



KONGU ENGINEERING COLLEGE
(AUTONOMOUS)
PERUNDURAI ERODE – 638052 TAMILNADU



Self-Study Report (Cycle I)

Volume-I

Submitted to



NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

(An Autonomous Institution of the University Grants Commission)

P.O. Box.No.1075, Nagarbhavi, Bangalore-560072

March 2015



VOLUME - I

CONTENTS	
Description	Page No.
Declaration by the Head of the Institution	
Abbreviations	i
Preface	v
Executive Summary	vi
SWOC Analysis	x
Profile of the Institution	01
Criterion-wise Evaluation Reports	12
Criterion-I : Curricular Aspects	12
Criterion-II : Teaching, learning and evaluation	31
Criterion-III : Research, Consultancy and Extension	68
Criterion-IV : Infrastructure and Learning Resources	118
Criterion-V : Student Support and Progression	143
Criterion-VI : Governance, Leadership and Management	165
Criterion-VII : Innovation and Best Practices	187



KONGU ENGINEERING COLLEGE

(Autonomous)

PERUNDURAI ERODE - 638 052 TAMILNADU INDIA
(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)



Prof. S. KUPPUSWAMI

B.E., M.Sc.Engg., Dr.Ing.(France)
PRINCIPAL

DECLARATION BY THE HEAD OF THE INSTITUTION

I certify that the data included in this Self-study Report (SSR) are true to the best of my knowledge.

This SSR is prepared by the institution after internal discussions, and no part therefore has been outsourced.

I am aware that the Peer team will validate the information provided in this SSR during the peer team visit.

Place : Perundurai
Date : 24.03.2015



S. Kuppuswami
24/3/15
Signature of the Head of the Institution

with seal
Prof. S. KUPPUSWAMI
PRINCIPAL
KONGU ENGINEERING COLLEGE
PERUNDURAI, ERODE - 638 052
TAMILNADU - INDIA

LIST OF ABBREVIATIONS

ACM	- Association for Computing Machinery
AICTE	- All India Council for Technical Education
AIRC	- American Information Resource Centre
AQAR	- Annual Quality Assurance Report
ASCE	- American Society of Civil Engineers
ASME	- American Society of Mechanical Engineers
ASP	- Application Service Provider
ATM	- Automated Teller Machine
B.E.	- Bachelor of Engineering
B.Sc.	- Bachelor of Science
B.Tech	- Bachelor of Technology
BC	- Backward Class
BCL	- British Council Library
BHEL	- Bharat Heavy Electricals Limited
BIS	- Bureau of Indian Standard
BITS	- Birla Institute of Technology & Science
BoS	- Board of Studies
BPO	- Business Process Outsourcing
CAD	- Computer Aided Design
CAI	- Centre for Affiliation of Institutions
CAM	- Computer Aided Manufacturing
CAT	- Common Admission Test
CBCS	- Choice Based Credit System
CDC	- Curriculum Development Cell
CECRI	- Central Electro Chemical Research Institute
CFD	- Centre for Faculty Development
CFL	- Compact Fluorescent Lamp
CGPA	- Cumulative Grade Point Average
CII	- Confederation of Indian Industry
CII-Yi	- Confederation of Indian Industry- Young Indians
CIM	- Computer Integrated Manufacturing
CIPET	- Central Institute of Plastics Engineering and Technology
CL	- Casual Leave
CMIE	- Centre for Monitoring Indian Economy
CNC	- Computer Numeric Control
CO	- Course Outcome
CODISSIA	- Coimbatore District Small Industries Association
COE	- Controller of examinations
CRS	- Community Radio service
CSE	- Computer Science Engineering
CSI	- Computer Society of India

CSE	-	Computer Science and Engineering
CSIR	-	Council of Scientific and Industrial Research
CT	-	Computer Technology
DELNET	-	Developing Library Network
DoTE	-	Directorate of Technical Education
DRDO	-	Defence Research and Development Organisation
DST	-	Department of Science and Technology
ECE	-	Electronics and Communication Engineering
EEDISSIA	-	Erode District Small Industries Association
EEE	-	Electrical and Electronics Engineering
EIE	-	Electronics and Instrumentation Engineering
EMDC	-	Entrepreneurship and Management Development Cell
ERO-INTECH	-	Erode International Industrial Trade Fair
ETP	-	Effluent Treatment Plant
FDP	-	Faculty Development Programme
FM	-	Frequency Modulation
FPGA	-	Field Programmable Gate Array
FT	-	Food Technology
GATE	-	Graduate Aptitude Test in Engineering
GD	-	Group Discussion
GMAT	-	Graduate Management Admission Test
GoI	-	Government of India
GRE	-	Graduate Record Examination
HoD	-	Head of the Department
HT	-	High Tension
HTML	-	Hyper Text Markup Language
IBPS	-	Institute of Banking Personnel Selection
ICT	-	Information and Communications Technology
IE (I)	-	Institution of Engineers (India)
IEEE	-	Institute of Electrical and Electronics Engineers
IELTS	-	International English Language Testing System
IES	-	Indian Engineering Services
IETE	-	Institution of Electronics and Telecommunication Engineers
IGCAR	-	Indira Gandhi Centre for Atomic Research
IGNOU	-	Indira Gandhi National Open University
IIPC	-	Industry Institute Partnership Cell
IISc	-	Indian Institute of Science
IIT	-	Indian Institute of Technology
ILL	-	Inter Library Loan Service
INDEST	-	Indian National Digital Library in Engineering Sciences and Technology
INSDAG	-	Institute for Steel Development & Growth
IOCL	-	Indian Oil Corporation Limited
IPR	-	Intellectual Property Rights

IQAC	- Internal Quality Assurance Cell
ISDN	- Integrated Services Digital Network
ISE	- Integrated Synthesis Environment
ISF	- Information Security Foundation
ISO	- International Organization for Standardization
ISRO	- Indian Space Research Organization
ISTE	- Indian Society for Technical Education
IT	- Information Technology
ITES	- Information Technology Enabled Services
KEC	- Kongu Engineering College
kVA	- Kilo Volt Ampere
KVITT	- Kongu Vellalar Institute of Technology Trust
kW	- Kilo Watt
LAN	- Local Area Network
LCD	- Liquid Crystal Display
LED	- Light Emitting Diode
M.B.A	- Master of Business Administration
M.C.A	- Master of Computer Applications
M.E	- Master of Engineering
M.Phil	- Master of Philosophy
M.Sc	- Master of Science
M.Tech	- Master of Technology
MAT	- Management Aptitude Test
MBC	- Most Backward Class
MECH	- Mechanical Engineering
MEMS	- Micro Electro Mechanical Systems
MHz	- Mega Hertz
MIT	- Madras Institute of Technology
MNC	- Multi National Corporation
MOOC	- Massive Open Online Course
MoU	- Memorandum of Understanding
MS	- Master of Science
MTS	- Mechatronics Engineering
NAAC	- National Assessment and Accreditation Council
NBA	- National Board of Accreditation
NCC	- National Cadet Corps
NCFM	- National Stock Exchange's Certification in Financial Markets
NET	- National Eligibility Test
NIT	- National Institute of Technology
NPTEL	- National Program on Technology Enhanced Learning
NSDC	- National Skills Development Corporation
NSS	- National Service Scheme
OBC	- Other Backward Class
OBTL	- Outcome Based Teaching Learning

OHE	-	Open House Exhibition
OHP	-	Over Head Projector
OPAC	-	Online Public Access Catalogue
P&T	-	Placement and Training
PCB	-	Printed circuit board
PEO	-	Programme Educational Objectives
PF	-	Provident Fund
PG	-	Post Graduation
Ph.D	-	Doctor of Philosophy
PO	-	Programme outcome
R&D	-	Research and Development
RDBMS	-	Relational Data Base Management System
RO	-	Reverse Osmosis
S&H	-	Science and Humanities
SAE	-	Society of Automotive Engineers
SC	-	Scheduled Caste
SDP	-	Staff Development Program
SLET	-	State Level Eligibility Test
SPD	-	Student Personality Development
ST	-	Scheduled Tribe
STTP	-	Short Term Training Programme
TA	-	Travelling Allowance
TANCET	-	Tamil Nadu Common Entrance Test
TBI	-	Technology Business Incubator
TNEA	-	Tamil Nadu Engineering Admissions
TNSCST	-	Tamilnadu State Council for Science and Technology
TOEFL	-	Test of English as a Foreign Language
TQM	-	Total Quality Management
UG	-	Under Graduate
UGC	-	University Grants Commission
UPS	-	Uninterrupted Power Supply
UPSC	-	Union Public Service Commission
VLSI	-	Very Large Scale Integration
WDC	-	Women Development Cell
Wi-Fi	-	Wireless Fidelity
Yi KEC	-	Young Indians Kongu Engineering College

PREFACE

Kongu Engineering College (KEC) was established in 1984 by The Kongu Vellalar Institute of Technology Trust (KVITT) formed by 41 philanthropists of Kongu region in the western TamilNadu with the prime objective of providing affordable and value based quality technical education mainly to the needy students of this region. From a humble beginning three decades ago, KEC has made phenomenal strides qualitatively and quantitatively in all spheres - student and faculty strength, programmes offered, infrastructural facilities, Teaching-Learning process, R&D, industry interaction, outreach and community engagement and student amenities - to name a few.

In three decades, the institution has grown from an initial intake of 180 students to the present total strength of about 8200 students in the 13 UG programmes, 19 PG programmes and 16 research programmes.

What has made this transformation possible is the selfless dedication and support of management combined with the efforts of the heads of the institution, faculty, staff and disciplined students. KEC is one of the first self-financing engineering colleges to be established in TamilNadu. The terrain in which it is situated is rocky with undulations. It is a testimony to the vision, passion and determination of the builders of this institution that a barren terrain once it was is now brimming with greeneries, flowers, plants and fountains.

The institution was affiliated to Bharathiar University, Coimbatore from 1984 to 2001 and is affiliated to Anna University since 2001. It has been conferred Autonomous status by UGC since 2007.

The institution is approved by AICTE and many of the UG programmes are accredited by NBA under Washington Accord.

The lush green campus of 167 acres houses excellent infrastructure facilities in a built-up area of 18,50,809 Sq.ft

In addition to curricular excellence, the institution focuses on research and lays great emphasis on overall development of the students by various co-curricular and extra-curricular activities.

The institution has got strong industry linkage through the AICTE sponsored Industry Institute Partnership Cell (IIPC). The TBI in the campus, first of its kind in India, established with the grant-in-aid with support of DST, GOI is a unique facility for converting innovative ideas into commercial products. The institution has been continuously rated among top five institutions at state level and top 50 at national level by various surveys conducted by reputed media.

The institution continues its journey towards excellence by constantly updating its facilities, systems and strategies with active participation of its stakeholders, so as to be greater service to the nation.

The Self Study Report for NAAC presented here has been useful to us for self analysis and introspection.

We would like to thank our Correspondent, members of Governing Council, Deans, HODs, faculty members and staff for their cooperation and active participation in preparation of this Self Study Report.

Principal

EXECUTIVE SUMMARY

Kongu Engineering College, an autonomous institution affiliated to Anna University, has been offering value based education in engineering, management and applied sciences for more than three decades now. The academic milestones (commencement of various programmes) are given below.

1984	:	KEC was established with 3 UG programmes (Civil, Mechanical and ECE)
1988	:	BE (Computer Science and Engineering)
1993	:	MCA
1994	:	BTech (Chemical Engineering), BE (EEE) and MBA
1996	:	BSc(Computer Technology) and ME (Engineering Design)
1997	:	MSc (Computer Technology)
1998	:	BE (Electronics and Instrumentation Engineering) and BTech (Information Technology)
1999	:	BE (Mechatronics) and ME(CSE)
2000	:	BSc (Information Technology)
2001	:	MSc (IT), PhD programmes in Mechanical Engineering and Computer Science and Engineering
2002	:	ME (Applied Electronics)
2003	:	ME (Construction Engineering), ME (CAD/CAM), ME (VLSI Design) and MTech(Chemical Engineering)
2004	:	ME (Mechatronics)
2005	:	PhD programmes in Civil Engineering and Chemical Engineering
2006	:	BTech (Food Technology) and PhD programmes in EEE and Mathematics
2007	:	Autonomous Status conferred and PhD programmes in Physics and Chemistry, BSc(Software Engineering)
2008	:	PhD programmes in ECE, Mechatronics and English
2010	:	ME (Control and Instrumentation Engineering), ME (Computer and Communication Engineering) and PhD Programmes in Electronics and Instrumentation Engineering and Information Technology
2011	:	ME (Communication Systems), ME (Power Electronics and Drives)and PhD programmes in FT, Computer Applications and Management Studies
2012	:	ME (Structural Engineering) and ME (Embedded Systems)
2013	:	MTech (Information Technology) and MTech (Food Technology)

Curricula Aspects-Academic Dynamism

The autonomous status of the institution is exploited to the hilt to make the curriculum ever dynamic in tune with the national and global scenario. The stake holders within the institution as well as from the industry, R&D sector apart from alumni are involved in making the curricula vibrant. Academic flexibility is in-built in the system and the curriculum is enriched periodically based on the ever- changing in requirements of the stakeholders. A well established feedback system is in place which helps in taking timely corrective and improvement actions.

Teaching-Learning and Evaluation

The institution appreciates the fact that Teaching-Learning and Evaluation is the core activity of any educational institution. As the institution enjoys a high rating, the student input is fairly good. However as quite a few students are from rural areas, the Teaching-Learning approach takes into account the student diversity and caters suitably to meet the requirements. The Teaching-Learning process is continuously monitored and refined. The institution is able to attract fairly good quality teachers and their skill and knowledge are updated periodically by exposing them to various in-house programs and sponsoring them for conferences, workshops, seminars, symposiums etc organized by various premier institutions. A well oiled and transparent evaluation process has been established, which is also continuously reviewed based on feedback and experience. Outcome Based Education (OBE) process based on the recently introduced NBA's Washington Accord has been adopted.

Research, Consultancy and Extension

The institution lays great emphasis on research both of fundamental and applied nature. With 119 PhD holders and 192 faculty are pursuing PhD, the institute offers the right environment for research. About Rs. 15 crore funding has been received from various bodies for carrying out research projects in different domains. With 9 patents in its kitty and many more in the pipeline, research is taken to the logical conclusion. The faculty members have published a number of research papers in peer-reviewed journals. The institution has a good number of faculty with rich experience in industry. This has helped in the institution getting actively involved in industry consultancy and energy audit for industries. Senior personnel from industry as members of boards of study for various programmes, contribute towards giving a practical orientation to the curricula. Community Connect: KEC acknowledges the fact that an educational institution should be of service to the community. The Community Radio Service, second of its kind in Tamil Nadu, is in constant touch with rural community around and educates them regarding various aspects of health environment and matters of topical interest. The NSS in the campus periodically visits the villages around and conducts camps for their upliftment. The infrastructural and manpower resource of the institute are also productively used for various programme of governmental and non-governmental agencies. Blood donation camps and contributions to the underprivileged in the society are regular features. The institution also offers scholarship to the tune of Rs. 1 crore every year to the needy students.

KEC also has entered into MOU with a number of industries for mutual benefit. Premier corporates like Cognizant, Free Scale Semiconductors and Texas Instruments have extended their support to our activities by establishing laboratories in our campus.

Infrastructure and Learning Resources

The institution boasts of excellent infrastructure on a par with premier institutions in India. With a built-up area of 18,50,809 Sq.ft in the vast lush green campus, the institution include separate buildings for each programme of study, state-of-the-art laboratories, computer centres , library with a stack of about 1 lakh volumes and with digital access, vast playground with indoor stadium and gymnasium, on-campus accommodation for about 4500 boys and girls, 76 buses to ferry the dayscholars, bank, post office, health centre, air conditioned convention centre with 4500 capacity (biggest of its kind in India) in addition to individual seminar halls for each department etc. The infrastructural facilities are continuously updated and upgraded to meet the ever-changing demand of the industry and society.

In addition to central library, serving as a nodal learning resource, each department of institution has also department library. The IT infrastructure includes about 2714 computers with 110 Mbps Internet and Wi-Fi connectivity. The campus facilities are kept spic and span by continuous monitoring by various department like estate office, electrical maintenance, horticulture, IT service group etc.

Student Support and Progression

Mentoring of the students is given utmost priority and the student progress is continuously monitored and facilitated. The faculty advisors and student counsellors take care of the academic and personal issues of the students. For overall personality development of students, a number of avenues have been established for promoting and nurturing the co-curricular and extra-curricular talents of the students. Placement cell of the college provides meticulous training to enhance employability skills of the students. The student chapters of various national and international professional bodies provide enough scope for students to hone their professional skills. The Student Association in each department is another platform provided to the students to enhance the technical and organizational skills. Students are also motivated to participate in various events in India and abroad. Wards of the faculty and staff in addition to sports persons are provided with scholarship. Free education for 25 students from government schools is also provided each year.

Governance, Leadership and Management

A clear vision with mission is developed for the institution as well as for the departments. A truly academic autonomy exists and authority and responsibility are delegated at various levels. The management has given freedom for the faculty to function within the framework of broad guidelines. The financial delegation of power is also given at various levels. The Internal Quality Assurance System (IQAS) continuously monitors and ensures that the various parameters concerning the Teaching learning process are attained by implementing ISO and NBA systems.

Innovation and Best Practices

The Institution nurtures the culture of environment consciousness which is evident from the well maintained greenery and gardens in the campus. Energy conservation and deployment of renewable energy (Solar) devices are also given due importance. Innovation among the students and faculty is nurtured by providing various facilities and motivation. The Annual Open House Exhibition in Science and Engineering is one such avenue. The Technology Business Incubator (TBI) in the campus established with the grant-in-aid and support of DSI, GOI is an excellent facility for converting the innovative idea of students and faculty into useful product by working hand-in-hand with

entrepreneurs in TBI. Provision of clean drinking water, water harvesting and waste water treatment facilities facilitate conservation and recycling of water.

The Path Ahead

“One cannot rest on one’s laurels. For, the world is becoming highly competitive day by day in all spheres of activity. Education sector is no exception. The Institution is aware that ‘we have miles to go before we sleep’. With its track record, the Institution will continue to march ahead to meet the expectations of the stakeholders and be of greater service to the nation. The journey continues”.

SWOC ANALYSIS

STRENGTHS

Rewards and recognition

- A strong public image on quality, reputation, discipline and infrastructural facilities at the college
- Recognized consistently as one of the top institutions at the national level
- Best Engineering college / Best Principal Awards
- Active TBI which has won National Award for BEST TBI in India
- AICTE – CII Award for best Industry linkage at National Level
- ISO certified & IE(I) Accredited
- Five UG programmes NBA Accredited under Washington Accord. Balance in pipeline

Management and Administration

- A highly supportive and motivating management
- Autonomy in Administration with empowerment at different levels
- Transparent and systematic functioning
- Disciplined organizational culture
- Financial strength and stability
- Financial Assistance to needy / deserving students

Academics

- Autonomous status giving freedom and flexibility in academic and related matters
- Broad range of programmes in the UG and PG level

Faculty and students

- 119 faculty members with PhD and 192 pursuing PhD representing 23.42% and 37.79% respectively of faculty strength
- Structured programmes and motivation for faculty development
- Faculty with very rich industry experience
- Highly skilled supporting staff
- Fairly good and disciplined students
- Motivation and support to students in co-curricular and extra-curricular activities
- Good Placement in reputed organizations

Infrastructure and Environment

- A conducive learning environment in the serene, clean and green campus
- Continuous upgradation of academic, research and welfare facilities
- Excellent facilities for co-curricular and extra-curricular activities

Research and Development

- Funded projects from various Govt. /Academic bodies
- 9 patents obtained; more in pipeline
- Nurturing Innovation through Annual Open House Exhibition on Science and Technology

Industry Focus

- Dynamic value added courses to meet the changing requirements of the industry
- Good tie-up with industry

Community Linkage

- Good community Linkage through Kongu CRS, NCC, NSS, etc.,
- Scholarship for school toppers of government schools
- Forums for the benefit of less privileged in the community
- Computer skill development programmes are police personnel
- Development programmes for Self Help Groups

AREAS OF IMPROVEMENT (WEAKNESSES)

- Utilization of resources to be enhanced
- Communication skills of students and faculty
- Initiative on the part of the faculty to exploit their full potential needs to be improved
- Conceptual understanding of our graduates needs improvement
- Research output in terms of publication in reputed journals needs improvement
- Sponsored research from industries is not upto the desired level
- Interaction with society needs to be improved
- Understanding of real world problems need to be improved
- Internship and industry projects needs to be enhanced
- Tie-up with premier Institutions in India and abroad
- Locational disadvantage

OPPORTUNITIES

- Acquiring Deemed University status
- Tapping research funding
- Leveraging technology for societal cause
- Conversion of Projects into products for better utilization of our resources to meet industry/societal needs
- Applied research with the involvement of TBI and IIPC
- Tie up with noted institutions in India and abroad
- Enhancing industry institute tie-up by showcasing our success stories and potential
- Enhancing tie-up with local bodies, government agencies and NGOs
- Leveraging the membership of professional and industry bodies
- Entrepreneur development through student / faculty entrepreneur development schemes
- Application of technology for enhancing teaching learning process
- IPR and patenting project/research outcomes
- Leveraging the accreditation with NBA under Washington Accord
- Utilizing the potential of TBI to the fullest extent
- Internships and Industry projects
- Leveraging Alumni Strength

CHALLENGES

- Fluctuating market conditions for employment of our graduates
- Mushrooming of engineering institutions
- Entry of Foreign universities
- Supply far in excess of demand for engineering graduates
- Fast changing requirements and expectations of industries
- Possibility of decline in admissions due to external factors
- Declining charm of engineering education

Profile of the Autonomous College



“Education is the manifestation of the perfection already in man.”
- Swami Vivekananda

PART – I**1. Profile of the Autonomous College****1. Name and Address of the College:**

Name :	KONGU ENGINEERING COLLEGE	
Address :	PERUNDURAI RAILWAY STATION ROAD THOPPUPALAYAM PERUNDURAI	
City : ERODE	Pin : 638 052	State : TAMILNADU
Website : www.kongu.ac.in		

2. For communication:

Designation	Name	Telephone with STD code	Mobile	Fax	Email
Principal	Prof. S. Kuppaswami	O:04294220583 R: 04294220630	9942820583	220087	principal@kongu.ac.in
Dean – CDSA	Prof. K. Krishnaswamy	O:04294226555 R: 04294226555	9842724173	220087	dean_cdsa@kongu.ac.in
Steering Committee Co-ordinator	Dr. K. Krishanmurthy	O:04294226730	9842722881	220087	deanrnd@kongu.ac.in

3. Status of the Autonomous College by management.

- I. Government
- II. Private ✓
- III. Constituent College of the University

4. Name of University to which the College is affiliated

Anna University, Chennai

5. a. Date of establishment, prior to the grant of ‘Autonomy’

29.09.1984

b. Date of grant of ‘Autonomy’ to the College by UGC

28.02.2008

6. Type of Institution: Co-education**a. By Gender**

- i. For Men
- ii. For Women
- iii. Co-education ✓

By Shift: Regular

- iv. Regular ✓
- v. Day
- vi. Evening

b. Source of funding : Self - financing

- i. Government
- ii. Grant-in-aid
- iii. Self-financing ✓
- iv. Any other (Please specify)

7. It is a recognized minority institution?

- Yes
- No ✓

If yes specify the minority status (Religious/linguistic/ any other) and provide documentary evidence.

