	National Conference on Innovations in Science, Engineering, Technology and Management 2018	1000
2017-2018	MS. PRIYANGA S	National Power Engineering Conference	3000
2017-2018	Mr. SIVANRAJ C	National Power Engineering Conference	3000
2017-2018	Mrs. MUTHUPRIYA G	National Power Engineering Conference	3000
2017-2018	Mr. NAGARAJAN M	National Power Engineering Conference	3000
2017-2018	Mrs. MARY SHARMILA M	National Power Engineering Conference	3000
2017-2018	Dr. KANNAN M	FDP on "Electromagnetics, Microwave, RF and Antenna Design"	6000
2017-2018	Dr. GNANA KING GR	FDP on "Electromagnetics, Microwave, RF and Antenna Design"	6000
2017-2018	Mr. RAJ KUMAR S	FDP on "Electromagnetics, Microwave, RF and Antenna Design"	6000
2017-2018	Mrs. VIJAYALAKSHMI N	FDP on "Electromagnetics, Microwave, RF and Antenna Design"	6000
2017-2018	Mrs. GOMATHI M	FDP on "Electromagnetics, Microwave, RF and Antenna Design"	6000
2017-2018	Mr. NAVEEN S	FDP on "Electromagnetics, Microwave, RF and Antenna Design"	6000

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2017-2018	Mrs. GOWRI DEVI B	One Week Faculty Development Programme (FDP)on "Design, Modeling, Simulation and Analysis of Advanced Electronic Circuits"	1500
2017-2018	Mrs. DHIVYA K.T	One Week Faculty Development Programme (FDP)on "Design, Modeling, Simulation and Analysis of Advanced Electronic Circuits"	1500
2017-2018	Mr. NAVEENRAJ M	One Week Faculty Development Programme (FDP)on "Design, Modeling, Simulation and Analysis of Advanced Electronic Circuits"	1500
2017-2018	Ms. SURYA A	One Week Faculty Development Programme (FDP)on "Design, Modeling, Simulation and Analysis of Advanced Electronic Circuits"	1500
2017-2018	Ms. JEMIMA A	One Week Faculty Development Programme (FDP)on "Design, Modeling, Simulation and Analysis of Advanced Electronic Circuits"	1500
2017-2018	Dr VAIKUNDA SELVAN D	One Week Faculty Development Programme (FDP)on "Design, Modeling, Simulation and Analysis of Advanced Electronic Circuits"	1500
2017-2018	Dr. SANGEETHA S	One Week Workshop on Practical Python	1000
2017-2018	Mrs.SAKTHI SHREE T	One Week Workshop on Practical Python	1000
2017-2018	Mr.RAVI D	One Week Workshop on Practical Python	1000
2017-2018	Ms.VIDHYA PRIYA S P	One Week Workshop on Practical Python	1000
2017-2018	Ms.PUNITHA GOWRI R	One Week Workshop on Practical Python	1000
2017-2018	Ms.RAJAAMBIKA S	One Week Workshop on Practical Python	1000
2017-2018	Ms.DHIVYABHARATHI S	One Week Workshop on Practical Python	1000
2017-2018	Mr. RAMKUMAR M	International Conference ICRAET"17, Sri Krishna College of Engineering and Technology	1000
2017-2018	Mrs. JEYA BHARATHI M	International Conference ICRAET"17, Sri Krishna College of Engineering and Technology	1000

