

# KINGS

## **COLLEGE OF ENGINEERING**

Punalkulam, Gandarvakottai Taluk Pudukkottai Dist – 613 303 www.kingsindia.net, (Approved by AICTE, Affiliated to Anna University)



# The Annual Quality Assurance Report (AQAR) of the IQAC 2016-2017

Submitted To

# NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL (NAAC) BANGALORE

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Part – A							
I. Details of the Institution							
1.1 Name of the Institution	KINGS COLLEGE OF ENGINEERING						
1.2 Address Line 1	Punalkulam						
Address Line 2	Gandarvakottai Taluk						
City/Town	Pudukkottai District						
State	Tamil Nadu						
Pin Code	613303						
Institution e-mail address	principal@kingsindia.net						
Contact Nos.	9442590002						
Name of the Head of the Institution	Dr.J.Arputha Vijaya Selvi						
Tel. No. with STD Code:	04362-282474						
Mobile:	9442590002						
Name of the IQAC Co-ordinator	Ms.K.Abhirami						
Mobile	9841013972						
IQAC e-mail address:	iqac@kingsindia.net						
1.3 NAAC Track ID	TNCOGN26260						
1.4 NAAC Executive Committee No. & Date	F.19.26/EC(SC-17)/DO/2016/100.1 & 19 <sup>th</sup> Sep 2016						
1.5 Website address:	www.kingsindia.net						

Web-link of the AQAR:

www.kingsindia.net/KCE-AQAR-1617.pdf

22.01.2015

2016-17

#### 1.6 Accreditation Details

Sl. No.	Cuala	Grade	CCDA	Year of	Validity
SI. INU.	Cycle	Glade	CGPA	Accreditation	Period
1	1 <sup>st</sup> Cycle	В	2.27	2016	2021

#### 1.7 Date of Establishment of IQAC :DD/MM/YYYY

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

1.9 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC : EC Date 19.9.2016 (Accreditation during Aug'16).

#### 1.10 Institutional Status University Deemed Private State Central v Affiliated College Yes No Constituent College Yes No Autonomous college of UGC Yes No Regulatory Agency approved Institution Yes No Type of Institution Co-education Men Women ٧ Urban Rural Tribal UGC 12B UGC 2(f) **Financial Status** Grant-in-aid Grant-in-aid + Self Financing Totally Self-financing ٧ 1.11 Type of Faculty/Programme PEI (Phys Edu) Law Science Commerce Arts TEI (Edu) Health Science Management Engineering Anna University, Chennai 1.12 Name of the Affiliating University (for the Colleges) 4

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

Nil

# 2. IQAC Composition and Activities

2.1 No. of Topoham	
2.1 No. of Teachers	6
2.2 No. of Administrative/Technical staff	2
2.3 No. of students	2
2.4 No. of Management representatives	
2.5 No. of Alumni	2
2. 6 No. of any other stakeholder and	
Community representatives	2
2.7 No. of Employers/ Industrialists	1
	1
2.8 No. of other External Experts	
2.9 Total No. of members	17
2.10 No. of IQAC meetings held	8
2.11 No. of meetings with various stakeholders:	No. 14 Faculty 6
Non-Teaching Staff /Students 2	Alumni 1 Others 5
2.12 Has IQAC received any funding from UGC d	uring the year? No
2.13 Seminars and Conferences (only quality relate	ed)
(i) No. of Seminars/Conferences/ Workshops	/Symposia organized by the IQAC
Total Nos. 2 International	National State Institution Level 2
(ii) Themes Outcome Based Education	
Interactive Teaching Learni	ng Practices
	5

2.14 Significant Activities and contributions made by IQAC

- Review , Analysis and report generation
  - Internal assessment performance
  - Department Review Meeting
  - Faculty advisor review meet & Student support identification
  - Faculty professional progression
  - My Credit course execution
  - In\_house training & Faculty visit to factory schemes
  - Student Enrichment initiatives
  - Student Profile Analysis, Entry Level Analysis
  - Department progression Best Department award (criteriawise score and performance)
- **Institute level committees** acted upon the action plan ensuring respective activities are executed in a better manner. Appropriate review sessions were made and members were motivated.
- **Organized Spoken Tutorial Workshop series** in Association with IIT, Bombay (16 workshops) on various FOSS.
- Initiative towards **standardization of Internal Assessment Question paper** and policies towards strengthening internal examination was made.
- Initiative towards **strengthening of stakeholder communication** resulted in regular communication with renowned Alumni, External Experts.
- Organized motivational Session on "Improving Communication skills" for all II Year students
- **Repository of e-books** covering curriculum was made for reference. Library user notification posting was introduced.
- Supported **Institute Level Coordinators review meet** (conducted once in a semester ) reviewing records and activities.
- Coordinated **KCE Best Practices video** preparation briefing the highlights
- Participated in **Best Practices in Higher Education TN 2017 organized by ICTACT** and Institutional practice In-House Training & Faculty-Visit-to-Factory scheme on the theme "Industry-Institute Collaboration" was selected among 50 out of 450 nominations from all over Tamilnadu.
- Academic Audits were conducted periodically reviewing student progression in internal assessments, maintenance of academic records
- 2.15 Plan of Action by IQAC/Outcome : Annexure-I

2.15 Whether the AQAR was placed in statutory body	Yes	۷	
Management V Syndicate	Any other body		

Provide the details of the action taken : AQAR was approved by Management.