8. a. Details of UGC recognition:

Under Section	Date, Month & Year (dd-mm-yyyy)	Remarks (If any)
i. 2 (f)	30.01.2003	--
ii. 12 (B)	30.01.2003	--

(Enclosed the Certificate of recognition u/s 2 (f) and 12 (B) of the UGC Act)

Annexure - A

b. Details of recognition/approval by statutory/regulatory bodies other than UGC (AICTE, NCTE, MCI, DCI, PCI, RCI etc.)

Under Section/clause	Day, Month and Year (dd-mm-yyyy)	Validity	Programme/ Institution	Remarks
AICTE / Anna University	10-Jun-2014	2014– 2015	B.E. / B.Tech./M.E./ M.Tech./MBA/MCA/ B.Sc./M.Sc.	--

(Enclosed the Certificate of recognition/approval)

Annexure – B1, B2, B3

9. Is the college recognized

a. By UGC as a College with Potential for Excellence (CPE)?

- Yes
- No ✓

If yes, date of recognition: (dd/mm/yyyy)

b. For its contributions / performance by any other governmental agency?

- Yes
- No ✓

If yes, Name of the agency and

Date of recognition: (dd/mm/yyyy)

10. Location of the campus and area:

Location*	Rural
Campus area in sq.mts. or acres	167 Acres
Built up area in sq.mts.	18,50,809 Sq.ft

(*Urban, Semi-urban, Rural, Tribal, Hilly Area, Any others specify)

11. Does the College have the following facilities on the campus (Tick the available facility)? In case the College has an agreement with other agencies in using such facilities provide information on the facilities covered under the agreement.

- Auditorium/seminar complex ✓
- Sports facilities ✓
- play ground ✓
- swimming pool
- gymnasium ✓

- Hostel
 - Boys' hostels ✓
 - Girls' hostels ✓

- Residential facilities
 - for teaching staff ✓
 - for non teaching staff ✓

- Cafeteria ✓

- Health centre –
 - First aid facility ✓
 - Inpatient facility ✓
 - Outpatient facility ✓
 - Ambulance facility ✓
 - Emergency care facility ✓

- Health centre staff –
 - Qualified doctor ✓ Full time ✓ Part-time
 - Qualified Nurse ✓ Full time ✓ Part-time

- Other facilities
 - Bank ✓
 - ATM ✓
 - Post Office ✓
 - Book Shops ✓

- Transport facilities
 - for students ✓
 - for staff ✓

- Power house ✓
- Waste management facility ✓

12. Details of programmes offered by the institution: (Give data for current academic year)

Sl. No.	Programme	Name of the Programme / course	Duration	Entry Qualification	Medium of Instruction	Sanctioned / approved Student intake	No. of students admitted
1.	B.E.	Civil Engineering	4 Years	HSC	English	240	230
2.	B.E.	Mechanical Engineering	4 Years	HSC	English	240	239
3.	B.E.	Mechatronics Engineering	4 Years	HSC	English	120	120
4.	B.E.	Electronics and Communication Engineering	4 Years	HSC	English	240	225
5.	B.E.	Computer Science Engineering	4 Years	HSC	English	240	244
6.	B.E.	Information Technology	4 Years	HSC	English	120	112
7.	B.E.	Electrical and Electronics Engineering	4 Years	HSC	English	120	113
8.	B.E.	Electronics and Instrumentation Engineering	4 Years	HSC	English	120	110
9.	B.E.	Chemical Engineering	4 Years	HSC	English	120	112
10.	B.Tech.	Food Technology	4 Years	HSC	English	60	56
11.	B.Sc.	Computer Systems & Design	3 Years	HSC	English	60	48
12.	B.Sc.	Information Systems	3 Years	HSC	English	60	43
13.	B.Sc.	Software Systems	3 Years	HSC	English	60	22
14.	M.E.	Construction Engineering and Management	2 Years	UG Degree in Engineering / AMIE with relevant branches	English	18	18
15.	M.E.	Engineering Design	2 Years	UG Degree in Engineering / AMIE with relevant branches	English	25	24
16.	M.E.	Computer Science and Engineering	2 Years	UG Degree in Engineering / AMIE / MCA/MSc (5Yrs)	English	25	24
17.	M.E.	Applied Electronics	2 Years	UG Degree in Engineering / AMIE with relevant branches	English	25	25
18.	M.Tech.	Chemical Engineering	2 Years	- do -	English	18	7
19.	M.E.	CAD/CAM	2 Years	- do -	English	18	12
20.	M.E.	VLSI Design	2 Years	- do -	English	18	18
21.	M.E.	Mechatronics	2 Years	- do -	English	18	11

Sl. No.	Programme	Name of the Programme / course	Duration	Entry Qualification	Medium of Instruction	Sanctioned / approved Student intake	No. of students admitted
22.	M.E.	Computer and Communication Engineering	2 Years	- do -	English	18	10
23.	M.E.	Control and Instrumentation Engineering	2 Years	- do -	English	18	18
24.	M.E.	Communication System	2 Years	- do -	English	18	18
25.	M.E.	Power Electronics and Drives	2 Years	- do -	English	18	18
26.	M.E.	Embedded Systems	2 Years	- do -	English	18	18
27.	M.E.	Structural Engineering	2 Years	- do -	English	18	18
28.	M.Tech.	Information Technology (Information & Cyber Warfare)	2 Years	- do -	English	18	18
29.	M.Tech.	Food Technology	2 Years	- do -	English	18	15
30.	MCA	Master of Computer Applications	3 Years	ANY UG DEGREE with Maths	English	120	12
31.	MCA (Lateral)	Master of Computer Applications	2 Years	ANY UG DEGREE with Maths	English	24	31
32.	MBA	Master of Business Administration	2 Years	Any UG Degree	English	120	120
33.	M.Sc.	Software Systems	5 Years	HSC	English	60	33
34.	Ph. D.	Civil Engineering		As per Anna University norms	English		8
35.	Ph. D.	Mechanical Engineering		-do-	English		24
36.	Ph. D.	Mechatronics Engineering		-do-	English		36
37.	Ph. D.	Electronics and Communication Engineering		-do-	English		20
38.	Ph. D.	Computer Science and Engineering		-do-	English		49
39.	Ph. D.	Information Technology		-do-	English		6
40.	Ph. D.	Electrical and Electronics Engineering		-do-	English		6
41.	Ph. D.	Electronics and Instrumentation Engineering		-do-	English		23
42.	Ph. D.	Chemical Engineering		-do-	English		16
43.	Ph. D.	Food Technology		-do-	English		10
44.	Ph. D.	Mathematics		-do-	English		19
45.	Ph. D.	Physics		-do-	English		7
46.	Ph. D.	Chemistry		-do-	English		10

Sl. No.	Programme	Name of the Programme / course	Duration	Entry Qualification	Medium of Instruction	Sanctioned / approved Student intake	No. of students admitted
47.	Ph. D.	English		-do-	English		3
48.	Ph.D.	Master of Computer Applications		-do-	English		19
49.	Ph.D.	Master of Business Administrator		-do-	English		13

13. Does the institution offer self-financed Programmes?

Yes ✓ No

If yes, how many? 48

14. Whether new programmes have been introduced during the last five years?

Yes ✓ No

If Yes? Number: 08

15. List the departments: (Do not list facilities like library, Physical Education as departments unless these are teaching departments and offer programmes to students)

Particulars	Number	Number of Students
Science		
Under Graduate (B.Sc.)	3	282
Post Graduate (M.Sc.)	1	33
Research centre(s)	3	36
Arts		
Under Graduate	-	-
Post Graduate	-	-
Research centre(s)	1	3
Commerce		
Under Graduate	-	-
Post Graduate	-	-
Research centre(s)	-	-
Any Other (Engineering & Technology)		
Under Graduate	10	6448
Post Graduate	16	567
Research centre(s)	10	198
Any Other (Computer Applications)		
Under Graduate	-	-
Post Graduate	1	272
Research centre(s)	1	19
Any Other (Management Studies)		
Under Graduate	-	-
Post Graduate	1	230
Research centre(s)	1	13

16. Are there any UG and/or PG programmes offered by the College, which are not covered under Autonomous status of UGC? Give details.

Nil

17. Number of Programmes offered under (Programme means a degree course like BA, MA, BSc, MSc, B.Com etc.): 48

- a. annual system
- b. semester system ✓
- c. trimester system

18. Number of Programmes with

- a. Choice Based Credit System: All Programmes (2014 Regulation)
- b. Inter/Multidisciplinary Approach: 32
- c. Any other (specify)

19. Unit Cost of Education

(Unit cost = total annual recurring expenditure (actual) divided by total number of students enrolled)

(a) Including the salary component : Rs. 84090.00

(b) Excluding the salary component : Rs. 25880.00

20. Does the College have a department of Teacher Education offering NCTE recognized degree programmes in Education?

Yes No ✓

if yes,

- a. How many years of standing does the department have?
_____ years
- b. NCTE recognition details (if applicable) Notification
No.:
Date: (dd/mm/yyyy)
- c. Is the department opting for assessment and accreditation separately?
Yes No

21. Does the College have a teaching department of Physical Education offering NCTE recognized degree programmes in Physical Education?

Yes No ✓

If yes,

- a. How many years of standing does the department have?
_____ years
- b. NCTE recognition details (if applicable) Notification
No.:
Date: (dd/mm/yyyy)
- c. Is the department opting for assessment and accreditation separately?
Yes No

22. Whether the College is offering professional programme?

Yes ✓ No

If yes, please enclose approval / recognition details issued by the statutory body governing the programme.

The orders issued by the Anna University and AICTE are attached as in the (Annexure – B1, B2, B3)

23. Has the College been reviewed by any regulatory authority? If so, furnish a copy of the report and action taken there upon.

AICTE and Anna University on yearly basis review the functioning and extend the Affiliation (**Annexure – B1, B2, B3**)

24. Number of teaching and non-teaching positions in the College

Positions	Teaching Faculty						Non-Teaching Staff		Technical Staff	
	Professor		Associate Professor		Assistant Professor		*M	*F	*M	*F
	*M	*F	*M	*F	*M	*F				
Sanctioned by the UGC / University / State Government Recruited Yet to recruit	-	-	-	-	-	-	-	-	-	-
Sanctioned by the Management/society or other authorized bodies Recruited Yet to recruit	34	13	15	10	242	194	218	42	186	15

*M - Male *F - Female

25. Qualifications of the teaching staff

Highest Qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
D.Sc./D.Litt.							
Ph.D.	29	13	13	8	30	26	119
M.Phil.	1	0	0	0	30	60	91
PG	4	0	2	2	181	108	297
UG					1		1
Temporary Teachers							

26. Number of Visiting Faculty/ Guest Faculty engaged by the College: Nil

27. Students enrolled in the College during the current academic year, with the following details:

Students	UG		PG		Integrated Masters		M. Phil		Ph.D		Integrated Ph.D		D.Litt./ D.Sc.		Certificate		Diploma		PG Diploma	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
From the state where the College is located	4254	2454	442	613	23	10			172	97										
From other states of India	14	08	05	09																
NRI students																				
Foreign students																				
Total	4268	2462	447	622	23	10			172	97										

*M – Male

*F – Female

28. Dropout rate in UG and PG (average for the last two batches)

UG	0.0095%	PG	0.0655%
----	---------	----	---------

29. Number of working days during the last academic year: 270**30. Number of teaching days during the last academic year: 180****31. Is the College registered as a study centre for offering distance education programmes for any University?**

Yes ✓ No

If yes, provide the

a. Name of the University: INDIRA GANDHI NATIONAL OPEN UNIVERSITY

b. Is it recognized by the Distance Education Council?

Yes ✓ No

c. Indicate the number of programmes offered: 07

32. Provide Teacher-student ratio for each of the programme/course offered:

Sl. No.	Name of the Course	Teacher-Student Ratio
1.	B.E. Civil Engineering	1 : 15
2.	B.E. Mechanical Engineering	1 : 15
3.	B.E. Electronics and Communication Engineering	1 : 15
4.	B.E. Computer Science and Engineering	1 : 15
5.	B.E. Chemical Engineering	1 : 15
6.	B.E. Electrical and Electronics Engineering	1 : 15
7.	B.E. Electronics and Instrumentation Engineering	1 : 15
8.	B.Tech. Information Technology	1 : 15
9.	B.E. Mechatronics Engineering	1 : 15
10.	B.Tech. Food Technology	1 : 15
11.	B.Sc. Computer Systems & Design	1 : 20
12.	B.Sc. Information Systems	1 : 20
13.	B.Sc. Software Systems	1 : 20
14.	M.E. Engineering Design	1 : 12
15.	M.E. Computer Science and Engineering	1 : 12
16.	M.E. Applied Electronics	1 : 12
17.	M.E. Construction Engineering & Management	1 : 12
18.	M.Tech. Chemical Engineering	1 : 12
19.	M.E. CAD/CAM	1 : 12
20.	M.E. VLSI Design	1 : 12
21.	M.E. Mechatronics	1 : 12
22.	M.E. Computer and Communication Engineering	1 : 12
23.	M.E. Control and Instrumentation Engineering	1 : 12
24.	M.E. Communication Systems	1 : 12
25.	M.E. Power Electronics and Drives	1 : 12
26.	M.E. Embedded Systems	1 : 12
27.	M.E. Structural Engineering	1 : 12
28.	M.Tech. Information Technology (Information & Cyber Warfare)	1 : 12

Sl. No.	Name of the Course	Teacher-Student Ratio
29.	M.Tech. Food Technology	1 : 12
30.	Master of Computer Applications	1 : 15
31.	Master of Business Administration	1 : 13
32.	M.Sc. Software Systems	1 : 12

33. Is the College applying for?

Accreditation

Cycle 1	✓	Cycle 2	NA	Cycle 3	NA	Cycle 4	NA	Re-Assessment	NA
---------	---	---------	----	---------	----	---------	----	---------------	----

34. Date of accreditation* (applicable for Cycle 2, Cycle 3, Cycle 4 and re-assessment only) - Not applicable**35. a. Date of establishment of Internal Quality Assurance Cell (IQAC)**

20.09.2011 (Reconstituted on 26.11.2014)

b. Dates of submission of Annual Quality Assurance Reports (AQARs):

Not applicable

36. Any other relevant data, the College would like to include.**(Not exceeding one page)**

- Eco-friendly green and clean campus area of 167 acres with built up area of 18,50,809 sq.ft.
- 13 UG Programmes, 19 PG programmes and 16 Ph.D./M.S. (Research) programmes
- 7832 students, 508 faculty (119 with Ph.D. Qualifications), 461 staff members
- Well defined curriculum – avenue to learn beyond syllabus
- Rs.15.17 crore of research grants received from various funding agencies like AICTE, UGC, DST, CSIR, DIT, MNRE, etc.,
- 5 UG programmes accredited by National Board of Accreditation (NBA), under Washington Accord.
- Recipient of Best Engineering College Award (2001) from ISTE, New Delhi.
- Recipient of Best Engineering College Principal Award – 2 times (2000 & 2013) from ISTE, New Delhi.
- Received National Award for Technology Business Incubator @ Kongu Engineering College (TBI @ KEC) from DST presented by the President of India, May 2013
- Received AICTE – CII Award for Best Industry Linked Institution in India for Department of Electrical and Electronics Engineering based on AICTE – CII 2013 survey
- CII-Yi KEC Students Net received “BEST NET” award at National Level for the year 2013-2014 from CII-Yi, New Delhi.
- Ranked 2nd Position in Tamilnadu and 27th Position in India among Engineering Institutes in India (including IITs and NITs) by Competition Success Review (CSR) Magazine.
- Ranked 2nd Position in Tamilnadu and 43rd position at all India level by “Outlook” magazine (including IIT’s and NIT’s)

- Ranked 2nd Position in Tamilnadu and 32nd Position in private engineering in India by “The Week” Magazine
- Industry – Institute Partnership Cell (IIPC) with approved Energy Auditors
- Community FM radio, second of its kind in Tamilnadu; bagged “Best Community / Campus Radio 2008” award from Radio Duniya, New Delhi.
- State-of-the-art Laboratories
- Campuswide Networking with Wi Fi connectivity, 110 Mbps Internet
- A/C Library, Online Journals and Self Learning facility
- A/C Seminar Halls – 13, A/c. Auditorium – 1, Meditation Hall – 2 and A/C Convention centre with a seating capacity of 4500
- Guest House, Dispensary with Ambulance, Bank with 24 hrs ATM facility and Post Office.
- Un-interrupted water supply and power supply with captive generators of 3250 kVA
- Top 5% of students in each class are given scholarship
- Offers full scholarship to students who excel in sports
- Excellent placement record
- 25 Students from government schools are provided with free education every year

ANNEXURE - A

F.8-52/2002 (CPP-I)



तार : युनिग्रान्ट्स
Grams: UNIGRANTS
विश्वविद्यालय अनुदान आयोग
बहादुरशाह जफर मार्ग
नई दिल्ली-११०००२
UNIVERSITY GRANTS COMMISSION
BAHADUR SHAH ZAFAR MARG,
NEW DELHI-110002

January, 2003

13

The Registrar,
Anna University;
Chennai-625 002 (T.N).

30 JAN 2003

Sub:- List of Colleges prepared under Section 2 (f) and 12 (B) of the UGC Act, 1956-
Inclusion of New College.

Sir,

With reference to letter No. KEC-PA/UGC/24/2002 dated 26-09-2002 received from Kongu Engineering College, Perundurai on the subject cited above, I am directed to say that the name of the following College has been included in the above list under the Non-Government Colleges teaching upto Post Graduate Degree:

<u>Name of the College</u>	<u>Year of Establishment</u>	<u>Remarks</u>
Kongu Engineering College, Perundurai, Erode-638 052 (T.N).	1984	The College is eligible to receive central assistance in terms of the Rules framed under Section 12-B of the U.G.C Act, 1956.

The Indemnity Bond and other documents in respect of the above College have been accepted by the Commission.

Yours faithfully,

K. P. Singh
(Dr. K. P. Singh)
Deputy Secretary

Copy to:-

1. The Principal, Kongu Engineering College, Perundurai, Erode-638 052 (T.N).
2. The Secretary, Department of Higher Education, Government of Tamil Nadu, Chennai (T.N).
3. The Joint Secretary, UGC, Southern Regional Office, P.B. No. 152, A.P.S.F.C. Building, IV Floor, 5-9-194, Chirag Ali Lane, Hyderabad-500 001 (A.P).
4. Section Officer, FD-III Section, UGC, New Delhi.
5. All Sections, UGC, New Delhi.
6. D.T. P. Cell, UGC, New Delhi.
7. Guard file.

J. S. Rawat
(J.S. Rawat)
Section Officer

ASPO
A.O.
Ch. Sekaran
E.O.
P.A.
Stereo
V.P. LIPC.

ANNEXURE – B1



ANNA UNIVERSITY

CHENNAI - 600 025, INDIA

Phone : (O) 22352161, 22357004

Fax : 91-44-2235 1956

Gram : ANNATECH

E-mail : registrar@annauniv.edu

REGISTRAR

Lr.No.451/CAI/AU/2014

Date: 11.09.2014

TO WHOM IT MAY CONCERN

This is to certify that Kongu Engineering College (Autonomous), Perundurai Railway Station Road, Thoppupalayam, Perundurai, Erode District – 638 052 was established in 1984 and Affiliated to ANNA UNIVERSITY, CHENNAI -600 025 since 2001.