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2017-2018	MS. PRIYANGA S	International Conference ICRAET"17, Sri Krishna College of Engineering and Technology	1000
2017-2018	Ms. SANGEETHA M	International Conference ICRAET"17, Sri Krishna College of Engineering and Technology	1000
2017-2018	Ms. SARANYA R	International Conference ICRAET"17, Sri Krishna College of Engineering and Technology	1000
2017-2018	Mrs. MOHANA PRIYA M	International Conference ICRAET"17, Sri Krishna College of Engineering and Technology	1000
2017-2018	Ms. REVATHI K	Two Days Hands-on Training session on LABVIEW	1600
2017-2018	Ms. AKILA T	Two Days Hands-on Training session on LABVIEW	1600
2017-2018	Mrs. KAVIYA A	Two Days Hands-on Training session on LABVIEW	1600
2017-2018	Mr. YASODHARAN S	Two Days Hands-on Training session on LABVIEW	1600
2017-2018	Mr. VIVEK KARTHICK P	Two Days Hands-on Training session on LABVIEW	1600
2017-2018	Ms.GAYATHRI V	Two Days Hands-on Training session on LABVIEW	1600
2017-2018	Ms. SHANTHINI N	Two Days Hands-on Training session on LABVIEW	1600
2017-2018	Ms. GOMATHI M	Two Days Hands-on Training session on LABVIEW	1600
2017-2018	Mr.ARUN PRAKASH M	FDP on Research Perspectives on Robotics and Vision	1000
2017-2018	Mr.KARTHICK N	FDP on Research Perspectives on Robotics and Vision	1000
2017-2018	Mr.KARTHICK T	FDP on Research Perspectives on Robotics and Vision	1000
2017-2018	Mr.VENGATESH M	FDP on Research Perspectives on Robotics and Vision	1000
2017-2018	Ms. JANANI P	FDP on Research Perspectives on Robotics and Vision	1000
2017-2018	Ms. PRIYANKA R	FDP on Research Perspectives on Robotics and Vision	1000
2017-2018	Mr. SANJUNATH J	FDP on Research Perspectives on Robotics and Vision	1000
2017-2018	Mr.JANARTHANAN T	FDP on Research Perspectives on Robotics and Vision	1000
2017-2018	Ms. MADHUMATHI S	FDP on Research Perspectives on Robotics and Vision	1000
2017-2018	Mrs. THATCHANA DEVI S R	National Conference on "Innovative Practices, Recyclable Materials and Energy	1250

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		Efficient Methods in Civil Engineering" (IPRME `18)	
2017-2018	Mrs. KAYALVIZHI T	National Conference on "Innovative Practices, Recyclable Materials and Energy Efficient Methods in Civil Engineering" (IPRME `18)	1250
2017-2018	Mr. BALAJI PRAVEEN J	National Conference on "Innovative Practices, Recyclable Materials and Energy Efficient Methods in Civil Engineering" (IPRME `18)	1250
2017-2018	Ms. JANANI P	National Conference on "Innovative Practices, Recyclable Materials and Energy Efficient Methods in Civil Engineering" (IPRME `18)	1250
2017-2018	Ms. PRIYANKA R	National Conference on "Innovative Practices, Recyclable Materials and Energy Efficient Methods in Civil Engineering" (IPRME `18)	1250
2017-2018	Mr. SANJUNATH J	National Conference on "Innovative Practices, Recyclable Materials and Energy Efficient Methods in Civil Engineering" (IPRME `18)	1250
2017-2018	Mr.JANARTHANAN T	National Conference on "Innovative Practices, Recyclable Materials and Energy Efficient Methods in Civil Engineering" (IPRME `18)	1250
2017-2018	Mr. FANEY J	National Conference on "Innovative Practices, Recyclable Materials and Energy Efficient Methods in Civil Engineering" (IPRME `18)	1250
2017-2018	Mrs.KALPANA S	National Conference NCETC 2018	750
2017-2018	Mrs.KALAIVANI S	National Conference NCETC 2018	750
2017-2018	Mr. RAMKUMAR M	National Conference NCETC 2018	750
2017-2018	Mr. LOKESH S	National Conference NCETC 2018	750
2017-2018	Mrs. NITHYA G	National Conference NCETC 2018	750
2017-2018	Mrs. NIVETHA G	National Conference NCETC 2018	750
2017-2018	Ms. SANGEETHA M	National Conference NCETC 2018	750
2017-2018	Ms. SARANYA R	National Conference NCETC 2018	750