# Part – B Criterion – I

# I. Curricular Aspects

## 1.1 Details about Academic Programmes

Level of the	Number of	Number of	Number of	Number of value
Programme	existing	programmes added	self-financing	added / Career
	Programmes	during the year	programmes	Oriented
				programmes
PhD	3			
PG	5			
UG	5			2
PG Diploma				
Advanced Diploma				
Diploma				
Certificate				
Others				
Total	13			2
Interdisciplinary				
Innovative				

# 1.2 (i) Flexibility of the Curriculum: Elective option (ii) Pattern of programmes:

Pattern	Number of programmes
Semester	10
Trimester	-
Annual	-

1.3 Feedback from stakeholders* (On all aspects)	Alumni	V	Parents	٧	Employers	٧	Students	٧	
Mode of feedback :	Online	٧	Manual	٧	Co-operating	g scho	ools (for Pl	EI)	

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

Not Applicable

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

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	Criterion – II											
2. Teaching, Learr	ning a	nd Ev	valua	tion								
2.1 Total No. of permanent faculty	Total	Asst. Professors			Associate Professors			Pro	Professors		Others	
	146	13	1		10			05		-	-	
2.2 No. of permanent faculty with Ph.D. 09												
2.3 No. of Faculty Positions Recruited (R) and Vacant (V)					ssociate Profes		ssors Others		Total			
during the year	(•)	R	V	R	V	R	V	R	V	R	V	
		28	-	-	-	-	-	-	-	28	-	
<ul> <li>2.4 No. of Guest and Visiting faculty and Temporary faculty - 2 -</li> <li>2.5 Faculty participation in conferences and symposia:</li> </ul> No. of Faculty International National level State level												

No. of Faculty	level	National level	State level
Attended	01	24	-
Presented	18	112	-
Resource	01	05	-
Persons			

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

- **Regular curriculum enrichment activities** strengthening skill enhancement of students
- **E-Learning resources** such as NPTEL, Video Sessions of eminent academicians, Course materials by faculty incharges are made easily accessible by students.
- **Content Beyond Syllabus** component is mandated for all courses covering Case Study / Application / Real-Time Illustrations etc.
- In-House Training, Faculty-visit-to-Factory schemes impart industrial exposure to Students and Faculty members.
- Effective system of **remedial classes** are conducted to support slow learners progression in studies.
- Final year **project works** are demonstrated for Junior classes promoting peer learning.

• **Interactive Teaching-Learning practices** are adopted by faculty members during Lecture sessions motivating active student participation.

134

85

- 2.7 Total No. of actual teaching days during this academic year
- 2.8 Examination/ Evaluation Reforms initiated by the Institution
  - Assessment schedule was revised to 1 exam per day
  - Question papers are scrutinized by the Pedagogy team ensuring standardization.
- 2.9 No. of faculty members involved in curriculum restructuring/revision/syllabus development as member of Board of Study/Faculty/Curriculum Development workshop 02
- 2.10 Average percentage of attendance of students
- 2.11 Course/Programmewise distribution of pass percentage :

Title of the Programme	Total no. of	Division				
	students appeared	Distinction %	I %	II %	III %	Pass %
B.E. Civil Engineering	69	1.9	64.7	33.4	-	73.91
B.E. Computer Science and Engineering	62	-	83.6	16.3	-	79
B.E. Electronics and Communication Engineering	122	1.04	78.12	20.83	-	78.68
B.E. Electrical and Electronics Engineering	48	-	70.8	29.1	-	50
B.E. Mechanical Engineering	138	-	73.5	26.5	-	84.8

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

- ICT enabled teaching-learning practices are adopted to instil enhanced learning.
- Academic Audits are conducted periodically as per schedule to monitor Teaching-Learning examining Syllabus completion & effectiveness, Internal assessment performance of students
- Academic committees are functioning to ensure Teaching-Learning activities are carried out as per the guidelines set.
- Feedback from students examining Teaching-Learning strategies, impact created is made as per schedule. Appropriate follow-up actions are made to meet requirements.

- Report analysing the teaching-learning activities is made to identify progression and continuous tracking.
- 2.13 Initiatives undertaken towards faculty development

Faculty / Staff Development Programmes	Number of faculty benefitted
Refresher courses	-
UGC – Faculty Improvement Programme	-
HRD programmes	-
Orientation programmes	1
Faculty exchange programme	-
Staff training conducted by the university	-
Staff training conducted by other institutions	15
Summer / Winter schools, Workshops, etc.	Workshop-45
Others	FDP-30
	Internal Seminars – 02
	STTP-12
	SDP-03
	Seminar-08
	ISTE staff seminar - 16

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	23	-	-	-
Technical Staff	53	-	-	-

# Criterion – III

## 3. Research, Consultancy and Extension

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

The institution has a Research Committee to promote research activities among faculty and students. Principal is the Chairman of the research committee, Dean R&D is the convener, IQAC and Department Research Coordinators (DRCs) are members.

- Institute level Research Committee organizes seminars and workshops periodically instilling the culture of Research and to support research initiatives.
- Periodical meetings are held to plan and promote research initiatives.
- Faculty and students are encouraged to submit proposals seeking fund for project works.
- Best Department Award and Faculty appraisal system promotes faculty research and credits initiatives taken.

#### 3.2 Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	-	-	-	4
Outlay in Rs. Lakhs	-	-	-	1,35,40,170
				lakhs

#### 3.3 Details regarding minor projects

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

#### 3.4 Details on research publications

	International	National	Others
Peer Review Journals	15	-	-
Non-Peer Review Journals	12	-	-
e-Journals	0	-	-
Conference proceedings	45	109	-

#### 3.5 Details on Impact factor of publications:

Range	0.1-1.5
Average	0.9
h-index	10
Nos. in SCOPUS	15

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	
Major projects	-	-	-	-	
Minor Projects	0.5	Foundation for Advancement of Education and Research, Bangalore	Rs.5000/-	Rs.5000/-	
	0.5	IEEE Madras Section, Chennai	Rs.7500/-	Rs.7500/-	
<b>Interdisciplinary Projects</b>					
Industry sponsored					
Projects sponsored by the University/ College					
Students research projects (other than compulsory by the University)					
Any other(Specify)			D 10500/	D 10500	
Total         7 No. of books published i) With	ISBN No.	05 Chapter	Rs.12500/-	Rs.12500/	
7 No. of books published i) With	out ISBN No				
7 No. of books published i) With ii) With	out ISBN No				
7 No. of books published i) With ii) With 8 No. of University Departments re	out ISBN No		rs in Edited Boo	oks	
7 No. of books published i) With ii) With 8 No. of University Departments re UGC-SA	out ISBN No eceiving fund .P		rs in Edited Boo DST-FIST	oks _ _ e/funds _	
7 No. of books published i) With ii) With 8 No. of University Departments re UGC-SA DPE	out ISBN No eceiving fund .P  y	CAS _	s in Edited Boo DST-FIST DBT Schem	oks _  e/funds heme	
7 No. of books published i) With ii) With 8 No. of University Departments ro UGC-SA DPE 9 For colleges Autonom	out ISBN No ecciving fund P  y 2	CAS -	DST-FIST DBT Schem DBT Star Sc	oks _  e/funds heme	