The College is recognized by the University Grants Commission under section 2 (f) & 12 (b) of the UGC Act, 1956 in the year 2003 and as an Autonomous Institution in the academic 2007-2008 year.

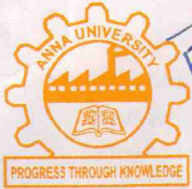
The following courses are affiliated to Anna University, Chennai:

Sl. No.	Name of the Course(s) and Duration (intake)	Affiliation		Period of Validity for the year(s)
		Permanent	Temporary (Provisional)	
UNDER GRADUATE TECHNICAL DEGREE COURSES				
1.	B.E. -Civil Engineering(240)-4 Years	Permanent	...	2014-15
2.	B.E. -Mechanical Engineering(240) - 4 Years	Permanent	...	2014-15
3.	B.E.- Electronics and Communication Engineering(240) - 4 Years	Permanent	...	2014-15
4.	B.E. -Computer Science and Engineering(240)- 4 Years	Permanent	...	2014-15
5.	B.E. -Electrical and Electronics Engineering(120)-4 Years	Permanent	...	2014-15
6.	B.Tech.- Chemical Engineering(120)- 4 Years	Permanent	...	2014-15
7.	B.E. -Electronics and Instrumentation Engineering(120)- 4 Years	Permanent	...	2014-15
8.	B.Tech.-Information Technology(120)- 4 Years	Permanent	...	2014-15
9.	B.E. -Mechatronics(120)- 4 Years	Permanent	...	2014-15
10.	B.Tech. -Food Technology(60)- 4 Years	...	Provisional	2014-15
POST GRADUATE TECHNICAL DEGREE COURSES				
1.	M.E. -Engineering Design(25)- 2 Years	Permanent	...	2014-15
2.	M.E. -Computer Science and Engineering(25)- 2 Years	Permanent	...	2014-15
3.	M.E. -Applied Electronics(25)- 2 Years	Permanent	...	2014-15
4.	M.E. -Construction Engineering and Management(18)- 2 Years	Permanent	...	2014-15
5.	M.E. -CAD/CAM(18)- 2 Years	Permanent	...	2014-15

6.	M.Tech. -Chemical Engineering(18)- 2 Years	Permanent	...	2014-15
7.	M.E. -VLSI Design(18)- 2 Years	Permanent	...	2014-15
8.	M.E. -Mechatronics(18)- 2 Years	...	Provisional	2014-15
9.	M.E. -Computer and Communication Engineering(18)- 2 Years	...	Provisional	2014-15
10.	M.E. -Control and Instrumentation Engineering(18)- 2 Years	...	Provisional	2014-15
11.	M.E. -Communication systems(18)- 2 Years	...	Provisional	2014-15
12.	M.E. -Power Electronics and Drives(18)- 2 Years	...	Provisional	2014-15
13.	M.E. -Structural Engineering(18)- 2 Years	...	Provisional	2014-15
14.	M.E. -Embedded Systems(18)- 2 Years	...	Provisional	2014-15
15.	M.Tech. -Information Technology (Information and Cyber Warefare)(18) - 2 Years	...	Provisional	2014-15
16.	M.Tech. -Food Technology(18)- 2 Years	...	Provisional	2014-15
17.	M.B.A. – Master of Business Administration(120) - 2 Years	Permanent	...	2014-15
18.	M.C.A. – Master of Computer Applications (120)- 3 Years	Permanent	...	2014-15
UNDER GRADUATE & POST GRADUATE SCIENCE DEGREE COURSES				
1.	B.Sc., -Computer Systems and Design(60)- 3 Years	...	Provisional	2014-15
2.	B.Sc., -Information Systems(60)- 3 Years	...	Provisional	2014-15
3.	B.Sc. -Software Systems(60)- 3 Years	...	Provisional	2014-15
4.	M.Sc. -Software Systems(60)- 5 Years	...	Provisional	2014-15


REGISTRAR
REGISTRAR
ANNA UNIVERSITY
CHENNAI-600 025

ANNEXURE – B2



REGISTRAR

ANNA UNIVERSITY
CHENNAI - 600 025, INDIA

21 / SP
ET 16/364241 IN
153/7
Comptroller / Secretary
Date: 16/7/14
15/7/14
Phone : (O) 22352161, 22357004
Fax : 91-44-2235 1956
Gram : ANNATECH
E-mail : registrar@annauniv.edu

Lr No. 02 /AFFLN/CAI/AU/CBE/2014-15/7378

Date: 23-06-2014

To

The Principal,
Kongu Engineering College (Autonomous),PERUNDURAI
RAILWAY STATION
ROAD,THOPPUPALAYAM,PERUNDURAI, ERODE-
638052



Sir,

Sub: AU - AFFILIATION - Provisional Affiliation for the existing course(s) / New course(s) / variation in intake - U.G. / P.G. for the academic year 2014-15 Granted - Reg.

- Ref: 1. Your application for affiliation for the academic year 2014-15
2. AICTE Approval for the academic year 2014-15.

I am to inform that under the provisions of Section 7.6.1 of the Statutes for affiliation of Anna University, Chennai, **Provisional Affiliation** for the continuation of the existing course(s) / new course(s) / variation in intake in the existing course(s) is granted for the following U.G / P.G. courses with the sanctioned intake mentioned against each course for the academic year **2014-15** at **Kongu Engineering College (Autonomous),PERUNDURAI RAILWAY STATION ROAD,THOPPUPALAYAM,PERUNDURAI, ERODE-638052.**

Sl. No.	Degree	Course(s)	Sanctioned Intake	
			2013-14	2014-15
1	B.Tech.	Food Technology	60	60
2	M.E.	Communication Systems	18	18
3	M.E.	Computer and Communication Engineering	18	18
4	M.E.	Control and Instrumentation Engineering	18	18
5	M.E.	Embedded Systems	18	18
6	M.E.	Mechatronics	18	18
7	M.E.	Power Electronics and Drives	18	18
8	M.E.	Structural Engineering	18	18
9	M.Tech.	Food Technology	18	18
10	M.Tech.	Information Technology(Information & Cyber Warefare)	18	18
11	B.Sc.	Computer Systems and Design	-	60
12	B.Sc.	Information Systems	-	60
13	M.Sc.	Software Systems (5 Years)	-	60
14	B.Sc.	Software Systems	-	60

The above said Provisional Affiliation is being granted subject to the fulfillment of the conditions mentioned below:

- Production of Originals of AICTE / COA / DGS approval and all other related documents for verification, whenever demanded by the University.

- Verification by a committee towards the fulfillment of the conditions mentioned above and the continued fulfillment of the requirements for the above-mentioned course(s) as per the norms and standards of AICTE and the laboratory requirements as per the curricula and syllabi of Anna University, Chennai for the above courses. In the event of any violation/infringement of the above said conditions and / or the provisions of Anna University, Chennai Act / Statutes / Regulations, AICTE Act, norms & standards / regulations / guidelines or any other law time being in force, suitable action including suspension / withdrawal of affiliation of course(s) may be initiated against the college.
- Under no circumstances, fresh admission be made in the above course(s) during the academic year 2015-16, until and unless the continuation of provisional affiliation is obtained from the University.

The Provisional Affiliation is granted without prejudice to the right of the University of requiring production of certificate required under Section 37-B of TAMILNADU Reforms (LC) Act 1961 subject to the decision of the Hon'ble High Court of Madras in W.A. No. 3454 / 2002 batch and W.A. No. 3482 / 2002 batch.

The Chairman should submit an undertaking duly signed on a Rs.100/- non-judicial stamp paper to **The Registrar, Anna University, Chennai 600 025**, within 15 days from the date of receipt of this letter stating that the conditions specified above be fulfilled and The Chairman is aware of the fact that the University may conduct surprise inspections to verify the fulfillment of requirements as per the norms and standards of Anna University for the continuation of affiliation.

Yours sincerely,



Copy to:

hms
23/6/14

[Handwritten signature]
REGISTRAR
REGISTRAR
ANNA UNIVERSITY
CHENNAI-600 025

1. The Commissioner of Technical Education, DOTE campus, Chennai - 600 025.
2. The Regional Officer, Southern Regional Office, AICTE, 26, Haddows Road, Shastri Bhawan, Chennai 600 006.
3. The Controller of Examinations, Anna University, Chennai - 600 025.
4. The Director, Student Affairs, Anna University, Chennai - 600 025.
5. Master file.

ANNEXURE – B3



F.No. Southern/1-2017386438/2014/EOA

Date: 10-Jun-2014

To,
The Principal Secretary
(Higher Education) Govt. of Tamil Nadu,
N. K. M. Bld. 6th Floor Secretariat,
Chennai-600009

Sub: Extension of approval for the academic year 2014-15

Ref: Application of the Institution for Extension of approval for the academic year 2014-15

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations 2012 notified by the Council vide notification number F-No.37-3/Legal/2012 dated 27/09/2012 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Regional Office	Southern	Application Id	1-2017386438
		Permanent Id	1-3589631
Name of the Institute	KONGU ENGINEERING COLLEGE	Institute Address	PERUNDURAI RAILWAY STATION ROAD, THOPPUPALAYAM PERUNDURAI, ERODE - 638 052, PERUNDURAI, ERODE, Tamil Nadu, 638052
Name of the Society/Trust	THE KONGU VELLALAR INSTITUTE OF TECHNOLOGY TRUST	Society/Trust Address	KONGU ENGINEERING COLLEGE CAMPUS PERUNDURAI RAILWAY STATION ROAD THOPPU PALAYAM PERUNDURAI - 638052 ERODE DT TAMILNADU, PERUNDURAI, ERODE, Tamil Nadu, 638052
Institute Type	Unaided - Private		

Opted for change from Women to Co-ed	No	Opted for change of name	No	Opted for change of site	No
Change from Women to Co-ed approved	Not Applicable	Change of name Approved	Not Applicable	Change of site Approved	Not Applicable

to conduct following courses with the intake indicated below for the academic year 2014-15



Application Id: 1-2017386438			Course	Full/Part Time	Affiliating Body	Intake 2013-14	Intake Approved for 14-15	NRI Approval status	PIO Approval status	Foreign Collaboration Approval status
Program	Shift	Level								
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	APPLIED ELECTRONICS	FULL TIME	Anna University, Chennai	25	25	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	CAD CAM	FULL TIME	Anna University, Chennai	18	18	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	CHEMICAL ENGINEERING	FULL TIME	Anna University, Chennai	18	18	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	COMMUNICATION SYSTEMS	FULL TIME	Anna University, Chennai	18	18	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	COMPUTER AND COMMUNICATION ENGINEERING	FULL TIME	Anna University, Chennai	18	18	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	COMPUTER SCIENCE AND ENGINEERING	FULL TIME	Anna University, Chennai	25	25	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	CONSTRUCTION ENGINEERING AND MANAGEMENT	FULL TIME	Anna University, Chennai	18	18	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	CONTROL AND INSTRUMENTATION	FULL TIME	Anna University, Chennai	18	18	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	EMBEDDED SYSTEMS	FULL TIME	Anna University, Chennai	18	18	NA	NA	N



Application Id: 1-2017386438			Course	Full/Part Time	Affiliating Body	Intake 2013-14	Intake Approved for 14-15	NRI Approval status	PIO Approval status	Foreign Collaboration Approval status
Program	Shift	Level								
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	ENGINEERING DESIGN	FULL TIME	Anna University, Chennai	25	25	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	FOOD TECHNOLOGY	FULL TIME	Anna University, Chennai	18	18	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	INFORMATION TECHNOLOGY (INFORMATION AND CYBER WARFARE)	FULL TIME	Anna University, Chennai	18	18	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	MECHATRONICS	FULL TIME	Anna University, Chennai	18	18	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	POWER ELECTRONICS AND DRIVES	FULL TIME	Anna University, Chennai	18	18	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	STRUCTURAL ENGINEERING	FULL TIME	Anna University, Chennai	18	18	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	VLSI DESIGN	FULL TIME	Anna University, Chennai	18	18	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	CHEMICAL ENGINEERING	FULL TIME	Anna University, Chennai	120	120	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	CIVIL ENGINEERING	FULL TIME	Anna University, Chennai	240	240	NA	NA	N



Application Id: 1-2017386438			Course	Full/Part Time	Affiliating Body	Intake 2013-14	Intake Approved for 14-15	NRI Approval status	PIO Approval status	Foreign Collaboration Approval status
Program	Shift	Level								
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	COMPUTER SCIENCE AND ENGINEERING	FULL TIME	Anna University, Chennai	240	240	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	ELECTRICAL AND ELECTRONICS ENGINEERING	FULL TIME	Anna University, Chennai	120	120	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	ELECTRONICS AND INSTRUMENTATION ENGINEERING	FULL TIME	Anna University, Chennai	120	120	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	ELECTRONICS & COMMUNICATION ENGG	FULL TIME	Anna University, Chennai	240	240	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	FOOD TECHNOLOGY	FULL TIME	Anna University, Chennai	60	60	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	INFORMATION TECHNOLOGY	FULL TIME	Anna University, Chennai	120	120	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	MECHANICAL ENGINEERING	FULL TIME	Anna University, Chennai	240	240	NA	NA	N
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	MECHATRONICS	FULL TIME	Anna University, Chennai	120	120	NA	NA	N

- Validity of the course details may be verified at www.aicte-india.org>departments>approvals



The above mentioned approval is subject to the condition that KONGU ENGINEERING COLLEGE shall follow and adhere to the Regulations, guidelines and directions issued by AICTE from time to time and the undertaking / affidavit given by the institution along with the application submitted by the institution on portal and subsequently upload and update the student/ faculty/ other data on portal as per the time schedule which will be intimated by AICTE.

In case of any differences in content in this Computer generated Extension of Approval Letter, the content/information as approved by the Executive Council / General Council as available on the record of AICTE shall be final and binding.

Strict compliance of Anti-Ragging Regulation:- Approval is subject to strict compliance of provisions made in AICTE Regulation notified vide F. No. 37-3/Legal/AICTE/2009 dated July 1, 2009 for Prevention and Prohibition of Ragging in Technical Institutions. In case Institution fails to take adequate steps to Prevent Ragging or fails to act in accordance with AICTE Regulation or fails to punish perpetrators or incidents of Ragging, it will be liable to take any action as defined under clause 9(4) of the said Regulation.

(Dr. Kuncheria P. Isaac)

Member Secretary, AICTE

Copy to:

- 1. The Regional Officer,**
All India Council for Technical Education
Shastri Bhawan 26, Haddows Road
Chennai - 600 006, Tamil Nadu
- 2. The Director Of Technical Education,**
Tamil Nadu
- 3. The Registrar,**
Anna University, Chennai
- 4. The Principal / Director,**
KONGU ENGINEERING COLLEGE
PERUNDURAI RAILWAY STATION ROAD,
THOPPUPALAYAM
PERUNDURAI, ERODE - 638 052,
PERUNDURAI, ERODE,
Tamil Nadu, 638052
- 5. The Secretary / Chairman,**
THE KONGU VELLALAR INSTITUTE OF TECHNOLOGY TRUST
KONGU ENGINEERING COLLEGE CAMPUS
PERUNDURAI RAILWAY STATION ROAD
THOPPU PALAYAM
PERUNDURAI - 638052
ERODE DT TAMILNADU,



All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

PERUNDURAI, ERODE,
Tamil Nadu, 638052

6. Guard File(AICTE)

Application Number: 1-2017386438*

Page 6 of 6

Note: This is a Computer generated Letter of Approval.No signature is required.

Letter Printed On:10 June 2014

Printed By : AE450521

Criterion - I: Curricular Aspects



“The curriculum is to be thought of in terms of activity and experience rather than knowledge to be acquired and facts to be stored.”

-Haddow Report UK

PART – II

CRITERION - I: CURRICULAR ASPECTS

EXECUTIVE SUMMARY

Kongu Engineering College is an autonomous institution that offers 13 undergraduate, 19 postgraduate, 16 PhD / MS programmes in Engineering, Technology, Applied Sciences and Management disciplines. New academic programmes and courses are introduced in accordance with the emerging national and global trends and also relevant to the local needs. Need-based curricula are framed in consultation with the expert groups and other stake-holders to suit the professional and personal needs of the students and for realization of the core values. The curriculum development has been carried out with a prime focus on improving confidence, behaviour, oral and written communication, employability, inter-disciplinary learning, industry oriented learning, analytical skills and problem solving capacity, professional ethics and ICT skills.

The college has adopted the choice based credit system and developed “Outcome Based Teaching Learning” (OBTL) curricula with explicit statement of objectives and expected target skills for every course offered. The curricula of each programme contain syllabi consisting of theory and practical courses including core courses, elective courses, workshop/computer practice, industrial training, seminar presentation, project work, educational visits, etc. Revision in curriculum is done once in two years for all programmes. Academic bodies such as Board of Studies, Standing Committee and Academic Council are involved during the revision of syllabus. Systems and procedures of the college are audited by Quality Management System – ISO 9000, while Academic activities are monitored by IQAC and Academic Audit Committee. Reports and comments given by these bodies are considered for ensuring the quality sustenance and enhancement.

1.1 Curriculum Design and Development

1.1.1 How are the institutional vision/mission reflected in the academic programmes of the College?

The vision and mission statements of the college are as follows:

VISION	MISSION
To be a centre of excellence for development and dissemination of knowledge in Applied Sciences, Technology, Engineering and Management for the Nation and beyond.	We are committed to value based Education, Research and Consultancy in Engineering and Management and to bring out technically competent, ethically strong and quality professionals to keep our Nation ahead in the competitive knowledge intensive world.

Based on the above vision and mission of the institution, the departments' vision and mission statements are framed. The Programme Educational Objectives (PEOs) and Programme Outcomes (POs) for each programme offered by the departments are developed in line with the mission and vision of the departments. The Course Outcomes (COs) are thereafter developed for each course. Thus, it is ensured that from the apex level of vision of the Institute to the operating level of COs, they are in alignment. The college follows an "Outcome Based Teaching Learning" (OBTL) curriculum with explicit statement of objectives and expected target skills for each course offered. The vision/ mission of the institution are reflected in the academic programmes through the following activities:

- ✓ Teaching - learning activities
- ✓ Research activities
- ✓ Employment & Entrepreneurship based activities

Teaching & learning activities:

- i. The academic programs offered by the institution are designed to meet the needs of the society and the industry and also based on the higher education requirements. The curricula and syllabi are devised in line with the changes in emerging technologies / thrust areas. The same are revised once in two years to incorporate the latest developments. The teaching methods / techniques are also modified in order to enhance the teaching-learning process. This strategy has helped the institution to march forward continuously to achieve its vision to remain as a reputed centre for knowledge dissemination.
- ii. Innovations in teaching process are brought in through ICT enabled teaching methods, practical – oriented teaching, mini-projects, etc.
- iii. Students are enabled to enhance their technical /applied skills by exhibiting their innovative ideas/ findings in Open House Exhibition on Science and Technology conducted every year in the campus.
- iv. In order to groom the students as quality professionals, the college has been patronizing student chapters of professional bodies like IEEE (USA), ISTE, IETE , ICT Academy of Tamilnadu, Computer Society of India, Institution of Engineers(India), Indian Institute of Chemical Engineers and Society of Automotive Engineers.

- v. Social responsibilities and social consciousness are inculcated amongst students by offering courses like Value Education, Economics and Management for Engineers, Total Quality Management, Professional Ethics and Human Values and Environmental Science.

Research activities:

- i. The institution offers M.S. (by research) and Ph.D. in 16 programmes. Research scholars are encouraged to do fundamental and applied research works in the thrust areas/emerging areas.
- ii. The members of the faculty are encouraged to undertake projects funded by various agencies like UGC, AICTE, DST, DRDO, etc. The knowledge gained by the faculty members through research activities enhances the teaching - learning process. They also encourage students to get involved in the ongoing research projects. This strategy helps the students and faculty march ahead in the competitive knowledge intensive world.

Employment & Entrepreneurship based activities

- i. Employability of students is ensured by developing their language proficiency, communication skills and technical skills. In order to improve the overall skill set of the students, the college has students' association in each department and have forums like Placement Cell, Higher Education/Competitive Examination Cell, Entrepreneur Development Cell, Student Counseling Cell, Yoga and Meditation Club, English Proficiency Club, Robotics Club, Android Application Development Club and Aero Modeling Club that organize various activities.
- ii. Technology Business Incubator (TBI) provides the students with the opportunity to work with entrepreneurs' in development of real time projects / products useful for the industry and society, thus providing the students invaluable hands-on experience useful for employability / entrepreneurship.
- iii. Entrepreneurship Management Development Cell (EMDC) caters to the needs of students who are aspiring to become entrepreneurs. To nurture entrepreneurial skills and to inculcate ethical behaviour, the curriculum of majority of the programme includes courses like Entrepreneurship Development, Professional Ethics & Human values and Value education.
- iv. TBI@KEC in association with EMDC conducts DST sponsored
 - a) Entrepreneurship awareness camps for students periodically to sow the seeds of entrepreneurship among the students.
 - b) Two week faculty development programmers on Entrepreneurship so that faculty participants can propagate the culture of entrepreneurship among the students and fellow faculty members.
- v. The student / faculty entrepreneur scheme launched recently by TBI @KEC aims at converting innovative ideas of students / faculty into viable commercial products by offering all assistants including mentoring and financial grant.