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2017-2018	Mr.ARUN PRANESH	FDP on Analysis of Materials and Engineering structures	3000
2017-2018	Mr.ELDHOSE MATHEW	FDP on Analysis of Materials and Engineering structures	3000
2017-2018	Mr.PRADEEP T	FDP on Analysis of Materials and Engineering structures	3000
2017-2018	Mr.KRISHNAKUMAR E	FDP on Analysis of Materials and Engineering structures	3000
2017-2018	Mr.KARTHIKEYAN .T	FDP on Analysis of Materials and Engineering structures	3000
2017-2018	Mr.PRASAD B	FDP on Analysis of Materials and Engineering structures	3000
2017-2018	Mr. MAREESWARAN M	FDP on Analysis of Materials and Engineering structures	3000
2017-2018	Mr.GOGULAKRISHNAN A	FDP on Analysis of Materials and Engineering structures	3000
2017-2018	Ms.PUNITHA GOWRI R	2nd National Conference on Data Science and Intelligent Information Technology NCDSIIT 18	1000
2017-2018	Ms.RAJAAMBIKA S	2nd National Conference on Data Science and Intelligent Information Technology NCDSIIT 18	1000
2017-2018	Ms.DHIVYABHARATHI S	2nd National Conference on Data Science and Intelligent Information Technology NCDSIIT 18	1000
2017-2018	Ms.RAMYASHREE V.V	2nd National Conference on Data Science and Intelligent Information Technology NCDSIIT 18	1000
2017-2018	Ms.NATHIYA V C	2nd National Conference on Data Science and Intelligent Information Technology NCDSIIT 18	1000
2017-2018	Ms.SHIVA BHUVANESHWARI J	2nd National Conference on Data Science and Intelligent Information Technology NCDSIIT 18	1000
2017-2018	Ms. SHARMILA V	2nd National Conference on Data Science and Intelligent Information Technology NCDSIIT 18	1000
2017-2018	Mr.ARUN PRAKASH M	ArduBotics Robotics Workshop	1350
2017-2018	Mr.KARTHICK N	ArduBotics Robotics Workshop	1350
2017-2018	Mr.KARTHICK T	ArduBotics Robotics Workshop	1350
2017-2018	Mr.VENGATESH M	ArduBotics Robotics Workshop	1350
2017-2018	Mr.ASHOTHAMAN A	ArduBotics Robotics Workshop	1350
2017-2018	Mr.RAMESHKUMAR A	ArduBotics Robotics Workshop	1350
2017-2018	Mr.PRABHAKARAN G	ArduBotics Robotics Workshop	1350

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The IQAC of Kathir College of Engineering organized professional development /administrative training programs for teaching and non teaching staff such as,

Dates (from-to) (DD-MM-YYYY)	Title of the professional development program organised for teaching staff	Title of the administrative training program organised for non-teaching staff	No. of participants
09-07-2017 to 10-07-2017	FDP on flipped learning & Creation of Micro learning resources		62
10-07-2017		Training Programme on Role of Supporting and Administrative Faculty	10
31-07-2017	Workshop on Strategies for Innovative and Quality Research		72
07-09-2017	One day FDP on How to write literature.review in research		55
07-09-2017 to 09-09-2017	Workshop on Importance of Pedagogy methods for innovation in teaching		65
09-10-2017 to 10-10-2017	Two day FDP on Academic Innovations and creativity		47
23-11-2017	Sensitization of Moral Values and Ethics		22
20-12-2017	Fdp on Enhancing Effective Communication Skills in English		34
21-12-2017	One day FDP on ICT Tools for Effective Teaching Learning		56
18-01-2018 to 20-012018	Two day Workshop on Importance of Pedagogy methods for innovation in teaching		74
05-02-2018		Training Programme on MS OFFICE	10
12-03-2018 to 13-03-2018		Workshop on Best Practices in Office Administration	10

The faculty members of KCE have also participated in FDP/STTP organized by various reputed institutions.