Level	International	National	State	University	College
Number	-	6	-	-	-
Sponsoring	-	Self	-	-	-
agencies					

2.12 No. of foculty conved	ac avparta ab	oim on con c	0.00						
3.12 No. of faculty served	-	-	<b></b>	- -	2				
3.13 No. of collaborations International - National - Any other -									
3.14 No. of linkages create	d during this	year	-						
3.15 Total budget for resea	arch for curren	nt year in la	ikhs :						
From Funding agency	-	From M	anagem	ent of Univer	sity/College	50000			
Total	50000	]							
	50000								
3.16 No. of patents receive	ed this year	Type of	Patent		Num	ber			
		National	1 400110	Applied	-				
				Granted	-				
		Internatio	onal	Applied	-				
				Granted	-				
		Commerc	cialised	Applied	-				
				Granted	-				
3.17 No. of research award year			-						
Total 1	International	National	State	University	Dist Colle	ege			
01 -	-	-	-	-	- 01				
and students registere 3.19 No. of Ph.D. awarded	<ul> <li>3.18 No. of faculty from the Institution who are Ph.D Guides and students registered under them</li> <li>3.19 No. of Ph.D. awarded by faculty from the Institution</li> <li>3.20 No. of Research scholars receiving the Fellowships (Newly enrolled + existing ones)</li> </ul>								
JRF -	SRF	I	Project I	Fellows	Any oth	ner –			
			5	-					
3.21 No. of students Partic	ipated in NSS	events:							
			Univers	sity level 2	State 1	evel 30			
			Nationa	l level	Interna	ational level _			
3.22 No. of students partic	cipated in NC	C events:							
			Univer	sity level	50 State	level _			
			Nation	al level	Intern	ational level			
National level International level13									

3.23 No.	of Awards won in	NSS:					
			U	niversity level	-	State level	-
			Na	ational level	-	International level	-
3.24 No.	of Awards won in	NCC:					
			Uı	niversity level	1	State level	1
			Na	ational level	-	International level	-
3.25 No. c	of Extension activi	ties organize	ed				
τ	University forum	2	College forur	n 2			
N	NCC	4	NSS	5	Any	other -	
3.26 Majo Responsib	-	g the year in	the sphere of	extension activ	vities and	Institutional Social	
	egular health camp eighbouring village		eness camps a	re organized	by NSS u	nit at the identified	
	ervice camps and (		are organized	every semeste	r.		

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# 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	194653sq.m (land area) 38405.2sq.m (builtup area)	-	Self	194653sq.m (land area) 38405.2sq.m (builtup area)
Class rooms	49	-	Self	49
Laboratories	32	-	Self	32
Seminar Halls	4	-	Self	4
No.ofimportantequipmentspurchased(≥ 1-0 lakh)during thecurrent year.	5109959	Purchase worth 1453413	Self	6563371
Value of the equipment purchased during the year (Rs. in Lakhs)	14598790	-	Self	14598790
Others	23873448	<ol> <li>Rest Rooms for Girls</li> <li>Amenities Block</li> <li>Staff recreation hall</li> <li>PTA Office</li> <li>Alumni Office</li> </ol>	Self	24530810

# 4.2 Computerization of administration and library

Automation of academic routines and Library transactions is instituted.

## 4.3 Library services:

	Exis	sting	Newly	added	Total	
	No.	Value	No.	Value	No.	Value
Text Books	18396		684		19080	
Reference Books	8917		495		9412	
e-Books	1091		42		1133	
Journals	50	99500	35	257415	85	356915
e-Journals						
1. DELNET	680	11500			680	11500
2. PROQUEST			102	66500	102	66500
3. BRITISH &			10	4340	10	4340
OTHERS 4. SPRINGER			49	119699	49	119699
Digital Database	27313		1179		28492	
CD & Video	1226				1226	
Others (specify)	625				625	

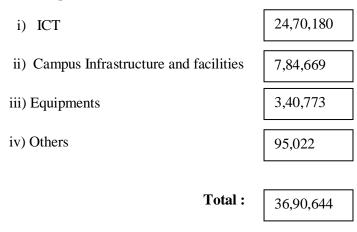
4.4 Technology upgradation (overall)

	Total Computers	Compute r Labs	Internet	Browsing Centres	Computer Centres	Office	Depart -ments	Other s
Existing	532	448	100Mbps	-	-	18	24	42
Added	30	30	-	-	-	-	-	-
Total	562	478	-	-	-	18	24	42

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

- I Year students are given training on "Basic Computing Skill" that includes Word Processing, Power Point Presentation, E-Mail and web access etc.
- Group Communication is activated and e-learning materials are shared through groupid. Students are given exposure to accessing web resources.
- Regular internet and library hours at Time-table enhances the exposure of students
- Resource upgradation details at Central library is circulated to all faculty and students.