1.1.2 Describe the mechanism used in the design and development of the curriculum? Give details on the process. (Need Assessment, Feedback, etc)

Curriculum development process is coordinated by the Curriculum Development Cell (CDC) through its activities. The flowchart shown in Fig.1 shows the approach followed by the college in designing and developing the curriculum.

First stage: Current status, Feedback and review

- Based on the needs of the society and in relevance to the regional and national developmental requirements, the faculty of each department is having the responsibility of designing suitable courses in the core and allied subjects, introducing new courses of study, updating existing courses to match the current state-of-the-art in each discipline, and preparing course materials and human resources.
- Inputs from recruiters are considered to meet their requirements
- At the end of every semester, suggestions are collected from the students and faculty about each course.
- Model curricula proposed by AICTE and UGC and other universities of national and international repute are considered while formulating and revising the curricula and syllabi.
- Requirement to meet GATE / IES syllabus is also taken into consideration while framing the curricula and syllabi.

Second stage: Development of curricula and syllabi

- At departmental level, necessary inputs regarding the revision of curricula and syllabi are identified by the faculty and students through the interactions with alumni, employers and academic experts, during their participation / presence in seminars, workshops, alumni meet, guest lectures, campus interviews and industrial visits.
- Consideration of projections in the subject areas over next 5 years- Trend analysis.
- Evaluation of availability of experts, expertise, training, tools and techniques.
- Based on the consolidated feedback from the above processes, the faculty designs a new curriculum after a great deal of deliberations. To prepare a new course, it takes 6-12 months.
- Curriculum development cell co-ordinates framing of curricula and syllabi for common courses.

Third stage: Formalizing the decisions in statutory academic bodies

- Board of Studies (BoS) of each programme comprising industry experts, alumni and university representatives in addition to senior faculty of the institution deliberates in depth on the draft syllabi and curricula. The final document on the same is made taking into account the various suggestions in the meeting of the BoS. In addition, methodologies for innovative teaching and evaluation techniques and method of continuous assessment are also discussed and finalized.

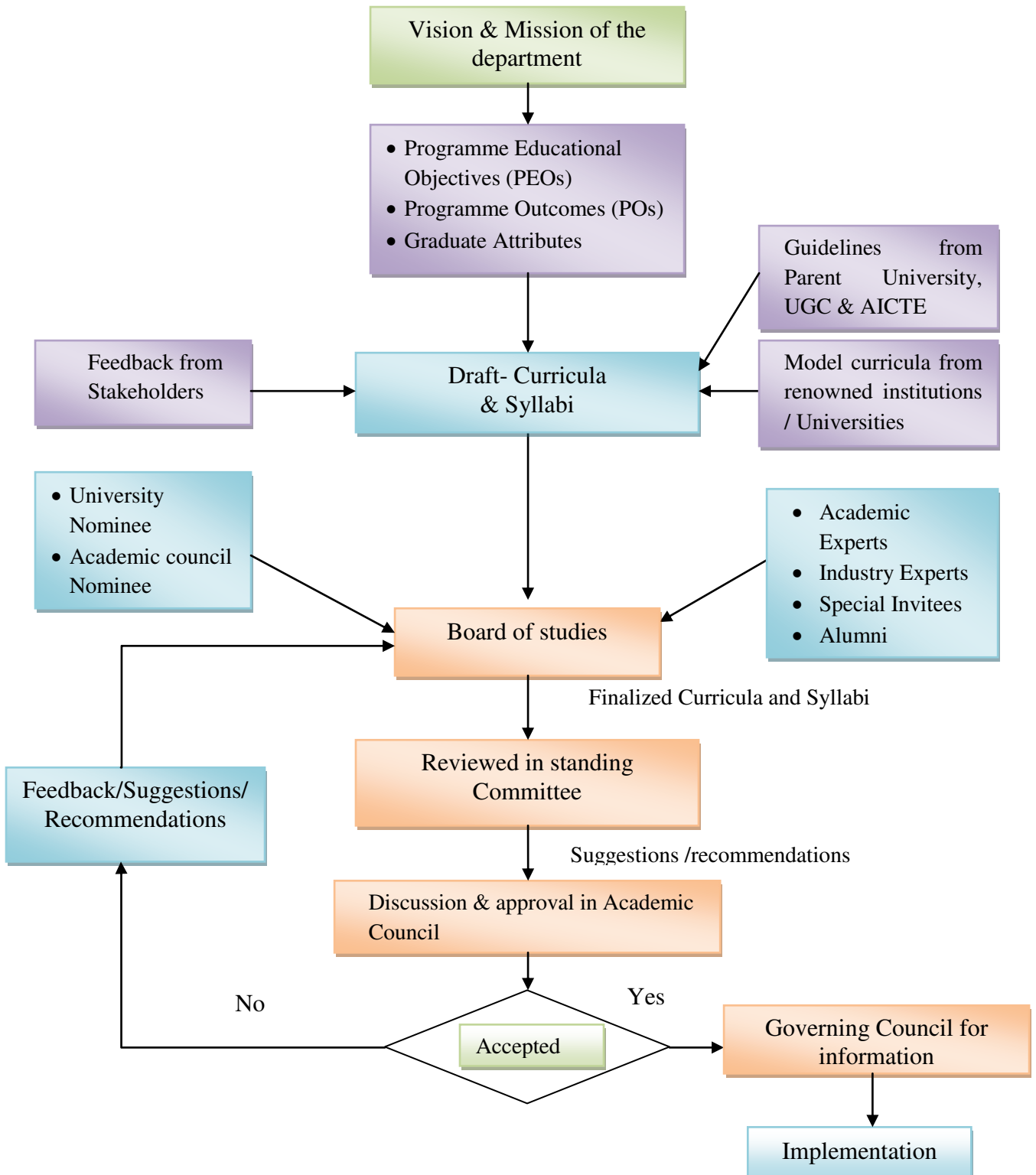


Fig.1 Mechanism used in the design and development of the curriculum.

- Standing Committee considers the proposed curricula and syllabi submitted by the BoS and recommends to the Academic Council for its consideration and approval with or without modification.

- The recommendations of the standing committee are placed before the Academic council (as per the norms of UGC) consisting of eminent educationists, industry experts and senior faculty including Heads of the departments, Deans and chaired by the Principal, for consideration and approval. Academic council formulates the common standards for the curricula of all programmes and approves the syllabi of all programmes after framing rules and regulations for each programme.

1.1.3 How does the College involve industry, research bodies, and civil society in the curriculum design and development process? How did the College benefit through the involvement of the stakeholders?

The institution involves internal and external academicians and experts from industry (employers) / service sector in the curriculum development process through their participation in the BoS and academic council. The BoS comprises the following members:

- i. University Nominee
- ii. Academic Council Nominee
- iii. Experts from the Department
- iv. Experts from other academic institutions
- v. Experts from industries
- vi. Alumni

Based on the recommendations from the BoS, the standing committee and academic council will approve the syllabi and curricula for each programme. The college gets benefitted by upgrading its syllabi and curricula to the higher standards through the involvement of the stakeholders. For example, the following courses suggested by industries viz. INFOSYS and Robert Bosch have been included in the curricula:

- i. Business Intelligence
- ii. Web Technology
- iii. Enterprise Computing
- iv. Introduction to Air Craft System
- v. Automotive Electronics

The college also gets feedback from stakeholders like industry personnel, alumni and parents in various forums and incorporates the same relevant to the curricula / syllabi during revision.

1.1.4 How are the following aspects ensured through curriculum design and development?

Employability:

Employability is ensured through multi-skill development of the student. To develop multi skills, the curricula include the following provisions:

- i. Curricula and syllabi are prepared with the contribution from the industry to meet their requirements and to improve contemporary industrial practices for enhancing productivity.

- ii. In each course, the students are facilitated to give a presentation/ a seminar, in addition to submitting two assignments / a mini project.
- iii. Certain basic technical training courses like Engineering Drawing, Engineering Practices and Computer Programming (as theory and practical courses) are included for all undergraduate programmes offered.
- iv. Courses on development of communication skills are included in the curriculum
- v. Industrial training is mandatory for all UG programmes and Industry project is mandatory for a few PG programmes like MBA, MCA and M.Sc. Summer / winter internships provide opportunities to the students to learn contemporary industrial practices which enhance their employability potential.

Innovation:

- i. A few programmes have Mini Projects, Design & Fabrication Projects in sixth / seventh semester. This helps the students to bring out innovative projects and exhibits.
- ii. Students are motivated to convert their innovative technical ideas into useful projects by providing all assistance including mentoring and funding in the Annual Open House Exhibition on Science and Technology, thus enhancing their hands – on experience.
- iii. Students are motivated to innovate in the DST- sponsored Technology Business Incubator (TBI @ KEC) in the campus where they get opportunity to work hand-in-hand with entrepreneurs in product development.
- iv. In addition, each programme provides the flexibility to students to select electives across programmes or department (Global Elective Concept). This type of flexibility will help the students to learn multidisciplinary concepts.

Research:

- i. Students are encouraged to submit proposals to various funding agencies and obtain research grants for student projects and also submit application for patents. It is worth mentioning here that the institution has bagged nine patents with student projects and more are in the pipeline.
- ii. Students have to submit two assignments for each course, one of which should be application oriented. This helps the students to explore the possibilities of finding research opportunities in each course.
- iii. The final project work helps the student to do research in the upcoming areas.
- iv. New electives are also introduced in the curriculum by considering emerging research fields.
- v. Providing academic reward for best projects motivates the students to put in their best efforts.
- vi. Financial assistance is provided to students and faculty who present papers in national and international conferences.
- vii. PhD programs are offered by all the departments. The internal and external scholars involved in academic research provide ample opportunity for UG and PG students to take up research problems.

1.1.5 How does the College ensure that the curriculum developed addresses the needs of the society and have relevance to the regional / national developmental needs?

Feedback from alumni, employers and the society representatives are obtained and the suggestions – related to the regional, national and societal needs are incorporated into the curricula and accordingly the syllabi contents are tuned. Examples of societal problems identified by various stakeholders are: Solutions for pollutions in water, air etc; Technology for Rural development; Products with reuse/ recycle property; Renewable source of energy and their management; Technology for productivity enhancement.

Based on the societal needs, the following courses are designed in Civil Engineering programme:

- i. Irrigation and Environmental Engineering
- ii. Municipal Solid Waste Management
- iii. Air Pollution Control Engineering
- iv. Ground Improvement Techniques
- v. Traffic Engineering

Similarly the curricula and syllabi of other programmes are also designed based on the needs of the society.

1.1.6 To what extent does the College use the guidelines of the regulatory bodies for developing or restructuring the curricula? Has the College been instrumental in leading any curricular reform which has created a national impact?

- The college follows the guidelines laid down by Affiliating University, AICTE and UGC for developing and restructuring the curricula. As per the guidelines of the regulatory authorities, the credit range for various programs is fixed as below:

Sl. No.	Program	Credit Range
1	B.E. / B.Tech	180-190
2	B.Sc	120-135
3	M.E./ M.Tech	70- 80
4	M.Sc (5year program)	180-190
5	M.B.A	100-110
6	M.C.A	110-120

- AICTE guidelines related to UG curriculum composition shown below is followed:
 - Basic Sciences – ~15%
 - Engineering Sciences – ~20%
 - Humanities and social sciences – ~5%
 - Core and Core Electives – ~60%
- As per the guidelines of the University, specific subjects like Total Quality Management, Professional Ethics and Human Values, Environmental Science, Economics and Management for Engineers are introduced.
- The curricula and syllabi are kept dynamic by restructuring the same periodically taking into account the changing national and global scenario.
- The value added course conducted by various departments fill the gap, if any, in the curricula so as to keep the students up-to date.

- Kongu Engineering College is one among the very few institutions offering programs in Food Technology and Mechatronics Engineering. The curricula have been developed for these programmes taking into account the nation's need in these domains.

1.2 Academic Flexibility

1.2.1 Give details on the following provisions with reference to academic flexibility.

a. Core / Elective options

i) Core options

Core courses are common for all students of a programme.

ii) Elective options

Students are given the option to choose electives within and across the department. One course can be selected as global elective in seventh semester across the departments. Remaining four elective courses can be selected from the list provided in the curriculum. In the forth coming Choice Based Credit System (CBCS) for 2014 regulations, more flexibility will be provided to the students in choosing electives.

b. Enrichment courses

➤ The following courses are offered with an objective of promoting value education / social citizenship roles among the students:

i. Value Education

ii. Professional Ethics and Human Values

iii. Total Quality Management

iv. Environmental Science

v. Entrepreneurship Development

vi. Economics and Management for Engineers

➤ Skills development through Value added courses on various engineering software packages / core areas in their field of study as listed in 1.3.4.

➤ Additional Training Provided:

i. Soft skill training through Infosys Campus Connect programme

ii. Quantitative aptitude, verbal and logical reasoning programme

iii. Language development programme

iv. Entrepreneurship Awareness camps

c. Courses offered in modular form

All courses offered are in modular form.

d. Credit transfer and accumulation facility

In the forth coming 2014 regulation based on CBCS, credit transfer facility and accumulation facility will be available for all the UG/PG Programmes.

e. Lateral and vertical mobility within and across programmes and courses

Lateral entry to 3rd semester is permitted in all the B.E./B.Tech programmes for students who have qualified in three year diploma programme. Similarly in MCA programme, lateral entry to 3rd semester is permitted to the students who have qualified in the three year degree programme.

1.2.2 Have any courses been developed specially targeting international students? If so, how successful have they been? If 'no', explain the impediments.

Not applicable

1.2.3 Does the College offer dual degree and twinning programmes? If yes, give details.

No

1.2.4 Does the College offer self-financing programmes? If yes, list them and indicate if policies regarding admission, fee structure, teacher qualification and salary are at par with the aided programmes?

All programmes fall under the self-financing category. The institution prepares students to qualify for Degree level examinations, both in Undergraduate and Post Graduate level.

➤ Undergraduate Degree Programmes in Engineering and Technology are:

- B.E. Civil Engineering
- B.E. Mechanical Engineering
- B.E. Electronics and Communication Engineering
- B.E. Computer Science and Engineering
- B.Tech Chemical Engineering
- B.E. Electrical and Electronics Engineering
- B.E. Electronics and Instrumentation Engineering
- B.Tech Information Technology
- B.E. Mechatronics Engineering
- B.Tech Food Technology

➤ Post Graduate Degree Programmes in Engineering and Technology are:

- M.E. Engineering Design
- M.E. Computer Science and Engineering
- M.E. Applied Electronics
- M.E. Construction Engineering & Management
- M.Tech. Chemical Engineering
- M.E. CAD/CAM
- M.E. VLSI Design
- M.E. Mechatronics
- M.E. Computer and Communication Engineering
- M.E. Control and Instrumentation Engineering
- M.E. Communication Systems
- M.E. Power Electronics and Drives
- M.E. Embedded Systems
- M.E. Structural Engineering
- M.Tech. Information Technology (Information & Cyber Warfare)
- M.Tech. Food Technology

M.S. (By research) and PhD programmes in relevant departments are available.

➤ Other Graduate and Post Graduate Degree Programmes are:

- B.Sc. Computer Systems & Design
- B.Sc. Information Systems
- B.Sc. Software Systems
- M.Sc. Software System (5 year programme)
- Master of Business Administration (MBA)
- Master of Computer Applications (MCA)

Admission policy: As per Government of Tamilnadu norms.

Fee structure: As per Government of Tamilnadu norms.

Teacher qualification: As per AICTE norms

Salary: As per AICTE norms

1.2.5 Has the College adopted the Choice Based Credit System (CBCS)? If yes, how many programmes are covered under the system?

Semester based credit system with electives are followed in 2011 regulations. Students are permitted to choose elective subjects within the department as well as across the departments. However, in the forth coming 2014 regulations based curriculum, CBCS will be adopted for all the programmes.

1.2.6 What percentage of programmes offered by the College follows annual, semester and trimester system?

* Annual system - Nil

* Semester system - All programmes follow the semester system (100%)

* Trimester system - Nil

1.2.7 What is the policy of the College to promote inter-disciplinary programmes? Name the programmes and what is the outcome?

The college encourages programmes that are inter-disciplinary in nature.

The following programmes fall under this category:

B.E. Mechatronics Engineering

B.E. Electronics and Instrumentation

B.Tech. Information Technology

B.Tech. Food Technology

M.E. VLSI Design

M.E. Mechatronics

M.E. Computer and Communication Engineering

Enhanced job opportunities, multi-disciplinary knowledge acquisition and possibility to explore engineering from a new perspective are some of the advantageous outcomes.

1.3 Curriculum Enrichment

1.3.1 How often is the curriculum of the College reviewed for making it socially relevant and/or job oriented / knowledge intensive and meeting the emerging needs of students and other stakeholders?

Revision in curriculum is done once in two years for all programmes. If required, minor changes in any course are permitted in between with proper approval from the BoS and academic council. Gaps in curricula, if any, are filled by designing and organizing value added programmes regularly in order to meet the changing needs of the industry and society.

1.3.2 How many new programmes have been introduced UG and PG level during the last four years? Mention details.

Eight post graduate programmes have been introduced in last four years.

- Inter-disciplinary (2 programmes)

PG- M.E. Computer and Communication Engineering

M.Tech. Food Technology

- Programmes in emerging areas (6 programmes)
 - M.E. Embedded Systems
 - M.E. Structural Engineering
 - M.E. Communication Systems
 - M.E. Control & Instrumentation Engineering
 - M.E. Power Electronics & Drives
 - M.Tech. Information Technology (Information & cyber warfare)

**1.3.3 What are the strategies adopted for revision of the existing programmes?
What percentage of courses underwent a major syllabus revision?**

The college revises the regulations, scheme of examinations, curricula and syllabi once in two/three years keeping in view the following:

- Feedback from employers.
- Guidelines from the regulatory bodies such as AICTE and UGC.
- Assessment of regional needs.
- Trend analysis.
- Societal and Industrial projections.
- Evaluation of availability of experts, expertise, training, tools and techniques.
- Review on affordability and utility as well as feasibility.
- Addressing the global challenges.
- Feedback from Alumni.
- Feedback from the faculty, students and parents.

104 courses out of 1122 courses (9.26 %) underwent a major syllabus revision. The courses which have major revisions during the last five years in various programmes are as follows:

Civil Engineering

- Construction Materials Methods & Equipment
- Environmental Engineering – I (Including Drawing)
- Environmental Engineering – II (Including Drawing)
- Irrigation Engineering (Including Drawing)
- Advanced Reinforced Cement Concrete (Including Drawing)
- Design of Steel Structure (Including Drawing)

Mechanical Engineering

- Engineering Drawing
- Machine Drawing
- Operations Research
- Industrial Engineering and Cost Estimation
- Automobile Engineering
- Power Plant Engineering
- Heat & Mass Transfer
- CAD/ CAM/ CIM

Mechatronics Engineering

- Electron Devices and Digital Circuits
- Sensors and Signal Processing
- Design of Mechatronics Systems
- Robotics and Machine Vision System
- Automotive Electronics
- Embedded Control

Electrical & Electronics Engineering

- Control Systems
- Microprocessors
- Digital Electronics
- Measurements and Instrumentation
- Electric Power Utilization and Energy Auditing
- Special Electrical Machines
- Digital Signal Processing
- Embedded Control

Electronics & Instrumentation Engineering

- C++ and Data Structures
- C++ and Data Structures Lab
- Microprocessors and Micro controllers
- Digital Signal Processing
- Virtual Instrumentation
- Embedded Control

Electronics & Communication Engineering

- Probability Theory and Random Process
- Communication Systems
- Digital Communication
- Speech Signal Processing
- Embedded System Design
- Automotive Electronics

Computer Science and Engineering

- Principles of Programming and Languages
- Visual Programming Laboratory
- Open Source Systems Laboratory
- Advanced C Programming
- Linux Operating System
- Visual Programming
- Embedded Control

Information Technology

- Advanced C Programming
- Data Structures
- Linux Operating System
- Embedded System Laboratory
- XML & Web Services
- Entrepreneurship Development
- Enterprise Architecture and Technologies
- Enterprise Applications
- Visualization Technologies

Chemical Engineering

- Industrial Training
- Enzyme Engineering
- Air Pollution and Control
- Waste Water Treatment
- Pulp and Paper Technology
- Fundamentals of Nanoscience
- Ecological and Ecosystems Engineering
- Environmental Biotechnology

Food Technology

- Refrigeration and Cold Chain Management
- Food Process Equipment Design
- Food Process Equipment Design and Drawing Laboratory
- Food Laws and Safety
- Industrial Training

Master of Computer Application

- Java Programming
- Web Technology
- Object Oriented Analysis Design
- Visual Programming
- Cloud Computing
- C# and ASP. NET

Master of Business Administration

- Business Communication
- Business Application Software Laboratory
- Professional Skill Development Lab – 1
- Application of Research Methods in Management
- Decision Modeling Lab
- Professional Skill Development Lab – 2
- Indian Economy & Business
- Social Project
- Professional Skill Development Lab – 3
- Professional Skill Development Lab – 4
- Management of Banks and Financial Institution
- Banking Technology Management
- Legal & Regulatory Aspects of Banking

Computer Technology (UG)

- System Software
- Component Based Technology
- Software Project Management
- Environmental Science and Engineering
- Middleware Technologies

Computer Technology (PG)

- Operating Systems
- Computer Networks
- Database Management System
- Knowledge Management
- Data Mining and Data Warehousing
- RDBMS and Advanced JAVA Programming Laboratory
- Software Engineering
- Computational Methods

1.3.4 What are the value-added courses offered by the College and how does the College ensure that all students have access to them?