Name of teacher who attended	Title of the program	Duration (from – to) (DD-MM-YYYY)
Dr. SANGEETHA S	FDP on Deep Learning in Big Data Analytics	06-11-2017 to 17-11-2017
Mrs.SAKTHI SHREE T	FDP on Deep Learning in Big Data Analytics	06-11-2017 to 17-11-2017
Dr.SURESH A R	FDP on Industrial hydraulics and pneumatics	29-10-2017 to 11-11-2017
Dr.ANANTHA KRISHNAN D	FDP on Industrial hydraulics and pneumatics	29-10-2017 to 11-11-2017
Mrs. MUTHUPRIYA G	FDP on VISION BASED ROBOT NAVIGATION AND MANIPULATION	22-01-2018 to 28-01-2018

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Mr. NAGARAJAN M	FDP on VISION BASED ROBOT NAVIGATION AND MANIPULATION	22-01-2018 to 28-01-2018
Mrs. MARY SHARMILA M	FDP on VISION BASED ROBOT NAVIGATION AND MANIPULATION	22-01-2018 to 28-01-2018
Dr. KANNAN M	FDP on Recent Trends in Embedded Systems and Internet of Things	23-10-2017 to 05-11-2017
Dr. GNANA KING GR	FDP on Recent Trends in Embedded Systems and Internet of Things	23-10-2017 to 05-11-2017
Mr. RAJ KUMAR S	FDP on Recent Trends in Embedded Systems and Internet of Things	23-10-2017 to 05-11-2017
Mrs. VIJAYALAKSHMI N	FDP on Recent Trends in Embedded Systems and Internet of Things	23-10-2017 to 05-11-2017
Mr.DEEPAN RAJ K	FACULTY DEVELOPMENT PROGRAM - RESEARCH METHODOLOGY	04-12-2017 to 08-12-2017
Mr.KARTHIKEYAN M	FACULTY DEVELOPMENT PROGRAM - RESEARCH METHODOLOGY	04-12-2017 to 08-12-2017
Mr. GOWTHAM S	FACULTY DEVELOPMENT PROGRAM - RESEARCH METHODOLOGY	04-12-2017 to 08-12-2017
Dr VAIKUNDA SELVAN D	FACULTY DEVELOPMENT PROGRAM - RESEARCH METHODOLOGY	04-12-2017 to 08-12-2017
DR. SIVAKUMAR T	FACULTY DEVELOPMENT PROGRAM - RESEARCH METHODOLOGY	04-12-2017 to 08-12-2017
Mr.ARUN M	FACULTY DEVELOPMENT PROGRAM - RESEARCH METHODOLOGY	04-12-2017 to 08-12-2017
Mr. BALAJI PRAVEEN J	FDP on Environmental and Sustainability	20-11-2017 to 26-11-2017
Ms. JANANI P	FDP on Environmental and Sustainability	20-11-2017 to 26-11-2017
Ms. PRIYANKA R	FDP on Environmental and Sustainability	20-11-2017 to 26-11-2017
Dr.DORAISWAMY G	FDP on Analysis of Materials and Engineering structures	04-12-2017 to 08-12-2017
Mr. RAVIKUMAR P	FDP on Analysis of Materials and Engineering structures	04-12-2017 to 08-12-2017
Mr.PRATHAP P	FDP on Analysis of Materials and Engineering structures	04-12-2017 to 08-12-2017
Mr.VIJAYAKUMAR A	FDP on Analysis of Materials and Engineering structures	04-12-2017 to 08-12-2017
Mr.GOGULAKRISHNAN A	FDP on potential and challenges for integrating renewable energy for smart city implementation	04-12-2017 to 15-12-2017
Mr.PRABHU P	FDP on potential and challenges for integrating renewable energy for smart city implementation	04-12-2017 to 15-12-2017
Mr.ARUN PRAKASH M	FDP on potential and challenges for integrating renewable energy for smart city implementation	04-12-2017 to 15-12-2017
Mr.KARTHICK N	FDP on IOT Applications in Green Energy Systems	27-04-2018 to 02-05-2018
Mr.KARTHICK T	FDP on IOT Applications in Green Energy Systems	27-04-2018 to 02-05-2018
Mr.VENGATESH M	FDP on IOT Applications in Green Energy Systems	27-04-2018 to 02-05-2018
Mr.ASHOTHAMAN A	FDP on IOT Applications in Green Energy Systems	27-04-2018 to 02-05-2018
Mr.RAVI D	FDP on Hands on Session for Teaching Faculty on Using Microsoft Office 365 for Automation	12-08-2017 to 17-08-2017
Ms.VIDHYA PRIYA S P	FDP on Hands on Session for Teaching Faculty on Using Microsoft Office 365 for Automation	12-08-2017 to 17-08-2017
Ms.PUNITHA GOWRI R	FDP on Hands on Session for Teaching Faculty on	12-08-2017 to 17-08-2017