4.6 Amount spent on maintenance in lakhs :



Criterion – V

# 5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

- Value addition initiatives like My Credit course, Refresher courses etc., are organized to support final year students for placement opportunities. Effectiveness of such programmes are ensured through appropriate feedback mechanism / verification process.
- Professional society activities, Student Committees and Club initiatives are circulated and posted at Student Notice board for reference and encouragement for participation.
- Details of Govt. Scholarships, Management and other scholarships are communicated to students during Induction programme and through periodical circulars.
- Library user services, addition of resources, access procedures are disseminated to students through circulars periodically.
- Details pertaining to student support services are also posted at Institutional website.
- System of feedback mechanism tracking reachability of student support services helps in improving the services and for future planning.

## 5.2 Efforts made by the institution for tracking the progression

- Course in-charges track the performance of students in internal assessments. HoD monitors the progression and suggests suitable remedial plan for improvement. Test report keeps track coursewise progression.
- Result Review Meets are organized after internal assessments, helps in student performance tracking and analysis. Remedial measures are planned for improving student performance.

- Result review is also made after publication of University results, helps in tracking and planning. Additional tests are also conducted to help students in progression. Periodical Internal marks gained by student are communicated to students. Results are also communicated to parents. Suitable remedial measures are taken to support progression
- Faculty advisor tracks the performance of the wards periodically. Centralized counselling sessions are organized. Student Track report helps faculty advisors to monitor the progression of their wards. Faculty advisors motivates and guides students for better performance in exams. Faculty advisor review meets are also organized. Credits for better performing mentor is included at Best Department award calibration process.
- Student participation in co-curricular, extra-curricular activities are encouraged. Students achievements are encouraged at Student Change Club Meet. Department also tracks the overall accomplishments made during the year. Suitable planning and motivations are made.
- Learning outcome attainment is ascertained for the courses taught for every semester. Steps are also taken for improving higher order thinking levels of the students based on LO attainment reports.
- Reports are generated identifying Entry level cut off range, Semesterwise result analysis, Placement records, Graduation rate. Suitable steps are taken for improvement at required stages.

5.3 (a) Tota	al Nurr	nber o	f student	us UG	PG	Ph. D.	Others				
	1506 08				08	-	-				
(b) No.	of stu	dents	outside t	he state	3						
(c) No.	of inte	ernatio	onal stud	ents	-						
М	len	No 1067	% 70	Women	No 447	% 30					
			Last Year	•				Г	This Year	•	
General	SC	ST	OBC	Physically Challenged	Total	General	SC	S T	OBC	Physically Challenged	Total
General 175	SC 182			Physically	Total 1847	General 77	SC 161	S	OBC 127 6	Physically	Total 1514
	182	ST 1	OBC	Physically Challenged -				S T	127	Physically	

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

- During I year study period, PEAK hour is utilized for providing insight into competitive exams. Students aspiring for higher studies and competitive exams are given orientation and preparatory programmes during pre-final year and final year study.
- Experts from various forums are invited for enrichment. Regular classes are conducted for GATE and other competitive exams for III Year students and IV Year students.
- Departmentwise coordinator will prepare schedule and classes will be conducted. Overall coordinator will monitor the conduct of classes and track student participation.
- Adequate resources are stacked at Central library to support preparations and Online resources access is also encouraged.
- Department of Training & Placement imparts regular softskill and aptitude skills training to students.

o. of students beneficiaries GATE : 217 TANCET :147
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5.5 No. of students qualified in these examinations

NET	SET/SLET	GATE	2	CAT	1
IAS/IPS etc	State PSC	UPSC		Others	

5.6 Details of student counselling and career guidance

Mentoring system is practiced to provide academic counselling to the students. Students are given individual care and attention by the Faculty advisor during counselling slots. Additional need based interactions will be made by the faculty advisors. Faculty advisor keep track of student progression in academics, ward's regularity and helps in addressing student needs. Internal counselling grievances report (IGCR) ensures issues requested by students are addressed. All students are given individual care and attention through mentoring system.

Career guidance programmes are organized through Training and placement cell. T&P hours imparting training on soft skills and aptitude are organized for II- IV year classes regularly. External experts are also invited to guide students.

No. of students benefitted (Counseling)

100%

### 5.7 Details of campus placement

	Off Campus		
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
4	373	113	5

#### 5.8 Details of gender sensitization programmes

Women cell organizes programmes periodically imparting self-confidence among women faculty and students. Programmes are organized inviting external experts also.

#### 5.9 Students Activities

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

State/ University level 5	National level 1	International level	-
No. of students participated in cu	ultural events		
State/ University level	National level	International level	-
5.9.2 No. of medals /awards won by st	udents in Sports, Games an	d other events	
Sports : State/ University level 5	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	374	14449200
Financial support from government	910	21971180
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	-	
Exhibition: State/ University level	National level	-	International level	-	
5.12 No. of social initiatives undertaken by	y the students				
5.13 Major grievances of students (if any) re	edressed: Nil				
Criterion – VI					
		-			
6. Governance, Leadership ar	nd Managem	<u>ient</u>			

6.1 State the Vision and Mission of the institution

#### Vision

To impart globally competitive technical education, enhance human values and to provide a research atmosphere to the socially challenged aspirants.

Mission

Providing a comprehensive theoretical foundation, inculcating state of art engineering practices and cutting edge research ambience that lead to societal upliftment with ethical values through effective teaching – learning methodologies and appropriate Information Communication tools via dedicated faculty to the aspirants

6.2 Does the Institution has a management Information System

Institute functioning is automated supporting academic and financial functioning.

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

- With the purview of Objective of the institution, target and schedule is set at the beginning of every academic year for the departments and committee. Encouragement and motivations are provided at all stages for implementation
- Strategies for all activities are derived considering the inputs of the stakeholders. Coordinators /In-charges for activities derive action plan, reviewed and approved for reference.
- Academic calendar and guidelines for activities acts as the operational framework for the routines.
- Operational issues and outcome analysis for every stages will be addressed at Staff council meet. Based on the interactions & inputs, suitable corrective measures are proposed and implemented.
- Periodical review and academic audits are carried out to ensure completion of the activities and thereby ensuring progress

#### 6.3.1 Curriculum Development

Being an affiliated Institution, curriculum and academic schedule as prescribed by Anna University is followed.