Value added courses on various engineering software packages / core areas offered in the college are provided in the table below:

Sl. No.	Name of the Department	Value added courses offered
1	Civil Engineering	AutoCAD, STAAD Pro, Primavera, REVIT Architecture MS- Project, E TABS, GATE Coaching Class.
	Mechanical Engineering	AutoCAD, CATIA, ANSYS, HyperMesh, Autodesk Inventor, Pro-E, Solid Works, Hindi coaching class.
	Mechatronics Engineering	AutoCAD, Solid Works, ProE, ANSYS, CNC Programming & Operations, Robot Programming, Relay Logic and PLC & SCADA, MATLAB, LabVIEW, Embedded C Programming, ORCAD, C & C++ programming, MEMS Intellisuite.
2	Electrical & Electronics Engineering	Modeling of Electrical System using MATLAB/Simulink, Application of MATLAB for Electrical Engineers, Embedded System Design, Solar Photovoltaic Technology, BETA Testing, Fundamentals and Safety Aspects of Electrical Appliances, Industrial Drives and its Applications, Service Selection Board Interview, Circuit Design Simulation and PCB Design using ORCAD, Variable Speed Drives, VLSI Design Techniques for PLD
3	Electronics & Instrumentation Engineering	C & C++, Virtual Instrumentation, PLC Programming and its Applications, Advanced Techniques for Test and Measuring Equipments, Distributed Control Systems and Process Simulation, Introduction to MATLAB Programming, Circuit Design, Simulation and PCB Design using ORCAD, VLSI Design, Fundamentals of Electrical Appliances and Safety Aspects, Advanced MATLAB Programming, Signal and Image Processing using MATLAB, EDA Tools for System Design, Image Processing and Soft Computing Techniques using MATLAB
4	Electronics & Communication Engineering	Modeling of Digital Logic Circuits using VHDL, Embedded System, Wireless Embedded System, Image Processing using MATLAB, Embedded uClinux using Blackfin Processor, Advanced Antenna Design and Simulation, ARM Processor Interfacing, Synopsys ASIC Design Tool, Linux for Beginners-A Crash course, ISDN and PRI

Sl. No.	Name of the Department	Value added courses offered
5	Computer Science Engineering	C and C++ Programming, HTML, PHP and MySQL, Web Designing, Machine Learning using Octave, NS2 Simulator, System Maintenance, Web Designing using Photoshop and Dreamweaver, Joomla, Animation and Visual Effects, QualNet, Data Mining Techniques using MATLAB, Application of Bio Inspired Computing in Data Mining, Advanced C Programming, Neuro – Fuzzy – GA Techniques using MATLAB
6	Information Technology	Oracle 10G, Multimedia / Web Design, .NET, Wireless Embedded Systems, Matlab and its application using computational Intelligence, Wireless sensor network research tools and its applications, Qualnet, Java Technologies, Mobile Application development using Android, C & C++, Opinion Mining, NS-2, Soft Computing techniques and its applications using MATLAB, Wireless Network and Network Simulators, Animation Tools, Research issues and simulation tool support in high speed wireless networks,
7	Chemical Engineering	Application of Refrigeration Engineering and Cold Chain Management in Food Processing and Preservation, Process simulation using ASPEN PLUS, Analytical Procedures for <i>Water Analysis</i> : BIS Standards, GATE Coaching, Principles of Chemical Engineering, An Introduction To Computational Fluid Dynamics, Data Analysis through Statistical Techniques, Statistical optimization techniques in chemical engineering, Water and effluent analysis BIS PCD Norms , Hands-on training using HYSYS Software
8	Food Technology	Hurdle Technology, Nondestructive Testing of Food Quality, Application of Chemical Engineering Principles in Food Technology, GM Foods, Minimal Processing of Fruits and Vegetables, Cold Chain Management for Food Processing Industries, Hands On Training In Baking Technology, Advances in Baking Technology, Applications of refrigeration Engineering and cold chain management in food processing and preservation, Sensory Analysis & computation Methods, Scientific Research Techniques for Food Engineers.

Sl. No.	Name of the Department	Value added courses offered
9	Department of Computer Technology - UG	Networking - Fast Track, Multimedia and Web design, .NET Programming, Developing Mathematical skills, Android Application Development, PC Configuration and Trouble Shooting, Software Testing Tools, Career based refreshing course in mathematics, Oracle, Developing Programming Skills, Tools for image processing, Open Source Tools and Cloud Computing, Graphics Programming, Bridge Course in Mathematics, Soft Skills, Internet Technologies & PHP
10	Department of English	French Speaking course
11	MBA	Banking Management, Insurance Management, Soft Skills To Placed Students Under Infosys –Campus Connect Programme, Merchant Banking and Financial Services, Financial and Management Accounting, Legal Aspects of Banking, Principles of Banking, Accounting for Managers, NCFM Modules
12	MCA	Android Application Development, C Programming, Web Designing, English Language Proficiency development programme, PHP

The courses are offered after regular college working hours thereby ensuring that all the students have a chance to attend them. Some courses are offered during the weekends, summer/winter vacations. The infrastructure facilities available in the departments and TBI are made accessible to the students during the conduct of the programmes.

1.3.5 Has the College introduced any higher order skill development programmes in consonance with the national requirements as outlined by the National Skills Development Corporation and other agencies?

Majority of the courses offered in various programmes are designed by considering the thrust areas of National Skills Development Corporation (NSDC). Thrust areas like Automotive, Telecom, Electronics Hardware, Chemicals and Pharmaceuticals, Building and Construction, Food Processing, IT or software, ITES-BPO, Media & Entertainment, Broadcasting, Content Creation, Animation, Healthcare, Banking/ Insurance and Finance, Plumbing, Education/ Skill Development are focused by the various programmes offered by the College. As the programmes are hands-on in nature, they ensure skill development.

1.4 Feedback System

1.4.1 Does the College have a formal mechanism to obtain feedback from students regarding the curriculum and how is it made use of?

Yes.

- Online feedback is collected from the students for the course and the transactional methodologies at the end of every semester to improve the quality of curriculum and teaching methodologies.
- Oral feedback is also collected periodically through class committee meetings and college student council meetings.
- Suggestion boxes are kept in all the departments so that the students can post their suggestions on curricular and related matters.
- Based on the above, necessary action in respect of teaching methodologies and curricular changes with the approval of BOS is taken.

1.4.2 Does the College elicit feedback on the curriculum from national and international faculty? If yes, specify a few methods adopted to do the same – (conducting webinar, workshop, online forum discussion etc.). Give details of the impact on such feedback.

Yes.

- Feedback on curriculum is obtained from national and international faculty experts, when they are invited for conducting workshops, national/international seminars/conferences
- BoS of each programme reviews and updates the syllabus and curriculum
- Online discussions with other lead university faculty are also held by the faculty members to upgrade the curricula to meet the global challenges.

Impact of feedback

- Based on the feedback, the syllabi of a few courses are modified.

1.4.3 Specify the mechanism through which alumni, employers, industry experts and community give feedback on curriculum enrichment and the extent to which it is made use of.

The mechanism for collection of feedback is as follows:

Alumni	Feedback is collected when they visit the college for personal reasons, alumni meet, decade meet, silver jubilee meet or during their presence in the BoS meeting.
Employers / Industries	Feedback is collected when they visit the college for seminars, workshops, conferences, campus placements, BoS meeting and academic council meeting.
Community	Through direct feedback from parents in the Parent – Teacher meet and Informal community contacts.
Academic Peers	Feedback is collected when they visit the college or during the BoS meeting and academic council meeting.

Collected feedback is analyzed during the departmental meetings and in the HOD's meeting. The draft curricula and syllabi incorporating the changes are sent to the BoS members comprising employers / industry nominees and senior professors from premier institutions and later deliberated in detail in the Board meeting before finalizing the same. Then, the Curriculum Development Cell is

notified about the revised curricula and syllabi for approval of BoS, Standing Committee and Academic Council.

The extent to which these feedbacks reflect in the curriculum enrichment is listed below:

- Based on the feedback from various sources, new courses are introduced in emerging areas depending on the technological advancements.
- Existing courses are updated according to the latest technological developments. For example, Automotive Electronics course in Mechatronics programme has been updated in order to incorporate the developments in embedded technology.
- As per the suggestions given by INFOSYS Ltd, the following new courses were introduced:
 - i. Business Intelligence for B.E. (CSE), B.Tech. (IT) and MCA programmes
 - ii. Introduction to Air Craft Systems for B.E. Mechanical & Mechatronics programmes

1.4.4 What are the quality sustenance and quality enhancement measures undertaken by the institution in ensuring effective development of the curricula?

Quality sustenance and quality enhancement measures with reference to curricular design and development / academic flexibility / feedback from stake holders / curriculum update:

Curricular design and development

- Curricula and syllabi have been revised twice during last five years to incorporate the latest developments.
- It is ensured that renowned people in the respective domains form part of the Academic council and BoS.
- About 20-30% of the periods are allotted for practical courses
- Sufficient number of electives are offered in each programme
- Industrial training courses are offered in some programmes like Chemical Engineering and Food Technology.
- Design and Fabrication project has been introduced in some programmes like Civil, Mechanical, Mechatronics and Electronics & Instrumentation.
- There is also provision in the curricula to offer specialized elective subjects, tailor made to enhance the knowledge of PhD scholars in their area of research, as and when required.

Academic flexibility

- The students are also allowed to take elective courses from other programme (Global elective concept) and also in their own domain.

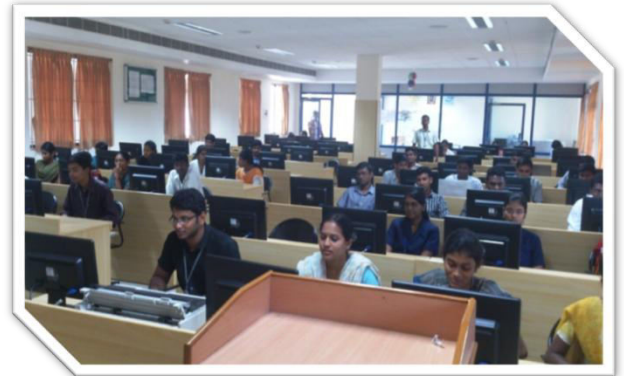
Feedback from stake holders

- Periodic feedback is obtained from various stakeholders and these feedbacks are used for revising the curricula.

Curriculum update

- Periodic update of curricula is ensured by the BoS
- The needs of industry and the research establishments and the employability of students are considered while revising the curriculum.

Criterion - II: Teaching-Learning and Evaluation



“It is the supreme art of the teacher to awaken joy in creative expression and knowledge.”

-Albert Einstein

CRITERION - II: TEACHING-LEARNING AND EVALUATION

EXECUTIVE SUMMARY

Kongu Engineering College recognizes the teaching-learning and evaluation as a highly significant process which requires continuous update, in order to keep pace with the ever changing higher education system and sustain its image in the increasingly competitive environment.

The students are admitted as per the state government norms and it provides opportunities to all sections of society, including disadvantaged sections and first generation learners. The single window system by state government and entrance test conducted by the management association ensure transparency and diversity in students admission. In order to fill the gap and also to meet the special needs of the students, a number of steps are taken, which include extra coaching, bridge courses, special courses on soft skill development, special tutorials and counselling. Liberal financial aid in the form of scholarships etc., is also provided to deserving cases.

The teaching learning process in the college is continuously improving through the facilities like, LCD projectors in the class rooms, 110Mbps Wi-Fi, ORELL communication software, Value added courses etc. Video lectures from Indian Institute of Science (IISc) and Indian Institute of Technology (IITs) are obtained through National Program on Technology Enhanced Learning (NPTEL). Open source learning through e-resources is encouraged. Industrial training credits are inbuilt into the curriculum. The faculty are constantly updated through workshops, seminars and research. 119 faculty members have PhD degrees and nearly 270 are pursuing PhD. Online student feedback system, course monitoring committee feedback, self appraisal, internal and external academic audit are helping to maintain fair quality of teaching, learning and evaluation.

The choice based credit system with student feedback ensures a flexible educational system. A well oiled assessment and evaluation process is also in place.

2.1 STUDENT ENROLMENT AND PROFILE

2.1.1 How does the institution ensure wide publicity and transparency in the admission process?

- All information regarding the Institution, Programmes offered, infrastructure etc. is made available in the College Prospectus and website.
- Wide publicity is given through popular dailies at regional and national level.
- Publicity is also made during the Science & Technology exhibition conducted every year by the Institution.
- Awareness of quality education is created among the nearby inhabitants through the Kongu Community Radio Service.
- Details of the rank holders of the institution are published in the leading dailies.
- Admission process is done as per AICTE norms and State Government norms.
- 65% of sanctioned strength is admitted through TNEA-Tamil Nadu Engineering Admissions and the remaining 35% is admitted through Single Window System conducted by Association of Management of Anna University affiliated Colleges.

2.1.2 Explain in detail the process of admission put in place of UG, PG and Ph.D programmes by the College. Explain the criteria for admission (Ex. (i) merit, (ii) merit with entrance test, (iii) merit, entrance test and interview, (iv) common test conducted by state agencies and national agencies (v) others followed by the College?

The mode of admission to various programmes is listed below:

Programme	Admission Process	Eligibility Criteria
UG (B.E. / B.Tech.)	Admission through Single Window Counseling system or Entrance Test	As prescribed by Anna University; Reservation as per State Government Policy
PG (M.E./ M.Tech. / MCA / MBA)	Based on the Tamil Nadu Common Entrance Test (TANCET) conducted by the University / GATE score for ME/M Tech	As prescribed by Anna University
B.Sc (Applied Sciences)	Based on Merit	As prescribed by Anna University
M.Sc. (Applied Sciences)	Based on Merit	
Ph.D.	Based on the entrance test and interview conducted by the Anna University	

U.G. PROGRAMMES:

B.E. / B.Tech.

- 65% of the sanctioned intake of B.E./B.Tech programmes is admitted through the Single window system conducted by Anna University, Chennai as per Tamilnadu Government norms.
- Remaining 35% of B.E./B.Tech programmes are admitted through the single window system conducted by Association of Management of Anna University affiliated Colleges with eligibility mark in higher secondary examination prescribed by the government of Tamilnadu. Eligibility mark is: OC-50%, BC – 45%, MBC & SC / ST- 40% (Average mark of Mathematics, Physics and Chemistry).
- 5 % of the sanctioned intake of B.E./B.Tech programmes is additionally admitted under fee waiver scheme as per norms of AICTE.
- Lateral entry admission of 20% of the sanctioned intake is done in second year as per AICTE norms.

B.Sc.

- For the 3 – year B.Sc programmes in Applied Sciences, candidates should have passed Standard XII or equivalent examination and they are admitted on merit basis.

P.G. PROGRAMMES:

M.E. / M.Tech.

- Candidates are admitted through TANCET - Tamil Nadu Common Entrance Test conducted by Tamilnadu Government as per norms.

MBA / MCA

- 50% of the sanctioned intake of MBA/MCA programme is admitted through the Single Window System based on TANCET- Tamil Nadu Common Entrance Test conducted by Tamilnadu Government as per norms.
- Remaining 50% are admitted by Association of Management of Anna University affiliated Colleges through TANCET.

M.Sc.

- For the 5 – year M.Sc. programme in Software Systems, candidates should have passed Standard XII or equivalent examination and they are admitted on merit basis.

RESEARCH PROGRAMMES:

- For Ph.D. / MS (by Research) for full time or part time, selection is done by Anna University through Common Entrance Test and Interview.

2.1.3 Does the College have a mechanism to review its admission process and students profiles annually? If yes, what is the outcome of such analysis and how has it contributed to the improvement of the process?

No. The college has no role to play in the admission process as the admissions are regulated only by the State Government.

2.1.4 What are the strategies adopted to increase / improve access to students belonging to the following categories

a) SC/ST/OBC

- Reservations are made for admissions through the Single Window System as per Tamilnadu Government reservation norms.

b) Women

- Women candidates fair well in the admission even though there is no special reservation for women candidates. More than 40% of the students admitted are women.

c) Differently Abled

- Differently abled candidates are admitted through the Single Window System as per the Tamilnadu Government reservation norms.
- Management gives scholarship to meritorious students

d) Economically Weaker Section of the Society

- Students can avail different Government Scholarships and private scholarships.

e) Athletes & Sports Persons

- Sports persons are given preference in admission through Single Window System and Management Quota as well, with full fee concession, free hostel accommodation and food.

2.1.5 Furnish the number of students admitted in the College in the last four academic years.

Categories	Year 2013-14		Year 2012-13		Year 2011-12		Year 2010-11	
	Male	Female	Male	Female	Male	Female	Male	Female
SC	105	62	107	59	96	51	81	38
ST	4	5	2	4	7	1	4	1
BC	582	384	547	396	512	327	467	287
MBC	135	100	148	84	124	77	119	58
General	32	24	35	16	21	13	46	24
Total	1433		1398		1229		1125	

2.1.6 Has the college conducted any analysis of demand ratio for the various programmes offered by the College? If so, indicate significant trends explaining the reasons for increase / decrease.

- 65% of the sanctioned intake of the first year B.E./B.Tech programmes is admitted through TNEA single window system. All the seats as per the sanctioned intake are filled every year through the single window system except very few in the reservation category such as ST.
- The cutoff mark for admission through the TNEA single window system for Kongu Engineering College starts from 198.75 out of 200 and majority of the seats are filled with 180 and above [Current year details are given in the table]
- Majority of the seats are filled within one week from the commencement of the TNEA single window counseling starting from the first day even though the counseling continues for about 45 days.
- Remaining 35% of the seats are admitted through the Single Window System conducted by Association of Management of Anna University affiliated Colleges.
- Majority of the management seats are filled within one week from the commencement of the single window counseling conducted by the Association of Management of Anna University affiliated Colleges even though the counseling continues for about 3 months.

The TNEA cut off mark details for the various programs of the college for the year 2014-05 is as follows.

Sl. No.	Branch	OC		BC		BCM		MBC		SCA		SC		ST	
1	CIVIL	197.25	194.00	193.75	192.50	191.00	187.50	193.50	188.25	173.25	161.75	180.25	165.50	138.25	-
2	MECH	197.25	195.00	194.75	194.00	193.75	189.50	194.25	190.75	168.50	161.50	179.75	167.50	120.00	-
3	MTS	194.75	191.75	191.50	190.50	189.50	186.50	191.00	185.50	147.50	136.00	168.25	133.50	-	-
4	EEE	197.50	195.00	195.00	194.25	189.75	183.25	192.75	187.00	174.75	171.50	181.50	167.50	158.50	-
5	EIE	196.75	191.00	191.00	190.00	181.25	178.75	188.75	182.50	148.50	128.75	156.25	150.50	-	-
6	ECE	198.75	195.50	195.25	194.75	192.50	187.00	193.25	188.75	175.25	164.50	183.25	161.25	161.75	107.00
7	CSE	198.00	194.00	194.00	193.00	188.50	179.50	191.00	184.00	166.00	149.50	177.50	136.00	-	-
8	IT	197.25	192.25	192.25	191.50	187.00	174.25	186.50	181.50	130.50	127.75	148.50	115.75	-	-
9	Chemical	197.00	192.50	191.00	189.25	190.00	187.50	191.25	183.25	154.75	149.00	175.75	144.50	146.50	-
10	Food Tech	194.75	190.00	188.75	178.00	-	188.50	177.50	123.25	102.25	169.75	136.00	-	-	-

Based on the demand trend and projected opportunities, increase in-take has been made in the programmes Chemical Engineering, Civil Engineering, Computer Science and Engineering, Electronics and Communication Engineering and Mechanical Engineering. Also PG Programmes like Communication Systems, Power Electronics and Drives, Structural Engineering, Embedded Systems, Information Technology (Information & Cyber Warfare) and Food Technology were started.

2.1.7. Was there an instance of the College discontinuing a programme during last four years? If yes, indicate the reasons.

Yes. As there was a delay in AICTE decision on B.Sc. and M.Sc. programmes for all institutions in Tamilnadu, there was one year break (2013-14) for these programmes.

2.2. CATERING TO STUDENT DIVERSITY

2.2.1 Does the College organize orientation / induction programme for freshers? If yes, give details of the duration of programme, issues covered, experts involved and mechanism for using the feedback in subsequent years.

Yes,

College organizes orientation programmes for the freshers every year to make the students understand the facilities available in the college and how the students can use the available facilities effectively. Various activities covered in the orientation programme include:

1. Motivational talk by experts is arranged on the inaugural day of the programme. Parents also participate in the inaugural function. Experts invited for the last three years are Dr. Praveen Sultana Chennai, Mr. G. Subramanian National Executive Vice President JCI India and Mr. N. Subramaniam Managing Director M/s Habasit Iakoka (P) Ltd. Coimbatore.
2. Talks by senior office bearers of the Trust and Principal highlighting the history of the institution and various facilities available for the students.
3. Experience sharing by final year students from various departments highlighting the opportunities available in the respective departments.
4. Deans of various schools and Controller of Examination address the fresher regarding the activities of their school/departments and about the regulations of the autonomous systems.
5. Academic details related to the programme (credits, evaluation procedures, eligibility for the award of degree), Milestones of the Departments and scope of the programmes by respective Heads of Departments
6. Personality Development programmes.
7. Special coaching classes are arranged for the lateral entry students in order to bridge the gap in fundamental knowledge between the regular and lateral entry students.