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	Using Microsoft Office 365 for Automation	
Ms.RAJAAMBIKA S	FDP on Hands on Session for Teaching Faculty on Using Microsoft Office 365 for Automation	12-08-2017 to 17-08-2017
Mr. VINUTHARANI T	FDP on Faculty Enhancement Training Programme on Teaching Methodology	25-05-2018 to 31-05-2018
Mrs. SANGEETHA D	FDP on Faculty Enhancement Training Programme on Teaching Methodology	25-05-2018 to 31-05-2018
Mr. SANJUNATH J	FDP on Faculty Enhancement Training Programme on Teaching Methodology	25-05-2018 to 31-05-2018
Mr.JANARTHANAN T	FDP on Faculty Enhancement Training Programme on Teaching Methodology	25-05-2018 to 31-05-2018
Mr. FANEY J	FDP on Faculty Enhancement Training Programme on Teaching Methodology	25-05-2018 to 31-05-2018
Mr.KARTHIKEYAN C	FDP on Faculty Enhancement Training Programme on Teaching Methodology	25-05-2018 to 31-05-2018
Mr.RAMESHKUMAR A	FDTP on Computational Energy Management in Smart Grid	20-11-2017 to 03-12-2017
Mr.PRABHAKARAN G	FDTP on Computational Energy Management in Smart Grid	20-11-2017 to 03-12-2017
Mr.RAMESH K S	FDTP on Computational Energy Management in Smart Grid	20-11-2017 to 03-12-2017
Mr.BALAJI S	FDP on Finite Element Analysis	23-11-2017 to 29-11-2017
Mr.SIVACHANDRAN K G	FDP on Finite Element Analysis	23-11-2017 to 29-11-2017
Mr.ARUN PRANESH	FDP on Finite Element Analysis	23-11-2017 to 29-11-2017
Mr.ELDHOSE MATHEW	FDP on Finite Element Analysis	23-11-2017 to 29-11-2017
Mr.PRADEEP T	FDP on "Computational fluid dynamics in Engineering and design	04-12-2017 to 17-12-2017
Mr.KRISHNAKUMAR E	FDP on "Computational fluid dynamics in Engineering and design	04-12-2017 to 17-12-2017
Mr.KARTHIKEYAN .T	FDP on Engineering Materials and Metallurgy	27-11-2017 to 03-12-2017
Mr.PRASAD B	FDP on Engineering Materials and Metallurgy	27-11-2017 to 03-12-2017
Mrs. VARALAKSHIMI A	FDP on Technical Session on Cloud Computing and Virtual Computing	26-03-2018 to 31-03-2018
Mr. RAJAGOPAL T.K.P	FDP on Technical Session on Cloud Computing and Virtual Computing	26-03-2018 to 31-03-2018
Mr. MANOJ KUMAR R	FDP on Technical Session on Cloud Computing and Virtual Computing	26-03-2018 to 31-03-2018
Mrs.SATHYA S N	FDP on Technical Session on Cloud Computing and Virtual Computing	26-03-2018 to 31-03-2018
Mrs. RADHIKA A	Faculty Development Programme on "Stem Cell Characterization & Advances in its Research and Applications	27-11-2017 to 08-12-2017
Mrs. DEVIPRIYA P	Faculty Development Programme on "Stem Cell Characterization & Advances in its Research and Applications	27-11-2017 to 08-12-2017
Ms. MALATHI K	Faculty Development Programme on "Stem Cell Characterization & Advances in its Research and Applications	27-11-2017 to 08-12-2017
Ms. KOKILAMANI K	Faculty Development Programme on "Stem Cell Characterization & Advances in its Research and Applications	27-11-2017 to 08-12-2017