- To augment the curriculum, various enrichment programmes like Guest Lecture, Workshop and Seminars are planned in advance and executed in the stipulated period.
- ICT enabled Teaching-Learning initiatives like A-View sessions, NPTEL sessions, other reputed Institutional Video sessions supports better knowledge acquisition process.
- Content Beyond Syllabus component for all theory courses includes case study presentations, Application oriented sessions. Laboratory courses also include additional experiment covered as content beyond syllabus for enrichment Case studies are included in the course plan of the courses for student enrichment.
- My Credit Course (MCC) for IV year classes imbibes skill oriented self-designed course to all students. MCC titles were identified based on student preferences. Continuous assessments for these courses was conducted to ensure periodical evaluation on student learning. MCC course served as Value addition to the students.

#### 6.3.2 Teaching and Learning

- Structured Teaching-Learning activities with prior planning for enrichment initiatives is practiced. Academic calendar acts as the framework for actions for the semester, guides faculty, student related activities.
- Well structured Course Plan emphasizing appropriate teaching methodology, references for preparation, assignment guidelines and assessment coverage gives an overview for the course to the learners. Experience summary (Review sheet) recorded at the end of course completion paves better approach in course delivery planning for subsequent faculty handling the course.
- Committee comprising senior faculty team verifies course plan, question bank and lab manual, ensure the set standard is met. Learning material is distributed during semester commencement.
- Promotion of NPTEL videos, OER, Virtual lab sessions, CBT sessions in Teaching provides opportunity for better learning
- Introduction of various monitoring committee like AMC, PMC, LMC etc ensures objective of the process is met.
- Teaching-Learning practices adopted involves student-centric activities in the process.
- Student feedback and expectations are sought regularly through various modes of interactions and necessary fine-tuning is done is the approaches of teaching and learning
- Periodical review and audits are conducted to ensure the status of execution is as per set expectations of the process. Periodical review and audits are conducted to ensure the status of execution is as per set expectations of the process.

#### 6.3.3 Examination and Evaluation

Vibrant Examination Cell of the institute provides transparent and efficient assessment & evaluation process. Quality and transparency in conduct of internal assessments are achieved through:

- 2 sets of question papers are prepared by faculty members covering questions from Question bank out of which 1 set is selected for exams. Question bank covers previous years Anna University question sets for the courses offered. This ensures exposure to students about the AU exams. Question paper is verified by IQAC team.
- Submission of question papers, corrected answer scripts are scheduled at academic calendar. Key for evaluation is prepared by faculty members and maintained at respective course files. Corrected answer scripts are issued to students for any clarifications. Students sign the scripts and coursewise scripts are stocked at CoE office. Random verification on these scripts ensures perfection in the evaluation process.
- Make up exams are scheduled and conducted to aid slow learners in gaining internal marks for the slot. In addition to assessments as per AU schedule, Daily test and Week test are conducted for improving student performance and to impart regular reading habits among them.
- To ensure smooth progression in laboratory courses, regularity and prompt completion of experiments, submission of record works are given weightage in the internal award procedure. Procedure for awarding marks for every experiment is followed. Lab Internal marks split up for 20 (5 marks to Record, Observation, Attendance, Model Exam)
- Result review meeting is organized after every assessment. Need based remedial measures are taken to support slow learners and subjects with less pass percentage.

#### 6.3.4 Research and Development

• Institute Level Research Committee is functioning with the objective of instilling culture of Research and Development among staff and students. Regular meetings are convened to review the progression. Faculty members are encouraged to pursue research, submit proposals and publications. Suitable guidance is provided for innovative project and in-house project works among students. Training programmes are organized periodically on various titles.

#### 6.3.5 Library, ICT and physical infrastructure / instrumentation

- Library advisory committee recommends the necessary upgradations for Library and monitors the functioning, utilization
- Library information system automates the transactions and OPAC supports search for resources easily
- Newspaper clippings on education, science and technology, sports, competitive exams, placement details are displayed on the notice board. Displays of KCE events covered in media are made at notice board.
- Computing facility provides access to online journals. Transactions and other reference materials.
- Campus is equipped with 100Mbps internet connectivity and Wifi access.
- Seminar, Audio-Visual Hall, Conference halls are provided with Computer and network facility. LCD projectors support ICT enabled presentation at classrooms and AV halls.
- Uninterrupted power supply provides support for ICT system access without interruption.

#### 6.3.6. Human Resource Management

- Culture of participative management is proactively promoted by the institution. The top leadership invites suggestions, incorporates them and gives autonomy to the faculty members and staff to perform their duties. At the same time, necessary review, audits are carried out
- Principal assigns specific duties to various academic and administrative bodies of the College.
- Heads of the Department are given operational autonomy to carry out departmental routines and thereby contribute in overall growth of the department.
- Each staff member is assigned with one or more responsibilities
- Programme to re-charge skills and knowledge are organized periodically for teaching and non-teaching staff.
- Confidence level and Ethical values among students are raised through initiatives like PEAK, KINGS Forum, SCC.

## 6.3.7 Faculty and Staff recruitment

• Faculty positions are filled up as per regulatory authorities norms and guidelines. Vacancies are notified in newpapers and applications are received. Shortlisted candidates appear for interview before the selection committee. Committee convene interview and selects suitable candidates.

## 6.3.8 Industry Interaction / Collaboration

- Industrial Collaborations for better exposure for students and faculty through In-house training & Faculty visit to factory scheme are practiced. IIIC aims at strengthening industrial relations.
- Industry Institute Interaction Cell strives to establish network among industries and arrange 3 to 5 days of industry oriented training sessions to all pre final year students during vacation period. Students gain industrial exposure through this Industrial visit. Good track record of 100% In-House training is aimed and attained
- Industrial experts are invited periodically to impart exposure to students.
- Faculty visit to factory scheme helps in interactions with industrial personnel by faculty members.