2.2.2 Does the College have a mechanism through which the “differential requirements of student population” are analyzed after admission and before the commencement of classes? If so, how are the key issues identified and addressed? Yes,

- For Tamil medium students, special coaching classes are conducted on English Communication.
- Yoga and Meditation classes are conducted in order to develop the mental and physical stability.
- Analytical and puzzles solving skills are developed by special training programme conducted in mathematical laboratories.
- Games hour is allotted in the time table in order to motivate the sports and games activities among the students.
- During the conduct of classes, exposure levels of the students are identified based on their performance in the class by the faculty members and suitable guidance are given for the needy students.
- Special coaching classes are scheduled and conducted for the lateral entry students during evening hours.

2.2.3 Does the College provide bridge /Remedial /add - on courses? If yes, how are they structured into the time table? Give details of the courses offered, department-wise/faculty-wise?

- If bridge courses are needed, they are discussed in the BOS meeting to get approval and conducted in scheduled time.
- Remedial classes are conducted for the lateral entry students and academically weak students during the evening hours.
- Special coaching classes are scheduled and conducted for the failed students to prepare for the supplementary examinations.
- Various value added courses are conducted periodically by all the departments on advanced topics which are not covered in the curriculum and syllabus but required for industries or to take up higher education. Certificates are issued to the participants.
- Value added courses are optional courses conducted in the evening hours after regular class hours. Certificates are provided for the participants.
- In 2014 Regulations and curriculum, value added courses, yoga and meditation course, and foreign language courses are added as one credit courses.
- Self study courses and Audit courses are also provided in the 2014 Regulations and curriculum.
- Skill development hours such as SPD (Student Personality Development) hours, Career Counseling hours and Placement related training hours are scheduled in the time table itself in order to prepare the students to get success in their career.
- Apart from the scheduled skill development hours, Special skill development programmes such as Communications skill development programmes, Aptitude and logical problem solving techniques, Programme on how to face interview and group discussion etc. are conducted by the placement and training cell for more than 100 hours for all the students during their first/second/third year programmes in order to make the students fit for the industries and get placed in campus placement.

- Training programme on entrepreneurship is conducted periodically for the students by TBI (Technology Business Incubator) in association with EMDC (Entrepreneurship Development Cell).
- Various workshops, technical and techno-managerial events are conducted through professional forums, department association and various clubs. Saturday is exclusively used for the above purpose.
- Courses to prepare competitive examinations such as GATE, CAT etc. are organized through Higher Education Cell.
- List of value added courses conducted by the departments are as follows:

Name of the Value Added Courses	Duration (in Hours)	Name of the Value Added Courses	Duration (in Hours)
Civil Engineering			
STADDPRO	60	GATE Coaching Class	100
AUTO CAD	60	MS Project	40
Revit Architecture	60	Prima Vera	40
E Tabs	60		
Mechanical Engineering			
Modeling and Analysis using ANSYS	40	Modeling and Assembly using Autodesk Inventor	40
Finite Element Modeling using Hyper mesh	40	Modeling and Assembly using Solid Works	40
Modeling and Assembly using Pro-E	40	Basics of Auto CAD	40
Modeling and Assembly using CATIA	30	Spoken Hindi coaching Class	50
Electronics and Communication Engineering			
Modeling of Digital Logic Circuits using VHDL	50	Advanced Antenna Design and Simulation	30
Embedded System	60	ARM processor interfacing	50
Wireless Embedded System	50	Synopsys ASIC Design Tool	30
Image Processing Using MATLAB	30	Linux for Beginners-A Crash course	30
Embedded uclinux using black fin processor	50	ISDN and PRI	20
Computer Science and Engineering			
C and C++ Programming	40	Joomla	30
HTML, PHP and MySQL	30	Animation and Visual Effects	40
Web Designing	20	QualNet	14
C and C++ Programming	30	Data Mining Techniques using MATLAB	14
Machine Learning Using Octave	30	Hands on training programme in NS2	21
NS2 Simulator	30	Application of Bio Inspired computing in Data Mining	14
System Maintenance	30	Advanced C Programming	14
Web designing using Photoshop and Dreamweaver	30	Neuro – Fuzzy – GA Techniques using MATLAB	14
Information Technology			
Oracle 10G	50	Opinion Mining	14
Multimedia / Web Design	50	Data Stage	7
.NET	40	NS-2	14
Wireless Embedded Systems	50	Soft Computing techniques and its applications using MATLAB	14
Matlab and its application using computational Intelligence	14	Data Mining Tools	7
Wireless sensor network research tools and its applications	14	Wireless Network and Network Simulators	14
Qualnet	40	Animation Tools	14

Name of the Value Added Courses	Duration (in Hours)	Name of the Value Added Courses	Duration (in Hours)
Java Technologies	50	Research issues and simulation tool support in high speed wireless networks	14
Mobile Application development using Android	14	Ethical Hacking	7
C & C++	50		
Chemical Engineering			
Application of Refrigeration Engineering and Cold Chain Management in Food Processing and Preservation	30	An Introduction To Computational Fluid Dynamics	30
Process simulation using ASPEN PLUS	24	Data Analysis through Statistical Techniques	30
Analytical Procedures for <i>Water Analysis</i> :	30	Statistical optimization techniques in chemical engineering	30
GATE Coaching	30	Water and effluent analysis BIS PCD Norms	30
Principles of Chemical Engineering	24	Hands-on training using HYSYS Software	30
Food Technology			
Hurdle Technology	20	Hands On Training In Baking Technology	44
Nondestructive Testing of Food Quality	26	Advances in Baking Technology	56
Application of Chemical Engineering Principles in Food Technology	24	Applications of refrigeration Engineering and cold chain management in food processing and preservation	66
GM Foods	20	Sensory Analysis & computation Methods	44
Minimal Processing of Fruits and Vegetables	24	Scientific Research Techniques for Food Engineers	66
Cold Chain Management for Food Processing Industries	28		
Mechatronics Engineering			
Modeling using Pro E	40	Embedded C programming	30
Programming with relay logic control	30	PLC & SCADA	30
CNC programming and machining operation	45	Modeling & Simulation using Pro-E and ANSYS	40
Analog and digital circuit simulation ORCAD	45	Modeling and Simulation using MATLAB	40
Basics of AutoCAD	40	Solid Works	30
C & C++ programming	30	Industrial Robot Programming, Simulation and Hands on Training	30
Electrical and Electronics Engineering			
Modeling of Electrical system using MATLAB/Simulink	30	Industrial drives and its Applications	30
Application of MATLAB for electrical engineers	30	Service Selection Board Interview	30
Embedded System Design	30	Circuit Design Simulation and PCB Design using ORCAD	30
Solar Photovoltaic Technology	30	Variable Speed Drives	30
BETA Testing	30	VLSI Design Techniques for PLD's	30
Fundamentals and Safety Aspects of Electrical appliances	30		
Electronics and Instrumentation Engineering			
C & C++	30	VLSI Design	30
Virtual Instrumentation	30	Fundamentals of Electrical appliances and Safety aspects	30
PLC Programming and its applications	30	Advanced MATLAB Programming	30

Name of the Value Added Courses	Duration (in Hours)	Name of the Value Added Courses	Duration (in Hours)
Advanced Techniques for test and measuring equipments	30	Signal and Image Processing using MATLAB	30
Distributed Control Systems and process Simulation	30	EDA Tools for System Design	30
Introduction to MATLAB Programming	30	Image Processing and Soft Computing techniques using MATLAB	30
Circuit Design, Simulation and PCB Design using ORCAD	30		
S&H			
French Speaking course.			50
CT UG			
Multimedia systems	34	Tools for image processing	40
.NET Programming	40	Open Source Tools and Cloud Computing	40
Mathematical skill Development	40	Graphics Programming	40
Linux operating system	55	Soft Skills	40
PC Configuration and Trouble Shooting	65	Internet Technologies & PHP	40
Software Testing Tools	55	Animation and web design	53
Oracle 8i	40	Web design and multimedia	65
Developing Skills in programming and web design	40	Web Design	50
ASP .net	50	English communication skills	50
MBA			
Personality Development	5	Unleash Human Potential Through Training	8
Tally 6.3 (Accounting package)	5	Current Trends in HR Management	8
Banking Management	16	Current Opportunities and Challenges for MBA in Industries	8
Insurance Management	16	Stock Trading	8
Tally	10	Transactional Analysis	8
Soft Skills To Placed Students Under Infosys –Campus Connect Programme	16	Merchant Banking and Financial Services	20
Soft Skills To Placed Students Under Infosys –Campus Connect Programme	16	Financial and Management Accounting	20
Corporate Performance Analysis	10	Legal Aspects of Banking	20
Boost Your Memory Power	5	Principles of Banking	20
Case Analysis in HRM	8	Accounting for Managers	20
Workshop on Advertising	8	NCFM Modules	20
Micro Analysis of Financial Statement	8	Capital Marker Investments	8
Personal Finance	8		
MCA			
Android Application Development	18	English Language Proficiency development programme	15
C Programming	60	PHP	60
Web Designing	70		

2.2.4 Has the College conducted a study on the incremental academic growth of different categories of students; - student from disadvantaged sections of society, economically disadvantaged, physically handicapped and slow learners etc.? If yes, give details on how the study has helped the College to improve the performance of these students.

Yes

- Student from disadvantaged sections of society and physically handicapped are admitted as per the reservation policy of the government.

- Class rooms are allotted to the physically handicapped students in such a way that they can reach the class room easily.
- Many students of this nature studied in Kongu Engineering College and got placed in reputed companies.
- Awards and merit scholarships are provided to the physically handicapped students.
- Students from economically disadvantaged family are allowed to pay the tuition fee in installment basis. They are guided to get first graduate scholarship and government and private scholarships.
- 25 students who studied their higher-secondary in government school, economically poor but good in studies are provided scholarships by college management.
- Every class is provided with two/three class advisors in order to assess the students and help them.
- Counseling is given for the needy students by faculty members. Parents are called and counseled if needed.
- Tamil Medium Students and who have not studied Computer Science as a subject in the higher secondary usually lack in communication and computer skills. Training is provided for them.
- Students can take break of study in genuine cases, It will not be considered as arrear.
- Soft skills development programmes are organized to upgrade the students level.
- Proficiency and interest of the students in Sports, Quiz, extracurricular, social and cultural activities are assessed by the class advisors, with a view to motivating them to enhance this skills in these areas.

Disadvantaged sections of society

The following facilities are extended for students from disadvantaged sections of the society.

- A separate book bank is available in the Central Library
- Special placement training classes are conducted
- Training on ICT is conducted

For Lateral Entry Students

- Orientation Programme is conducted for the B.E. / B.Tech. students admitted through lateral entry.
- Lateral entry students are generally given scheduled special coaching on the subjects they are weak.
- Theory and lab courses on English communication are conducted for the students who have studied in different vernacular medium.

For the slow learners

- Weak Student Adoption scheme is in existence in which senior faculty members take care of slow learners. Slow learners are motivated, guided and counseled.
- Special class tests are conducted for slow learners providing opportunity for them to boost their marks.
- Special coaching classes are arranged for the students who have failed in the end semester examinations

2.2.5 How does the institution identify and respond to the learning needs of advanced learners?

Advanced learners are identified through their academic performance, project execution, involvement in co-curricular activities etc. They are motivated and mentored to enhance their skills. They are encouraged to

- Participate in National/International conferences, Seminars/ Symposia for presenting papers. Students who win prizes in reputed Institutions like IITs, IISc, NITs, BITS, Anna University, MIT etc. are reimbursed 100% of their travelling expenses.
- Do innovative projects with funding provided by the institution and demonstrate in the Open House Exhibition on Science and Engineering conducted in the college every year.
- Undergo summer/winter training programmes.
- Enroll in IEEE, IETE, Aerodynamic modeling Club, Robotics Club, Science Club, English Proficiency Club, EMDC, Kongu CRS, Rotaract Club, and Tamil Literary Club in which quiz, technical contests, elocution, debate and other such competitions are conducted.
- Compete for the Merit scholarship which is awarded for 5% of the toppers in each discipline every year.
- Compete for the best student award which is given in each discipline every year.
- Enroll in Value added courses conducted on advanced topics which are not covered in the syllabus.
- Participate in Awareness programmes on higher education and entrepreneurship.
- One credit courses, Audit courses, Self-study courses, etc. are provided in the 2014 Regulations and curriculum for the advanced learners.
- Advanced learners are allowed to take up full time internship in industries for one full semester.
- Students are encouraged to take up part time job in TBI (Technology Business Incubator) to work with entrepreneurs.
- Students can attend GATE/CAT training programmes, foreign language training programmes etc organized by the institution.
- Innovative projects which are done by students are sponsored to apply for patent.
- Students are provided funding through TBI to convert their projects into products.
- Various Co-curricular, Cultural, Sports and games events are conducted to enable the students to showcase their talents.

2.2.6 How does the institution cater to the needs of differently-abled students and ensure adherence to government policies in this regard?

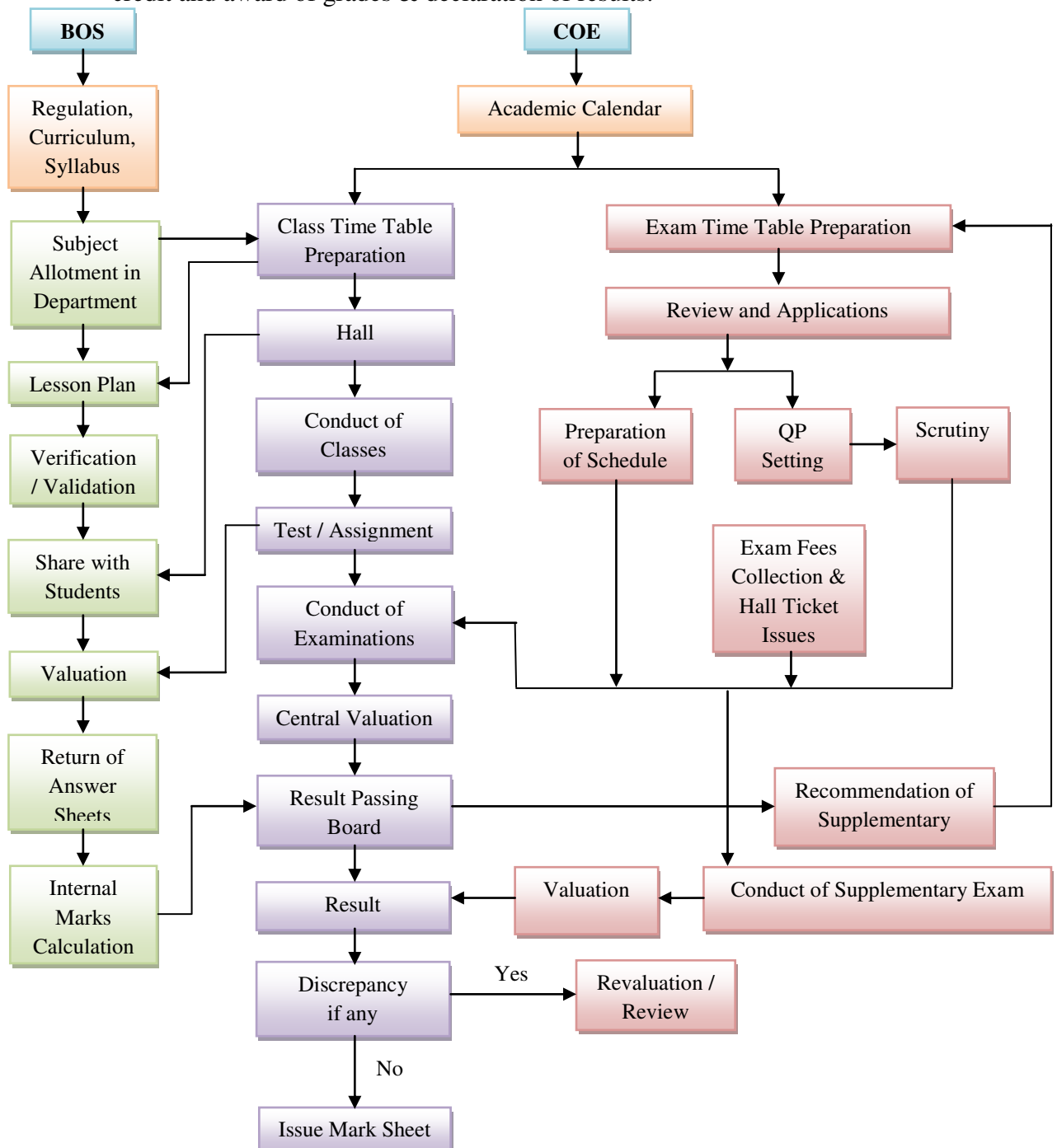
- Ramp facility is provided inside the college for their mobility
- College vehicle is arranged from hostel to the department for the differently – abled students.
- Examinations in Ground floor based on the need.
- Extra time is given for the differently – abled students in the end semester examination.
- In house medical facility is available in the case of emergency

- Special scholarship is given for differently – abled students who are academically good
- Hostel rooms in ground floor

2.3 TEACHING-LEARNING PROCESS

2.3.1 How does the college plan and organize the teaching, learning and evaluation schedules? (Academic calendar, lecture plan and evaluation blue print, student feedback etc.)

The Institution plans and organizes teaching-learning evaluation schedule as a total scheme mainly based on the regulations and curriculum of each program (UG or PG) specifies the frame work for academic schedule, number of semesters, working / teaching days, number of courses to be offered, hours of instruction per course, hours of tutorials, hours for practical course, method of assessment and credit and award of grades & declaration of results.



The plan for teaching is organized properly in the beginning of the every semester and it starts from the department level. The concerned Head of the Department conducts meeting with all the faculty members and allots subjects based on their interest. Then the time table is prepared and circulated to the students. The faculty members are provided with personal log book and this also contains the lecture plan to be filled by the faculty member.

The Controller of Examination, in consultation with Heads of the Departments, prepares the time frame for conducting Continuous Internal Assessment tests, End Semester theory and practical Examination and announcement of results for End Semester Examination and Supplementary Examination.

The academic calendar is prepared in consultation with the Principal, Deans, Controller of Examinations and all the Heads of the Departments prior to the commencement of the academic year. It contains the various details such as commencement of classes /continuous internal assessment tests / closing date of theory classes / commencement of practical examination / commencement of theory examination / reopening of college after semester holidays/communication details of all teaching and non-teaching faculty members. It also contains the schedule of the various college activities like Open House Exhibition, Annual Day, Sports Day, Alumni meet, Graduation Day, Farewell Day and List of Holidays.

2.3.2 Does the College provide course outlines and course schedules prior to the commencement of the academic session? If yes, how is the effectiveness of the process ensured?

Yes, Curricula and syllabi are provided to the students.

- Academic schedule is prepared by Controller of Examination in consultation with Principal and intimated to the faculty members through the KEC Web mail.
- Based on the academic schedule, the individual faculty will prepare the lecture plan. The lecture plan will be circulated in the class and displayed in the class notice board.
- The portion handled by the individual faculty will be entered in the class log book of every class. The feedback obtained from the students through class committee meetings will be intimated to the faculty concerned for necessary action.
- The course outline for each semester is published in the KEC web internet which can be viewed by everyone.
- Each course will contain course code, the course name, course credit, objective and outcome of the course, syllabus and reference books.
- Based on the review of the courses by Board of Studies, amendment, if any, as approved by the Board of Studies (BoS) will be published in the website.
- Implementation of the process is discussed in the class committee meetings and the effectiveness of the process is ensured.

2.3.3 What are the courses, which predominantly follow the lecture method? Apart from classroom interactions, what are the other methods of learning experiences provided to students?

- All 3 credit courses follow the lecture method predominantly and for 4 credit courses an additional hour for tutorial with two faculty members is allotted.

Lecture methods and class room interactions are supplemented by special lectures by experts from other educational institutions and industry.

- Some of the courses have CBT material and are offered on CD, DVD, or as an online E-learning course.
- To supplement chalk and talk method, the faculty members
 - Use ICT enabled teaching
 - Organize group discussion and quiz programmes for some of the courses
 - Arrange visits to Industry to get first hand information on the latest developments and application of theoretical aspects in the industrial environment
 - Demonstrate using cut or dismantled models and simulation tools
 - Motivate students to participate in national/international level symposiums
 - Encourage students to design and develop mini projects
 - Facilitate industry internship project to UG and PG students through IIPC Cell
 - Arrange special lectures by alumni members to present a glimpse of latest technology and to share their knowledge and experience with the students
 - Encourage self-learning by students
 - Guide the students to publish the technical paper in journals
 - Motivate students to develop working models for Open House Exhibition in Science & Engineering conducted annually.
 - Arrange to show video Lectures delivered by Professors from premier institutions like IITs and IISC, obtained from National Program on Technology Enhanced Learning (NPTEL)
 - Discuss case studies to make the students apply their knowledge to solve real time problems
 - Arrange for In plant Training for the duration of 15 days for UG students

2.3.4 How 'learning' is made more student-centric? Give a list of participatory learning activities adopted by the faculty that contribute to holistic development and improved student learning, besides facilitating life-long learning and knowledge management.