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Mrs. MONISHA S C	Faculty Development Programme on Entrepreneurship	13-03-2018 to 25-03-2018
Mrs. BHUVANESWARI M	Faculty Development Programme on Entrepreneurship	13-03-2018 to 25-03-2018
Mr.PRAKASH P	Faculty Development Programme on Entrepreneurship	13-03-2018 to 25-03-2018
Dr. KARPAGAM R	Faculty Development Programme on Entrepreneurship	13-03-2018 to 25-03-2018
Mr. DAVID BABU RAJ D	Faculty Development Programme on Entrepreneurship	13-03-2018 to 25-03-2018
Mr. DIVYA LAKSHMI J	Faculty Development Programme on Entrepreneurship	13-03-2018 to 25-03-2018
Ms. SURYA A	Faculty Development Programme on Entrepreneurship	13-03-2018 to 25-03-2018
Mr.SHANMUGAM R	Faculty Development Training Programme on EE6504 ELECTRICAL MACHINES-II 2018	23-05-2018 to 29-05-2018
Mrs.SASIREKHA M	Faculty Development Training Programme on EE6504 ELECTRICAL MACHINES-II 2018	23-05-2018 to 29-05-2018
Mrs.VIDHYAPRIYA V	Faculty Development Training Programme on EE6504 ELECTRICAL MACHINES-II 2018	23-05-2018 to 29-05-2018
Mr. VIVEK KARTHICK P	Faculty Development Training Programme on Design of Transmission System	20-11-2017 to 26-11-2017
Ms. GAYATHIRI V	Faculty Development Training Programme on Design of Transmission System	20-11-2017 to 26-11-2017
Mr. MUTHU KUMAR A	Faculty Development Training Programme on Design of Transmission System	20-11-2017 to 26-11-2017
Ms.SHIVA BHUVANESHWARI J	FDP on Recent Trends in Big Data analytics and its Research Issues	20-11-2017 to 26-11-2017
Ms. SHARMILA V	FDP on Recent Trends in Big Data analytics and its Research Issues	20-11-2017 to 26-11-2017
Ms. KARTHIKA K	FDP on Recent Trends in Big Data analytics and its Research Issues	20-11-2017 to 26-11-2017
Mrs. GOWRI DEVI B	Faculty Development Programme on Human Values and Professional Ethics	30-10-2017 to 12-11-2017
Mrs. DHIVYA K.T	Faculty Development Programme on Human Values and Professional Ethics	30-10-2017 to 12-11-2017
Mr. NAVEENRAJ M	Faculty Development Programme on Human Values and Professional Ethics	30-10-2017 to 12-11-2017
Mr.PRABHU K	Faculty Development Programme on Human Values and Professional Ethics	30-10-2017 to 12-11-2017
Mr.SHAKTHIVEL M R	Faculty Development Programme on Human Values and Professional Ethics	30-10-2017 to 12-11-2017
Mr. ARUN D	Faculty Development Programme on Human Values and Professional Ethics	30-10-2017 to 12-11-2017
Ms.DHIVYABHARATHI S	Faculty Development Training Programme on CS6601- Distributed Systems	29-11-2017 to 05-12-2017
Ms.RAMYASHREE V.V	Faculty Development Training Programme on CS6601- Distributed Systems	29-11-2017 to 05-12-2017
Ms.NATHIYA V C	Faculty Development Training Programme on CS6601- Distributed Systems	29-11-2017 to 05-12-2017
Mr. KUMAR K	Faculty Development Programme on Advances in Medical Signal and Image Processing	07-05-2018 to 11-05-2018