6.4 Welfare schemes for	Teaching	279638
	Non teaching	
	Students	210000

6.5 Total corpus fund generated

4701000

6.6 Whether annual financial audit has been done

Yes	No	
V		

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

Audit Type	External		Inter	rnal
	Yes/No	Agency	Yes/No	Authority
Academic	Yes	ISO Certification agency	Yes	Internal committee
Administrative	Yes	CA	Yes	Administrativ e Officer

Yes

Yes

6.8 Does the University declares results within 30 days?

For UG Programmes

٧	No	
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For PG Programmes

v 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?

Yes. University encourages autonomy status

6.11 Activities and support from the Alumni Association

- Alumni feedback is collected through various modes and utilized for institutional planning
- Interactions are made through Institution' website, Alumni Meet and social networking media through Alumni coordinator
- Alumni are invited for various technical events organized at the campus. Orientation sessions are also organized through Alumnus.

6.12 Activities and support from the Parent – Teacher Association

• Active Parent-Teacher Association(PTA) is functioning to identify the expectations from the stake-holder on all aspects of the institution. PTA members meet as per schedule and share their opinion. Representations made by the PTA office bearers is recorded and carried forward to authorities for suitable follow-up.

## 6.13 Development programmes for support staff

- Staff members are encouraged to pursue higher studies, enrol for Ph.D.
- Seminar sessions are organized bi-monthly on behalf of staff chapter on Technical and Non-Technical titles.
- Faculty-Visit-To-Factory scheme is regularly practised. Faculty members are visiting industries to enrich and get exposed to industry trends. During vacation faculty members are visiting factories.

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

- Seminars and Awareness programmes were organized periodically towards nurturing environment. Programmes were organized by Eco-club to motivate students.
- Energy audit is conducted every year and measures to conserve electricity is advocated among students through awareness sessions.
- Tree sampling were planted at various locations by the students in memory of Dr.A.P.K.Abdul Kalam and on behalf of memorial club
- Rain water harvesting facility is maintained.

# 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.
  - Learning materials like Question Bank, Lab Manual and Course Plan are prepared with enhanced approaches in Teaching-Learning practices. Committee comprising of senior faculty members are involved in ensuring standard material preparation.
  - E-learning material for the course is distributed to students during the semester commencement itself. E-Material includes planned NPTEL videos, PPTs, Lecture videos etc.
  - Assignment presentation hour mandated for every course includes application oriented topics instilling better understanding and supports knowledge widening amidst students. Every student will present 1 application oriented assignment per semester enriching communication and presentation skills.
  - Internal assessment question papers are ensured for its quality through the Pedagogy team members of concerned department. Set standard adhere to Bloom Taxonomy based evaluation.
  - Staff seminar on various titles are held bi-monthly, providing opportunity for staff enrichment.
  - Paper presentation at International Conference is introduced as a part of Foreign Industrial visits. Staff members and selected topper of the department jointly present papers at International conferences organized abroad.

- Internal audits are strengthened to monitor the academic process.
- Best Department Award encourages student and staff progression through crediting weightages for various components. Staff participation in external programmes and publications are encouraged.
- Effective system of stakeholder interaction and feedback system supports identification of expectation and plans are made to fulfil the requirements.
- Alumni members are periodically invited to various technical events and orientation sessions providing exposure to students.
- Role of Faculty advisor in supporting and motivating wards progression was insisted. Periodical department level review meet and institute level review meet was organized. Internal counselling grievances report (ICGR) ensures support requested by wards are addressed.
- With the objective of Industrial exposure for students and faculty members, periodical visit to industries is mandated through In-House Training for students and Faculty visit to factory scheme respectively. 344 final year students has visited 64 companies and undergone training. Faculty members in batches have visited 68 industries for the academic year. Out-of 400 nominations, ICTACT selected and awarded top 50 practices of higher education institutes. Institute has bagged the award under Institute interaction with Industries by the above practice on IHT & FVFS.
- .2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the beginning of the year

Annexure-I

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

Annexure-II

7.4 Contribution to environmental awareness / protection

- The Institution has a vast campus with many open spaces, huge, age-old trees preventing soilerosion and provides a pollution-free atmosphere. Institution has adopted eco-friendly practices and takes necessary steps towards energy conservation, rain water harvesting etc. Institution being aware of the responsibility of conserving the environment, has been practicing various measures to maintain the greeneries of the campus.
- As a conscious effort to protect the delicate balance of the environment, energy saving equipments are used in the institute premises.
- A waste disposable system is in place to ensure that no toxic waste is let out into the surrounding environment thereby causing environmental degradation.
- The gardening and campus maintenance is carried out by a dedicated team of workers.

The Institute encourages extension activities promoting environment protection, maintenance . involving students and staff members. Awareness programmes are conducted regularly kindles interest in nurturing the nature. It has been observed that the programmes have created a positive impact on the beholder and helps in developing an environment-friendly attitude in one and all. Smoke free, Tobacco free tree campus and Tree plantation activities by NSS, ECO club are few of the contributions towards "Go Green". 7.5 Whether environmental audit was conducted? No V Yes 7.6 Any other relevant information the institution wishes to add. Department of CSE was given permanent affiliation status by Anna University during the year 8. Plans of institution for next year To obtain permanent affiliation status from affiliating University for courses To obtain 12B status from UGC . To strengthen Industry-Institute relationship through MoUs with core industries To initiate NBA accreditation preparatory works. To strengthen Research and development activities Name Dr. J. ARPUTHA VIJAYA Name K. ABHIRAMI SELVI Kidler PRINCIPAL Kings College of Engineering Signature of the Chairperson, IQAC Signature of the Coordinator, IQAC WALKULAM-61 DINTROTTILD 27 28