Focusing on the needs of the students, the learning process is made student centric. Most of the points outlined in 2.3.3 above concern student centric learning. Additionally,

- Curriculum is designed on credit based system which provides freedom to the students to choose their electives from a variety of courses designed especially to satisfy their interests and meet their requirements
- Students are provided opportunity to choose interdisciplinary courses
- Some of the courses are integrated with practical components to enhance understanding of the application of the theoretical concepts.
- Some topics in certain courses are identified for
 - Solving Challenging problems during tutorial hours
 - Self-study
 - Seminar
 - Assignments on emerging areas
 - Group discussion
 - Mini projects
 - Publication of papers in journals, national/ international level symposiums

- Model building
- Debugging
- Industrial visits and field trips are arranged for the benefit of the students to acquire practical knowledge.
- The academic clubs of the departments organize activities to facilitate the creative academic pursuits of the students individually and collectively. The intercollegiate and interdepartmental academic programmes encourage the same in addition to bringing a competitive edge to the academic endeavour of the students.

2.3.5 What is the College policy on inviting experts / people of eminence to provide lectures / seminars for students?

- The college gives autonomy to the departments to invite experts based on their expertise in the relevant field of specialization. Norms have been framed regarding remuneration/ honorarium / TA / DA for them.
- The experts / prominent persons are invited through associations, higher education cell etc.

2.3.6 What are the latest technologies and facilities used by the faculty for effective teaching? Ex: Virtual laboratories, e-learning, open educational resources, mobile education, etc.

- All the departments are provided with LCD projector facilities
- Computers/laptops are provided to the faculty members
- The campus is Wi-Fi enabled and is facilitated with internet connectivity of 110 Mbps
- NPTEL and open course ware are widely used in class rooms
- The language department is equipped with language laboratories with DVD players, computers and interactive CDs that are used for the screening of documentaries and information visuals. The English language laboratory is equipped with the ORELL software that is used for teaching, practice and testing of English language skills.
- E-Library resources and online content are used by teachers where the courses need updated information. This is made possible through the good infrastructural provisions for internet and intranet connectivity through optical fibre cables for networking.
- The college has installed a videoconferencing facility to make use of academic expertise across geographic and time-zone boundaries.

2.3.7 Is there a provision for the services of counsellors / mentors/ advisors for each class or group of students for academic, personal and psycho-socio guidance? If yes, give details of the process and the number of students who have benefitted.

Yes.

- The Advisor –advisee system is a long standing tradition of the college. One faculty is assigned for every 20 students for monitoring and guiding them on issues related to the academics and personal during the period of study.
- The Class Advisor is the first person whom the student approaches for any personal or academic guidance.

- The Class Advisor looks into matters regarding the academic performance, completion of academic requirements, health follow-ups and grievances if any.
- The Advisor also interacts with the parents on issues related to academics. Regular timings are allotted in the time table as a counseling hour for the advisors to meet the advisees as a group or as individuals.
- The Psycho-social needs of the student community are specifically met through the College counseling unit which comprises a senior faculty team for the students to approach for any of their problems.
- Head of the institution meets the students with more backlogs in their earlier semesters once in a semester and motivates them to clear their arrear exams.
- Class committee chairman is nominated by the HOD and is normally a faculty who does not handle classes for that particular class.
- The Class Advisor will be nominated by the HOD from the faculty members who are teaching that particular class.
- The class representatives (one male representative and one female representative) are also members of the class committee.
- The committee should necessarily meet thrice to discuss the various issues related to the class. They can additionally meet whenever the need arises.
- Doctor is available in the campus (24x7).
- Professional Counsellor is available for attending specific cases on need basis.
- Matrons, Deputy Warden and Assistant wardens have been appointed in the hostels to address to the needs of boys and girls.
- Yoga and Meditation classes are conducted every day from 5.30 pm to 6.30 pm in the yoga centre.

Number of students benefited:

The average percentage of students benefited through this method is about 20%. The class advisor takes care of all the students allotted to him/her and render his/her services whenever need arises.

2.3.8. Are there any innovative teaching approaches/methods/practices adopted / put to use by the faculty during the last four years? If yes, did they improve the learning? What methods were used to evaluate the impact of such practices? What are the efforts made by the institution in giving the faculty due recognition for innovation in teaching?

Yes,

The following innovative teaching approaches were adopted by the faculty during the last four years to supplement the lecture method of teaching by the use of audio visual aids, projects, seminars, field trips and other practical supplementary aids.

Interactive method

- The faculty members conduct group discussion, quiz programs and tutorial to ensure interactive teaching – learning.

Project-based learning

- Based on the concepts learnt in the subjects, mini projects and final year projects are assigned to students. Project-based learning enables the students to explore the real-time problems and challenges. This type of learning keeps the students active and engaged. Moreover they are inspired and encouraged to obtain a deeper knowledge of the subjects they study.

- Also Exhibition on Science and Technology provides opportunities for students to develop innovative projects.

Computer-assisted learning

- All the departments have multimedia materials for certain topics pertaining to their subjects which aid in understanding the complex and abstract areas.

Experiential learning

- Besides regular classroom learning, field trips, industrial visits, in-service training and working at the industrial unit provide a real life experience.
- Integrated practical courses offer rich practical experience to the students.

Seminars and others

- Students are motivated to handle seminar sessions and participate in quiz and group discussion on some topics to develop their academic and presentation skills.
- Central library with numerous volumes of books, as well as department libraries, is of immense help to the students in their preparation for such activities.

The impact of the innovative teaching practices / approaches adopted by the faculty in the classrooms is assessed by the following:

- The comprehension of the concepts learnt by the students by innovative practices is assessed by question-answer sessions in the classroom.
- Viva-voce is conducted for practical courses.

Improvements in learning

- Improvements are visible in terms of student participation in inter-collegiate competitions that include paper presentation, poster presentation, project presentation, participation in national and international conferences and symposia.

Methods used to evaluate the impact of such practices

- Feedback from students on curriculum, teacher and teaching methodology
- Feedback from the faculty on performance of the students.

Faculty Recognition

- Due recognition is given to the contribution made by the faculty members in their Performance Appraisal under different categories (Teaching-learning, examination results, responsibilities at Department and Institute level, publication / awards / patents, lectures delivered / proceedings, funded projects / consultancy services).
- The institution identifies and recognizes the faculty who practice innovative methods by adjudging them as the Best Faculty. One faculty from each department is chosen for the Best Faculty award every year.

2.3.9 How does the College create a culture of instilling and nurturing creativity and scientific temper among the learners?

The following methods are followed to instill and nurture creativity and scientific temper among the learners.

- The students are encouraged to participate in symposiums/seminars organized by leading institutions.
- All the departments of the college organize seminars/symposiums regularly.
- The students are encouraged to participate/ organize techno-management events.

- Each Department organizes a national level techno-management event, every year for the benefit of the students to enhance their knowledge in the cutting edge technology areas.
- The institution endeavours to provide a suitable platform for tech-savvy students who are passionate about technology and the ways in which technology can assist mankind.
- Programmes are organized to encourage students to think out-of-the-box and create projects and activities that cut across disciplines.
- Events to develop and hone the interpersonal, team building, planning, crisis management, handling of participants with diverse background and event management skills of the students are organised.
- In addition the conduct of workshops and guest lectures by eminent persons in emerging areas make students to be aware of current trends.
- The students are provided with funding to do their mini-projects for Open House Exhibition on Science and Engineering conducted by institution annually.
- The students also provided with funding from TBI@KEC, TNSCST, ISTE, IE etc., to do their innovative projects.
- The college also encourages the students to exhibit their projects in INTECH exhibition, ERO-INTECH and TAFE etc.,
- The creativity and scientific temper of the students are also nurtured by giving opportunity to them to work with entrepreneurs of TBI@KEC on projects in emerging technological areas.

2.3.10 Does the College consider student projects a mandatory part of the learning programme? If so, for how many programmes it is made mandatory?

Yes.

- It is mandatory for all the UG and PG programmes. The PG students carry out Phase-I and Phase-II Projects in the pre-final and final semester of the programme. The UG students carry out the project work in the final semester of the programme.
- The students have the option to do projects in the institute or in the industry.
- Some of the major industries where the students do projects are listed below.

- | | |
|--|---|
| • India Cement, Sankari | • Neyveli Lignite Corporation, Neyveli |
| • LG Equipments, Coimbatore | • Deccan Industries, Coimbatore |
| • Soliton Technologies Pvt Ltd Bangalore | • Bharat Heavy Electricals-Vellore |
| • Sakthi Sugars Ltd, Bhavani | • Lucas TVS Chennai |
| • Mettur thermal power station | • National Institute of Ocean technology |
| • Technip-Chennai | • Wipro, Chennai |
| • CECRI-Karaikudi | • Infosys |
| • Ponni sugars-Erode | • ITC Chennai |
| • Sakthi Auto Components Pallakoundampalayam | • Central Institute of Fisheries Technology, Cochin |
| • SPB paper Mills Ltd, Pallipalayam | • Bosch Electrical Drives India private Ltd., Sriperumpudur |
| • TNPL, Karur | • Caterpillar, Chennai |
| • Salem Steel Plant, Salem | |
| • Defence Research and | |

- Development Organization (DRDO) Bangalore
- Schneider Electric India Pvt Ltd
- IGCAR, Kalpakkam
- BPL, Palakkad
- BHEL, Trichy
- IOCL, Faridabad
- Manali petro chemicals- chennai
- Sterlite Chemicals- Tutucorin
- Yokogawa (Bangalore)
- Cognizant Technology Solutions India Pvt. Ltd, Coimbatore
- Robert Bosch Engineering and Business Solutions Ltd, Coimbatore
- Accenture Services Pvt. Ltd, Chennai
- Hewlett Packard, Bangalore
- NIIT Technologies Limited Bangalore.
- Aavin milk dairy, Erode
- Agni steels, Ingur
- Ashok Leyland, Chennai
- Ashok Leyland, Hosur
- Essar Pvt Ltd
- ELGI Equipments Ltd
- Chettinad Cements Corporation
- Reliance Communication Ltd
- Delphi TVS, Chennai
- Diesel Loco Shed, Erode
- Electrical loco shed, Erode
- HCL career development centre, Coimbatore
- Mahindra Reva Electric Vehicle Private Ltd., Bangalore
- Nissan ashokleyland, Chennai,
- Renault Nisan Automotive India private Ltd., Sriperumpudur
- Roots, Coimbatore
- Southern Railway, Chennai
- TATA motors, Pune,
- Titan Industries Ltd., Hosur
- TVS Sons Ltd, Madurai.
- BHEL Trichy,
- The Ramco Cement Ltd
- HDFC Bank,
- Suguna Poultry
- Jos Alukkas, Erode
- Syndicate Bank
- Canara Bank
- South Indian Bank
- Karur Vysya Bank
- Lakshmi Vilas Bank Ltd
- Bannari Amman Sugars Ltd

- **Role of the faculty in facilitating such projects :**
- The faculty members as the project guides facilitate the research endeavours of the students through the following means:
 - Ascertaining the feasibility of the student project proposal
 - Helping the students to streamline the project.
 - Guiding the students during the execution of the project.
 - Teaching the intricacies of interpretation and analysis of data
 - Enabling the student in writing the project report and facing the viva-voce

2.3.11 What efforts are made to facilitate the faculty in learning / handling computer-aided teaching/ learning materials?

What are the facilities available in the College for such efforts?

- In general, the faculty members are well versed with computer aided teaching.
- Faculty members are periodically deputed to attend programs on new and emerging technologies.
- Most of the departments are organizing training programs in relevant computer aided teaching and e -content development.

- All the faculty members are provided with a computer with internet connectivity and a printer.
- The Wi-Fi enabled smart class rooms supplement the computer aided Teaching.
- Extensive computing facilities with nearly 2714 terminals and college wide Wi-Fi connectivity with 110 Mbps and several licensed software are available for computer-aided teaching.
- NPTEL audio and video courses are available in the library, accessible by both faculty and students.

2.3.12 Does the College have a mechanism for evaluation of teachers by the students / alumni? If yes, how is the evaluation used in achieving qualitative improvement in the teaching-learning process?

Yes,

- The evaluation procedure provides feedback on the Teaching-Learning process from the students, Heads of the departments.
- The online feed-back by the students includes questions on Teaching and Evaluation. It is a computerized procedure where the evaluation is automated on a five-point scale.
 - a. Knowledge base of the teacher(as perceived by you)
 - b. Communication skills of the teacher (in terms of course delivery and making you to understand the course)
 - c. Sincerity and commitment of the teacher.
 - d. Interest generated by the teacher.
 - e. Ability to integrate course material with environment/others issues, to provide a broader perspective.
 - f. Ability to integrate content with other courses.
 - g. Accessibility of the teacher in and out of the class(Includes availability of the teacher to motivate further study and decision outside the class)
 - h. Ability of the teacher to design test/quiz/assignments/examination and projects to evaluate your understanding of the course.
 - i. Provision of sufficient time for you to give feedback during the course.
 - j. Overall rating.

As the teacher is the source of input to the students, mentoring the mentor is the scheme adopted for the improvement in quality of teaching. Based on the consolidation of feedback, corrective action is taken. The Head of the Department provides feedback on each staff based on the following criterion at the end of every year

- Technical papers published in Journals / Conferences (National & International Level)
- Achievements (Project Sanctions, Prizes & Awards)
- Seminars / Workshops / STTP / SDP / FDP / Conferences / Industrial Training etc., attended
- Value added courses offered
- Seminars / Workshops / STTP / SDP / FDP / Conferences etc. conducted
- Books/Notes Published
- Subjects (theory) handled and University / Autonomous results
- Contribution to the institute other than Academic activities
- Any other achievements / information.

2.3.13 Does the institution face any challenges in completing the curriculum within the planned time frame and calendar? If yes elaborate on the challenges encountered and the institutional approaches to overcome these.

No, The Institution has built-in mechanisms to ensure curriculum completion within the planned time frame. Some of these measures include:

- A well-prepared and complete College Calendar for the entire year.
- Individualized comprehensive work plan prepared in the beginning of each semester.
- Constant monitoring by the concerned authority in the implementation of the work plans.
- Teacher absence for long periods either due to personal / medical / maternity reasons could also create difficulties in completing the curriculum within the planned time frame. This is taken care by the department ensuring proper arrangement for the completion of the curriculum through the appointment of substitutes.

2.3.14 How are library resources used to augment the teaching-learning process?

- The library caters to the needs of teachers and students with access to books and journals.
- The Main library functions on all days including Sundays and Government Holidays till 10 pm on week days, 8 pm on Saturdays and 5.30 pm on Sundays and holidays.
- Departmental libraries are also kept open till 7 pm on working days.
- Book bank System provide Text books which are kept reserved for the under privileged students and are issued for one semester.
- The Librarian helps the departments to purchase the latest edition of the books as per the requirement of the teachers.
- 72070 Volumes of books and 274 periodicals are available in library
- Access to 5284 e-resources is available through INDEST-AICTE Consortium
- A number of guides and books are available in the Competitive Exams books section for preparation of competitive examinations like GATE, TOEFL, GRE, GMAT, Civil Service exams, Bank exam and other similar examinations.
- Through OPAC (Online Public Access Catalog), the availability of the required books can be obtained.

2.3.15 How does the institution continuously monitor, evaluate and report on the (i) quality of teaching, (ii) teaching methods used, (iii) classroom environments and (iv) the effect on student performance.

1. Quality of teaching:

- Evaluation of the quality of teaching is done through a feedback system by students, submitted at the end of semester for each course.
- Grievance redressed mechanism in each department and in the college plays a monitoring role in the quality of teaching.
- The Heads of departments monitor the Teaching-Learning process in the class room through direct observation.
- The report of student's feedback and regular monitoring help the faculty to improve their performance.

2. Teaching methods used:

- Regular monitoring and evaluation of the teaching methods is done based on the feedback received from the students in course monitoring committee meeting.

3. Classroom environments:

- Effective use of class rooms and comforts in class rooms are regularly monitored and the feedbacks are analysed for corrective action.

4. The effect on student performance;

- The results of each continuous assessment tests are analyzed and faculty members are mentored to take corrective actions to improve the student performance.
- Parents Teacher meeting is conducted every semester to discuss the performance of the student.

2.4 Teacher Quality

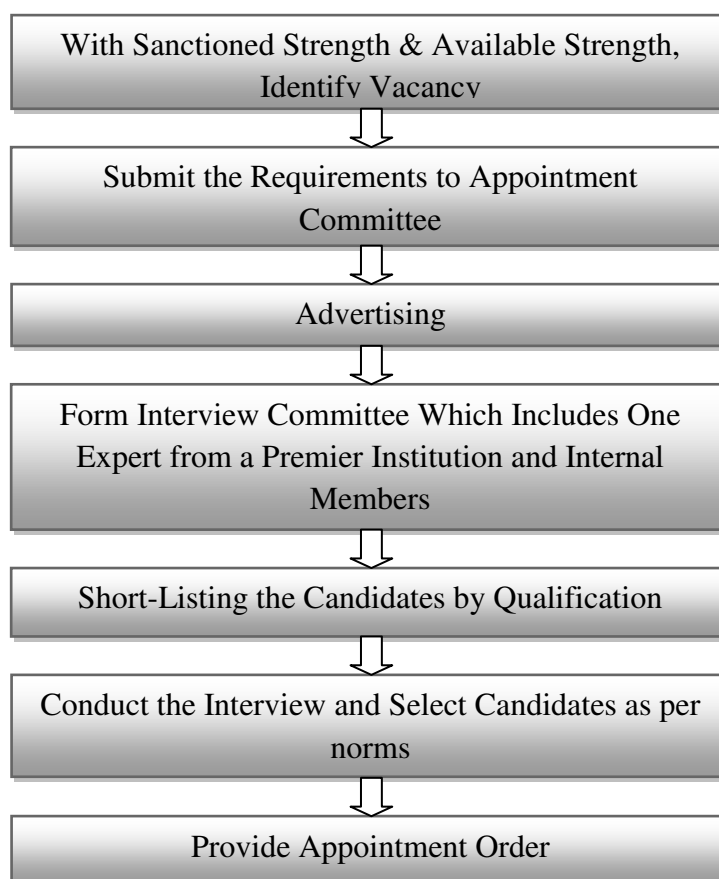
2.4.1 What is the faculty strength of the College? How many positions are filled against the sanctioned strength? How many of them are from outside the state?

Faculty Strength: 508

Positions Filled: 508

Faculty Members from Other states: 11

2.4.2 How are the members of the faculty selected?



2.4.3 Furnish details of the faculty

Highest Qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
Permanent Teachers							
D.Sc./D.Litt.							
Ph.D.	29	13	13	8	30	26	119
M.Phil.	1	0	0	0	30	60	91
PG	4	0	2	2	181	108	297
UG					1		1

2.4.4 What percentages of the teachers have completed UGC-CSIR-NET, UGC-NET, and SLET exams? In that what percentage of teachers are with PG as highest qualification?

Department	UGC-NET and SLET	PG as highest qualification
Dept. of Computer Applications	12%	100%
Dept. of Management Studies	11%	100%
Dept. of Computer Technology (PG)	11%	100%

2.4.5 Does the College encourage diversity in its faculty recruitment? Provide the following departments-wise details.

Dept.	% of faculty who are product of the same College	% of faculty from other Colleges within the State	% of faculty from other States	% of faculty from abroad	Total No. of faculty
CIVIL	48.57	45.71	2.86	2.86	35
MECH	47.06	47.06	5.88	0.00	52
MTS	62.96	33.33	3.70	0.00	27
EEE	29.03	67.74	3.23	0.00	31
EIE	40.74	59.26	0.00	0.00	27
ECE	38.89	61.11	0.00	0.00	54
CSE	75.00	20.45	4.55	0.00	44
IT	66.67	33.33	0.00	0.00	30
CHEM	47.37	42.11	5.26	5.26	19
FOOD	28.57	71.43	0.00	0.00	14
S&H	8.26	90.83	0.92	0.00	109
MBA	22.22	66.67	5.56	5.56	18
MCA	33.33	66.67	0.00	0.00	24
B.Sc.	33.33	66.67	0.00	0.00	18
M.Sc	16.67	83.33	0.00	0.00	6
Total	38.07	59.17	2.17	0.59	508

2.4.6 Does the College have the required number of qualified and competent teachers to handle all the courses for all departments? If not, how do you cope with the requirements? How many faculty members were appointed during the last four years? Yes.

The College has required number of qualified and competent teachers to handle all the courses for all departments.

Sl. No.	Academic year	No. of faculty recruited
1	2010-11	72
2	2011-12	90
3	2012-13	71
4	2013-14	40

2.4.7 How many visiting Professors are on the rolls of the College? Nil

However all departments utilize the expertise of external resource persons in seminars, symposia, workshop, training programmes, Department Association guest lectures, etc.

2.4.8 What policies/systems are in place to recharge teachers? (eg: providing research grants, study leave, nomination to national/international conferences/Seminars, in-service training, organizing national/international conferences etc.)

The faculty members are encouraged to continuously update their knowledge and skill. The following strategies are followed:

1. Pedagogical training is given to new faculty members
2. Faculty are given financial assistance to attend FDP and conferences conducted in reputed institutions/industries
3. Faculty are encouraged to take-up training in industries
4. Faculty are encouraged to take-up consultancy activities.
5. Faculty are motivated to register for Ph.D. programme
6. Faculty members are encouraged to organize national/international conferences.
7. The College encourages the faculty members to carryout postdoctoral research works at foreign Universities.
8. Faculty members are encouraged to work hand in hand with entrepreneurs of TBI@KEC.