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Mr. SATHISH P	Faculty Development Programme on Advances in Medical Signal and Image Processing	07-05-2018 to 11-05-2018
Mr. ARUNKUMAR M	Faculty Development Programme on Advances in Medical Signal and Image Processing	07-05-2018 to 11-05-2018
Mrs. GOMATHI M	FDP on Signal Processing for Wireless Communication	12-06-2017 to 17-06-2017
Mr. NAVEEN S	FDP on Signal Processing for Wireless Communication	12-06-2017 to 17-06-2017
Mr. DEVENDRAN R	FDP on Signal Processing for Wireless Communication	12-06-2017 to 17-06-2017
Mrs. SHANTHINI N	FDP on Signal Processing for Wireless Communication	12-06-2017 to 17-06-2017
Mrs. POONGOTHAI R	FDP on Learning Hub and Course Management	22-01-2018 to 26-01-2018
Mr. MAHALINGAM T	FDP on Learning Hub and Course Management	22-01-2018 to 26-01-2018
Mrs. KAYALVIZHI T	FDP on Learning Hub and Course Management	22-01-2018 to 26-01-2018
Mrs. GOWTHAMI K	Faculty Development Programme on Data Science and Its Research Challenges	06-11-2017 to 19-11-2017
Mr. SATHEESH KUMAR K	Faculty Development Programme on Data Science and Its Research Challenges	06-11-2017 to 19-11-2017
Mr. VIGNESHWARAN C	Faculty Development Programme on Data Science and Its Research Challenges	06-11-2017 to 19-11-2017
Mr. GOVINDASAMY D	Faculty Development Programme on Data Science and Its Research Challenges	06-11-2017 to 19-11-2017

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Kathir College of Engineering

Wisdom Tree, Avinashi Road, Neelambur, Coimbatore 641062

Annual Report

2016-2017

Kathir College of Engineering

Annual Report - 2016 – 2017

Annual Day is one of the most important day in which we recollect the memories the past year with intense proud. The academic year 2016-17 is one of the most cherishing years which we had lot of activities to mould our knowledge and skills. Each and every department of the college have contributed much to the development of the college.

The Department of Civil have organised workshops on **Public Transportation** & **GPS** for the students. They have conducted guest lecturers for the students on **Mechanics of fluid, Mechanics of Solids, Survey and Pre fabricated Structure.** The students of the department participated in many competitions including Yoga and won prizes.

The Department of CSE organised research seminars on recent technologies. They also organised seminar on Artificial Intelligence, Internet Of Things. The faculty and students benefited from the research seminars.

The Department of EEE had organised National level seminars. The department had also arranged for the FDP for faculties. The students attended programmes outside and participated in competitions.

The department of ECE has organised National level Seminars on latest topics. Two guest Lectures were arranged. The students of the department attended workshops and symposiums in various colleges throughout the year.

The faculty of Science and Humanities have published and presented papers in reputed journals and conferences, they have attended FDPs.

The department of Mechanical Engineering have organised National level seminars. The department had also conducted workshops**.** The students of the department participated in various competition in other colleges.

During the academic year the department of MBA has organised many activities for the benefit of the students. A national level workshop was organised. Youth day was celebrated.

The departments of Kathir College of Engineering jointly organised an International conference named ICKCE. The faculty members and students benefited from the interactions

from the technical experts during the conference. The faculty members of Kathir College of Engineering published 19 papers in this academic year.

The NSS unit of Kathir College of Engineering organised various outreach programmes. Health Awareness, Road Safety, Swatch Bharath awareness programmes were conducted. They also organise eye camps during this academic year.

Our students actively participated in sports. Four students participated in National Level Karate Tournament held in the campus. The women's Volley Ball team of our college participated in the Intercollegiate Competition held in the campus.

The Training and Placement office of Kathir College of Engineering organised various placement drives during which Core and IT companies visited the campus. A total of 253 students were placed during this academic year.