	Annexure-I
Plan of A	ction and Action Taken Report
Plan of action	Action Taken Report / Outcome
To strengthen curriculum enrichment	<ul> <li>Enhanced course plan structure and Access to E-Learning resources made easier. E-learning resources are mailed to students through group mail ids for all the courses.</li> <li>Usage of Open Educational Resources was promoted. Course plan structure included suitable OER for topics</li> <li>Content beyond the syllabus with suitable titles provides enriched course content (Application of concepts / case studies for all courses)</li> <li>Technical sessions inviting resource persons from Universities / Institutions / Industries are organized periodically. As per plan of action, departments organize programme for every semester</li> </ul>
To adopt to enhanced approaches in teaching learning	<ul> <li>Wi-Fi enabled campus with 100 Mbps internet connectivity promotes ICT enabled learning</li> <li>Interactive teaching learning practices are followed by faculty members</li> </ul>
	<ul> <li>Faculty members are encouraged to attended FDPs and other enrichment programmes organized at other institutions. Faculty programme participation is in increasing trend every semester. Faculty participation is credited towards Best Department award and motivation towards vacation eligibility</li> </ul>
To promote research culture and ambience among faculty and students	<ul> <li>2 Faculty members received Doctoral degree.</li> <li>Publication summary Staff         <ul> <li>Conference :52 (International Conference) , 129 (National Conference)</li> <li>Journals : 61</li> <li>Student                 <ul></ul></li></ul></li></ul>
	<ul> <li>2 programmes are organized as a part of research sensitization initiative</li> <li>2 proposals submitted seeking fund</li> </ul>

Plan of action	Action Taken Report / Outcome		
To strengthen internal assessment and evaluation process and review process	<ul> <li>Standard of Internal assessment question paper was tracked. Bloom taxonomy with internal pattern of evaluation was ensured. Centralized evaluation and answerscripts verification ensured rigorous pattern of evaluation.</li> <li>Course coverage was tracked before every assessment.</li> <li>Progression in assessment coursewise was reviewed department level. Suitable corrective preventive measures was taken. Remedial classes was also conducted.</li> </ul>		
	• Support for slow learners by conduct of additional tests encouraged the category for better commitment.		
To establish industrial linkages and exposure	<ul> <li>In-House Training (IHT) for students and Faculty-Visit-To-Factory is practiced and continued. Outcome of the visit is attained through presentation by students about the visit and suitable activities like inviting resource person from industries for technical events, training support, facility support etc.</li> <li>Exposure to industrial practices, skills enriches students and faculty</li> <li>100% participation is achieved in all departments</li> </ul>		
To strengthen student counselling system	• System of mentoring helps faculty members to identify the progression in wards and suitable support is provided.		
	• Faculty review meet also includes component on wards progression review. Faculty keep updated with academic progression and personal issues.		
	<ul> <li>Internal Counselling Grievances Report ensures issues raised/ support requested by students are addressed.</li> <li>Mentee progression is accounted in Best department award, motivated better performance by faculty advisors.</li> </ul>		

Plan of action	Action Taken Report / Outcome
To strengthen activities promoting student skill enrichment.	My_Credit Course : Skill oriented courses for IV year students was organized during VIII semester. Students shall opt to courses (max. Of 4 per branch) was organized with course plan insisting on practical component enhanced skills of final year students. Assessment was also conducted and certification was provided.
	• Professional society enrolment mandated for all the students. Coordinators derive plan of action for every semester and conduct activities as per action plan. Faculty chapters also conduct activities as per plan. ISTE chapter has organized 16 events during the period.
	• Under Student association branchwise, programme enriching student knowledge and skills are organized periodically
	• Spoken tutorial classes conducted for all branch IV year classes. PEAK classes for I Year classes with clear course plan for coverage
To strengthen effectiveness and efficiency of institutional processes.	• Numbers of Committees / Cell / Clubs are formed with the Principal as the President who ensures their effective functioning. Coordinators will plan and ensure execution of the required task with the approval from Head of the Institution
	• Decentralized top-down disbursement of responsibilities, entrusting effective functioning giving equal opportunities to the individuals on turn basis is followed. The Principal holds regular meetings with the heads concerned and committee coordinators, to monitor the progress.
	• All the faculty members are given opportunities with entrusted responsibilities for effective functioning of the academic system
	• Every semester committee review meet is organized. Committee present their report of activities and impact created. Review is made and updations are made if required to furher strengthen the processes /activities.

#### Annexure-II

#### **Best Practice I**

#### **Title of the Practice**

Systematic approaches to widen Industry-Academia Interactions

#### Goal

Industry Institute Interaction Cell(IIIC) of the institute encourages its faculty and students to interact with industry in all possible ways with the spirit of driving mutual benefit in a systematic manner. Regular industrial training for students in the name of In-house Training (IHT), Faculty members in the name of Faculty-Visit-to-Factory-Scheme (FVFS) will widen the knowledge of students and faculty members.

#### The Context

The most dynamic and vibrant youth potential is seriously weakened with **narrow knowledgebase** that is acquired through the present **educational system.** The primary challenges faced by the professional educational sectors are

- *Curriculum updations* do not meet the exponential changes
- *Educational practices* focuses on course coverage & assessment based on scores
- **Obsolete laboratory** infrastructure and practices end up in unskilled graduate.
- *Institute Locate factor* governing the employability issue adds alarm stating Tier-I, Tier-II cities scoring 18%, 14% respectively and very low trends at Tier-3 and rural locates
- *Intellectual demands* resulting in faculty positions for livelihood and not as a passion.
- *Governing policies & rules* of Industry-Academia do not provide opportunity, space for mutual interactions.

#### The Practice

#### • Staff interaction with Industries

• *Faculty-Visit-To-Factory (FVFS):* To impart "Training to the Trainer", FVFS scheme is practiced. Faculty members acquire practical knowledge by these visits and disseminates the knowledge through suitable course mapping component. Faculty establishes networking with industrial experts for all academic support.

#### • Student interaction with Industries

- **In-Plant training (IPT), Industrial Visits (IV) :** II, III, IV year students are encouraged to undergo training at industries through IPT, IV creating industrial culture among students. Project work is also initiated by the students through these visits.
- In-House training (IHT): All pre-final year students are encouraged to undergo training at domain specific industries for a period of 3-5 days to gain industrial exposure and to understand the practices & requirements of industries. After the visit, teams will do presentation sharing the experience for collaborative knowledge sharing process.
- *Foreign Industrial Visit (FIV):* All Round performer for every batch is sponsored by the management for FIV during III Yr., that ignites and builds accomplishments among students. Yearwise FIV details: 2012,13,14 Singapore, 2015- Sri Lanka, 2016-Thailand.

### **Evidence of Success**

• IIIC by its initiatives has established networking with local industries. Number of students involved in Industrial projects in recent years is in increasing trend which is a direct reflection of industrial visits made by students and faculty. Technical Training Programmes organized inviting industrial experts : 43 sessions

Category	No. of
	Companies
Production & Manufacturing sectors	35
Service sectors	15
Communication sectors	08
IT sectors	05
Training sectors	10
Others	02
Total	78

Categorywise Industrial sectors in regular interaction (3 years)

Faculty-Visit-To-Factory Scheme summary (Increasing trend in Networking with industries)

DEPT.	Yearwise No. of		Industries visited	
	2017	2016	2015	2014
Civil	15	11	10	09
CSE	11	10	14	06
ECE	15	14	11	09
EEE	11	11	09	07
IT	03	05	04	05
Mech	14	13	11	09
Total	69	64	59	45

- **Tailor designed skill oriented courses** in the name of "**My Credit Course-MCC**" is offered to all final year students, supports in increasing employability. MCC was made possible through the experience gained by faculty during FVFS.
- Formal agreement in terms of MoU with 6 sectors and Consultancy works initiated (last 3 years)
   :7
- *Collaborative project & Consultancy works:* Upon mutual interests, initiatives have resulted in collaborative project works. Testing of Materials of PWD, CBR test for SPL Infra Pvt. Ltd., Test of Cement for PWD, Wireless Data Logger for S-Calibration Lab, Digital Communication for Sakthi Power Solutions etc.are few collaborative initiatives in the recent years.
- Best Practice of KCE certified by ICTACT ICT Academy, an initiative of Govt. of India in collaboration with state Govt. & Industries endeavors in developing next generation teachers and industry ready graduates. We are extremely delightful in sharing that one of our Best practice inculcating industrial training to faculty and students was awarded under Industry-Institute Collaboration. Out of 450+ nominations from various academic institutions all over the state, our Best practice is awarded as the Best practice and is recommended for its follow-up by others too.

#### Problems encountered and resources required

• Establishing linkages with Industries to support In-House Training initiatives.

## **Best Practice II**

## Title of the Practice

Skill enrichment practices meeting diversified student group needs

## Goal

- To Provide opportunities for skill enhancement, exhibit talents and become employable / progress towards higher education.
- To Motivate learner through various value addition initiatives and support services

## The Context

Institute caters to the demands of students with varied skills and diverse approaches to learning due to limited exposure. It is essential to bridge the gaps by means of creating opportunities that instills confidence, promoting orientation towards learning, imparting values in the minds of learners is sensibly made by the Institute. Skills and the Knowledge are the engines contributing to the development of the individual and the society

## The Practice

Skill enhancement practices of the institute starts from entry level, strengthened appropriately at all stages, resulting in overall grooming. Application oriented assignments, Mini-Project works, Content Beyond Syllabus for all courses, Refresher courses with suitable industrial expert involvement imparts industrial exposure to students in a systematic manner. Students were motivated and enriched through various opportunities created internally through value addition initiatives and encouraged to attend external programmes

Year	Practices		
I Yr.	PEAK		
	Programme to Enrich Attitude and Knowledge		
	Orientation Programme		
II Yr.	Mini-Project		
III Yr.	In-House Training		
	GATE & Competitive exam coaching		
IV Yr.	Refresher courses		
	VII Sem Project work		
	GATE & Competitive exam coaching		
	My Credit Course (MCC)		
Common to	Students CHANGE Club (SCC)		
all classes	KINGS Student Forum		
	Professional Society Activities		
	Maths Made Easy		
	T&P Training		

## Yearwise skill enhancement practices

#### **Evidence of Success**

- 1. Regular time-table incorporates the skill enhancement practices PEAK, Project work, GATE & Competitive exam coaching, T&P training and MCC.
- 2. Student Change Club meet is conducted regularly as per day order of the department.
- 3. **Professional society activities** are conducted as per action plan semesterwise. Student feedback on the activity records effectiveness of the activities. ISTE chapter of the institute organizes events encouraging active student participation. Minimum 2 events per semester is organized by every department.
  - IEEE Madras Section appreciation award

**IEEE Madras Section** in appreciation for organizing activities towards advancement of IEEE and Engineering profession during the year 2016, **Student branch of our institution is awarded C Grade.** 

- Professional society activity summary
  - Staff publication in Professional society convention : 14
  - Number of Professional society activities conducted : 45

#### 4. My Credit Course execution summary

- Civil branch : 2 courses
- CSE branch : 4 courses
- ECE branch : 3 courses
- EEE branch : 3 courses
- IT branch : 2 courses
- Mech branch : 4 courses

Skill enrichment course meeting the industry required skills organized during the year is totally 18.

**5. Placement track record** of our institution is highly appreciable : 75 % of our 2017 batch students have been selected and placement offers were committed to these students. We are happy in creating opportunities for our final year students every year among the best industry players

# Programme organized for the benefit of students

	Programme Category				
	Seminar	Workshop	Symposium	Guest	Project Expo
				Lecture	
Total	2	21	5	15	9

#### Programme attended by the students

	Programme Category				
	Seminar	Workshop	Symposium	Professional	Project
				society	Expo
				activities	_
Total	9	186	83	45	94

#### Problems encountered and resources required

Conduct of programmes in align to hectic academic schedule was found difficult.