2.4.9 Give the number of faculty who received awards / recognitions for excellence in teaching at the state, national and international level during the last four years. 17

Department	National	International
Civil	2	-
Food Technology	1	-
Mechatronics	2	-
Mechanical	1	1
EEE	1	1
EIE	1	-
ECE	1	-
Chemical	-	1
S&H	2	-
MBA	1	-
Computer Technology-PG	2	-

2.4.10 Provide the number of faculty who has undergone staff development programmes during the last four years. (Add any other programme if necessary)

Academic Staff Development Programmes	Number of Faculty			
	2010-11	2011-12	2012-13	2013-14
Refresher courses	121	68	102	100
HRD programmes	8	14	26	12
Orientation programmes	31	25	61	62
Staff training conducted by the College	60	65	83	134
Staff training conducted by University/other Colleges	40	58	61	67
Summer / winter schools, workshops, etc.	87	81	129	119
Any other (English communication training, SDP /STTP, FDP)	10	19	16	24

2.4.11 What percentage of the faculty have

- **been invited as resource persons in Workshops / Seminars / Conferences organized by external professional agencies -**
- **participated in external Workshops / Seminars / Conferences recognized by national/ international professional bodies**
- **presented papers in Workshops / Seminars / Conferences conducted or recognized by professional agencies**
- **teaching experience in other universities / national institutions and others**
- **industrial engagement**
- **international experience in teaching**

Year	% of faculty invited as resource person in workshop/ seminars/ conferences organized by external professional agencies	%of faculty participated in external Workshops /Seminars/ Conferences recognized by national/ international professional bodies	%.of faculty presented papers in Workshops / Seminars / Conferences conducted or recognized by professional agencies	%of faculty-teaching experience in other universities / national institutions and others	%of faculty - industrial engagement	%of faculty - International experience in teaching
2010-11	9.57	26.45	27.71	14.11	4.28	0.25
2011-12	15.95	21.43	28.33	14.52	7.62	0.24
2012-13	10.47	18.93	31.40	15.37	5.79	0.22
2013-14	11.05	20.51	37.28	16.57	7.89	0.20

2.4.12 How often does the College organize academic development programmes for its faculty, leading to enrichment of teaching-learning process?

Sl. No.	Programme	Frequency
1	Faculty Orientation (New Recruits)	Once in a year
2	Curriculum Development	Once in two years
3	Faculty Development Programmes in various domains	Various sponsored/Self supporting faculty development programmes are conducted in every semester in every department. About 100 programmes are conducted every year
4	Examination reforms	HoD's Meeting, as and when convened

2.4.13 What are the teaching innovations made during the last five years? How are innovations rewarded?

- Cut section Models and Display models are used to make the students to understand the concepts clearly.
- Following Supplementary Teaching methods are used
 - E-learning through NPTEL, Moodle software
 - Satellite programme
 - Industry Visit
 - Open House Exhibition
 - Placement Related Training
- Innovative Practices introduced in 2015 Regulations are as follows
 - Choice based credit system
 - One-credit courses such as value added courses, yoga and meditation, Audit courses, etc.
 - Provision for the students to choose faculty
 - Mini-projects
 - Self-study electives / special electives/
 - Technical Seminar with Credits
- Following teaching aids are used to enhance the Teaching Learning Process
 - Audio-visual aids
 - Multimedia aids
 - Presentation slides
 - PowerPoint presentations

The innovations are taken into account and considered for self-appraisal report for award of best teacher.

2.4.14 Does the College have a mechanism to encourage

- **Mobility of faculty between institutions for teaching?**

The faculty members are encouraged to give guest lecturers for National/ International conferences/seminars/workshops organized by various institutions. Eminent professors from reputed Indian /Foreign universities are invited to conduct special programme to enhance teaching learning programme.

- **Faculty exchange programmes with national and international bodies?**
If yes, how have these schemes helped in enriching quality of the faculty?
Interested Faculty members are encouraged to visit foreign universities. Special lectures are given by faculty members in seminar, faculty development programmes, Short term training programmes and workshops conducted by various institutions/Industries. Many expert members from reputed institutions and industries are invited for giving special lectures at Kongu Engineering College.

2.5 EVALUATION PROCESS AND REFORMS

2.5.1 How does the College ensure that all the stakeholders are aware of the evaluation processes that are operative?

- Syllabus book is provided to all the students at the beginning of the programme. The syllabus book contains regulations, curricula and syllabi of all the semesters. Continuous evaluation methods and eligibility for appearing for End Semester Examination are provided in the regulations.
- The Regulations, Curricula and Syllabi are also published in the College web site.
- Academic calendar consisting of all academic schedule are provided to all students at the beginning of every year.
- Faculty handling the courses, Class Advisors and HOD also communicate the evaluation process to the students.

2.5.2. What are the major evaluation reforms initiated by the College and to what extent have they been implemented in the College? Cite a few examples which have positively impacted the evaluation management system?

- The weightage of the continuous internal assessment marks has been increased from 20% to 50% for all UG courses and PG theory courses. 100% weightage is given for M.E /M.Tech. Laboratory courses.
- Students are evaluated by the continuous internal assessment tests and end semester examination.
- Faculty members are trained to set the question paper based on Bloom's Taxonomy.
- Returning the answer papers within 3 days from the last date of continuous assessment tests.
- Educational Management software called INSPROPLUS is used effectively for the students' attendance and continuous assessment marks. It is accessed by the students in the campus to know their performance.
- For selective courses, instead of Assignment, students do Mini Projects related to the subject to improve the practical knowledge.
- CCTV Security system in CoE Office
- Dummy number system is used to ensure the fairness in evaluation.
- Centralized examination schedule with Chairperson / Chief Examiner for every board
- End Semester Examination Question paper setting through external examiners
- Two level scrutiny system to ensure error-free question papers in end semester exam.

- Students can apply for reevaluation if they are not satisfied with the first evaluation.
- Students can also apply for the photo copy of their answer script and discuss with their respective course faculty. If the answer script deserves more marks than awarded in the first evaluation, the students can apply for challenging evaluation with the recommendation of HOD of the respective department.
- Preparation of Test Performance Report for analyzing test results and immediate corrective actions
- Performance of students are informed to their parents and counselling of the students in the presence of parents is done whenever necessary.
- Moderation is provided based on the recommendations of the members of the Results Passing Board.
- Supplementary examinations are conducted for the courses in which more number of students has failed to obtain the minimum required marks (more than 20 % failure).
- Autonomous audit is conducted in every semester to audit standard of question paper, key used for evaluation and standard of evaluation by experts from reputed engineering colleges such as NIT Trichy, CEG Guindy, Anna University, PSG College of Tech, TCE Madurai etc.
- Statement of grades issued with students photographs
- Transcripts are provided for the needy students on request.

2.5.3. What measures have been taken by the institution for continuous evaluation of students and ensuring their progress and improved performance?

- The students are informed of the evaluation process during the first day of the class by the course faculty, class advisor and HOD.
- Three continuous assessment tests and two assignments are given to evaluate the students performance continuously through the semester.
- Every Module test marks are displayed in the educational management software-INSPROPLUS once the test is completed.
- Before the commencement of the End Semester Examination, the Continuous Internal Assessment marks comprising 3 Module Test marks, Assignment marks, Marks for attendance and other assessments are displayed in the management software for the students.
- Students who have failed in more than three subjects are counselled with their parents to improve the performance.
- Special coaching classes and class tests are conducted for the failed students for improvement.

2.5.4 What percentage of marks is earmarked for continuous internal assessment? Indicate the mechanisms strategized to ensure rigorous of the internal assessment process?

- 50 % marks is earmarked for continuous internal Assessment
- **UG courses**
Three module tests for each course with 10 marks for each module test (total 30marks) ,two assignments for each course with 5 marks for each assignment (total 10 marks), 5 marks for attendance and 5 marks for seminars, quiz and other activities.

- **PG courses**
Three module tests for each course with 10 marks for each module test (total 30marks) ,two assignments for each course with 5 marks for each assignment (total 10 marks) and 10 marks for seminars, quiz and other activities
- 100% Continuous Internal Assessment system is followed for all practical courses of M.E./M.Tech. programmes
- Before the commencement of the End Semester Examination, the Continuous Internal Assessment marks comprising of 3 Module Test marks, Assignment marks, Marks for attendance and other assessments are displayed in the management software –INSPROPLUS for the students

2.5.5. Does the College adhere to the declared examination schedules? If not, what measures have been taken to address the delay?

Yes,

- Academic calendar is prepared and issued to all the students and faculty at the beginning of the every academic year indicating the schedule of the examinations.
- The schedules are followed as per the academic calendar. If there is any need to change the schedule due to any unexpected reasons, the revised schedule is informed to the students well in advanced through circular, short message service, E-mail and website.

2.5.6 What is the average time taken by the College for declaration of examination results? Indicate the mode / media adopted by the College for the publication of examination results e.g., website, SMS, email, etc.

- Module Test results are declared by the respective course faculty within three days from completion of the test.
- End Semester Examination results are declared within two/three weeks from the last date of the Exam.
- The result of the End Semester Examination is approved by the Result Passing Board. The board consists of Head of the Institution, Controller of Examinations, Deans, Chief Examiners and academic expert from outside. Finally the results are declared by the Controller of Examinations. It is uploaded in the College website.
- Hard copies of the results are given to the department.

2.5.7 Does the college have an integrated examination platform for the following processes?

- **Pre-examination processes – Time table generation, OMR, student list generation, invigilators, squads, attendance sheet, online payment gateway, etc.**
- **Examination process – Examination material management, logistics.**
- **Post examination process – attendance capture, OMR based exam result, auto processing, generic result processing and certification.**

Yes an Integrated Examination platform is available.

Pre-examination processes include the following:

- ✓ Schedule for the continuous assessment tests and end semester examinations.
 - ✓ Calculating the continuous assessment mark and displaying them for students.
 - ✓ Preparing model question papers to send them to external question paper setter for setting the end semester question paper.
 - ✓ Preparing the external panel of examiners for question paper setting and getting question paper from them.
 - ✓ The received question papers are scrutinized by the internal senior faculty members.
 - ✓ Preparing the coursewise examination schedule and display them to students.
 - ✓ Duty schedule for hall invigilators and squad for the examination and Attendance Sheets are prepared in advance by the Controller of Examinations.
- The entire process right from the admission of students in the first semester till the completion of the programme and the award of degree is computerized
 - There is a database containing the examination related information of all the students appearing for the semester examination. This database helps in generating the time table, students list, attendance sheet etc.

Examination processes:

- ✓ Answers sheets are distributed by the hall superintendents to students.
- ✓ The question papers are distributed to hall superintend by the chief examiner in under the supervision of university representative.
- ✓ Squad members monitor the process to find out malpractices during the examination.
- ✓ Hall superintendents collect the answer scripts at the end of examination and return them in exam section and all the answer scripts are covered and sealed.

Post Examination Processes:

- ✓ Dummy numbering all answer scripts
- ✓ Preparing valuation schedule and panel of examiners
- ✓ Preparing key for valuation, verification of key by senior faculty members.
- ✓ Performing valuation by internal and external examiners.
- ✓ Preparing mark list for all the students
- ✓ Submitting the marks before the result passing board meeting to approval for giving moderation if needed and publish the result.
- ✓ Publication of results through web site.
- ✓ Revaluation is done for the students who apply for it.
- ✓ Supplementary examination is conducted for the courses in which the pass percentage is very low and approved in the result passing board meeting.

2.5.8 Has the College introduced any reforms in its Ph.D. evaluation process?

- Anna University carries out the evaluation process. However, the college conducts periodical review on the progress of the research.

2.5.9 What efforts are made by the College to streamline the operations at the Office of the Controller of Examinations? Mention any significant efforts which have improved process and functioning of the examination division/section?

- Preparation of Academic schedule including Module Test, practical and end semester examinations
- Obtaining continuous assessment test marks from the department and maintain the database.
- Announcement of Theory and Practical examination schedule
- Preparation of Panel of Examiners and Question setters
- Obtaining question papers and keys for various courses from the External /Internal Faculty
- Conduct of End Semester Examination both laboratory and theory courses
- Preparation of the schedule for valuation and fixing the external/internal examiners for evaluation.
- Getting the approval of result passing board meeting and publication of End Semester Results.
- Interested students can obtain photocopies of the Answer Scripts. Provision for revaluation of theory papers is available in the Regulations of all UG and PG Programmes.
- There is also a provision for final Review of answer scripts after this revaluation process, if the students are not satisfied with the revaluation results
- Preparation of the Statement of marks with Grade points
- Recommending the eligible candidates to the University for Graduation
- Auditing the question papers and evaluation system by experts from reputed institutions.

2.5.10 What is the mechanism for redressal of grievances with reference to evaluation?

- Students can apply for revaluation if they are not satisfied with the first evaluation
- Students can also apply for the photo copy of their answer script and discuss with their respective course faculty.
- If the answer script deserves more marks than awarded in the first evaluation, the students can apply for review with the recommendation of HOD of the respective department.

2.6 STUDENT PERFORMANCE AND LEARNING OUTCOMES

2.6.1 Does the College have clearly stated learning outcomes for its programmes? If yes, give details on how the students and staff are made aware of these?

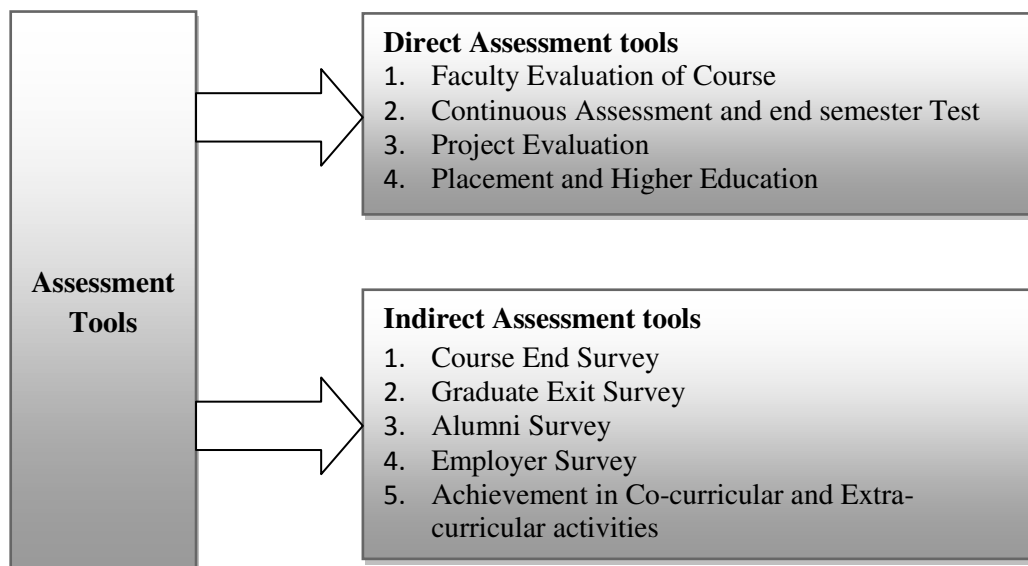
- Yes. The College has clearly stated the learning outcomes.
- Programme Educational Objectives and Programme Outcomes (Learning outcomes) are prepared for every programme and displayed at various

places in every department and in college web sites.

- Every course has course outcomes and they are provided in the regulation book which is given to every individual student.
- Also, course outcomes are displayed in class rooms and laboratories.
- The above information are disseminated among the students in special programmes organized for this purpose.

2.6.2 How does the institution monitor and ensure the achievement of learning outcomes?

Following assessment tools are used to monitor the achievement of learning outcomes



- The institution monitors the achievement of learning outcomes through the results of both continuous assessment and end semester examinations.
- Co-curricular activities such as projects presentation, paper presentations etc. are monitored to evaluate the outcome.
- Placement and higher education is also used to measure the learning outcome.
- Based on the performance of the students, improvement strategies are adopted for the attainment of the desired outcome.
- The attainment of outcomes are analyzed in course coordinator meeting and appropriate action such as enhancing the course delivery methods, special coaching classes etc. are taken
- Department level academic audit is conducted for all continuous assessment tests and semester end examination to monitor the attainment of course outcomes.
- Annual academic audit by outside experts is conducted to evaluate the standard of our evaluation systems.
- The quality system of Kongu Engineering College is monitored as per IQAS.

- Based on the feedbacks from Alumni, Employer and current students (Indirect Assessment), training programmes such as spoken English, personality development programmes etc. are conducted by faculty of our institution and experts from outside to improve the soft skills of students.
- Coaching classes for GATE, CAT etc., are arranged inside the campus with external experts.

2.6.3 How does the institution collect and analyse data on student learning outcomes and use it for overcoming barriers of learning?

- Direct and indirect assessment tools are there to analyse the learning outcomes.

Direct Assessment Tools	Continuous assessment tests, Assignments, Seminar, Quiz and End semester examinations
Indirect Assessment Tools	Alumni Survey, Employer Survey, Course end survey, Graduate exit survey

- Feedbacks are collected from employers and alumni. Based on the feedback modification are given in the curriculum.
- Special training programmes are conducted such as spoken English, personality development programme, aptitude and logical knowledge programme.
- The institution collects the data through AC 09 which can be calculated after the examinations with respect to academic performance. Special classes are conducted for the academically weak students.
- The CGPA and number of arrear subjects are the measures by which student learning outcome is assessed and accordingly remedial classes are arranged.
- Class committee meetings are arranged regularly and necessary steps are taken based on feedback from the staff as well as student representatives.
- Relevant points coming out of the indirect assessment tools like, alumni survey, employer survey, graduate exit survey are made use of to refine the teaching learning process.

2.6.4 Give Programme-wise details of the pass percentage and completion rate of students.

Pass Percentage Details

Sl. No.	Prog ramme	Branch	No. of Students Appeared				No. of students Passed				Pass Percentage			
			Academic Year	2010-11	2011-12	2012-13	2013-14	2010-11	2011-12	2012-13	2013-14	2010-11	2011-12	2012-13
1	B.E./ B.TECH.	CIVIL	130	130	132	143	125	119	123	127	96.15	91.54	93.18	88.81
2		MECHANICAL	132	130	140	141	126	123	132	131	95.45	94.62	94.29	92.91
3		MECHATRONICS	65	126	132	146	64	118	127	133	98.46	93.65	96.21	91.1
4		ECE	131	133	135	144	124	128	128	121	94.66	96.24	94.81	84.03
5		EEE	128	130	128	149	126	123	123	138	98.44	94.62	96.09	92.62
6		EIE	65	127	137	145	62	126	126	130	95.38	99.21	91.97	89.66
7		CSE	132	124	130	145	130	115	120	131	98.48	92.74	92.31	90.34
8		CHEMICAL	62	63	70	74	62	63	58	68	100	100	82.86	91.89
9		IT	98	132	139	151	95	103	132	134	96.94	78.03	94.96	88.74
10		FT	43	54	53	63	38	45	36	48	88.37	83.33	67.92	76.19

Sl. No.	Programme	Branch	No. of Students Appeared				No. of students Passed				Pass Percentage			
			Academic Year	2010-11	2011-12	2012-13	2013-14	2010-11	2011-12	2012-13	2013-14	2010-11	2011-12	2012-13
11	M.E./ M.TECH.	CEM	17	17	17	16	17	17	17	15	100	100	100	93.75
12		CEM (PT)		1				1				100		
13		STRUCTURAL				18				18				100
14		ED	24	25	24	25	24	24	24	24	100	96	100	96
15		ED (PT)	1				1				100			
16		CAD / CAM	17	16	16	18	17	16	15	18	100	100	93.75	100
17		CAD / CAM (PT)	2			1	2			1	100			100
18		MECHATRONICS	18	17	18	15	18	17	14	14	100	100	77.78	93.33
19		MECHATRONICS (PT)	2		1		2		1		100		100	
20		VLSI DESIGN	17	18	18	18	16	18	17	18	94.12	100	94.44	100
21		VLSI DESIGN (PT)	1			1	1			1	100			100
22		COMMUNICATION SYSTEMS			17	19			17	17			100	89.47
23		EMBEDDED SYSTEMS				18				17				94.44
24		APPLIED ELECTRONICS	23	24	25	25	23	22	24	25	100	91.67	96	100
25		PED			18	18			17	18			94.44	100
26		CIE		18	18	18		18	17	18		100	94.44	100

Sl. No.	Programme	Branch	No. of Students Appeared				No. of students Passed				Pass Percentage			
			Academic Year	2010-11	2011-12	2012-13	2013-14	2010-11	2011-12	2012-13	2013-14	2010-11	2011-12	2012-13
27		CSE	24	24	25	25	24	22	25	25	100	91.67	100	100
28		CSE (PT)	2	1	3		2	1	3		100	100	100	
29		CCE		18	17	16		18	16	16		100	94.12	100
30		CHEMICAL	9	11	12	12	9	10	12	11	100	90.91	100	91.67
31		CHEMICAL (PT)	1				1				100			
32	B.Sc.	CT	109	56	61	57	98	48	52	50	89.91	85.71	85.25	87.72
33		IT	116	59	59	60	109	53	51	44	93.97	89.83	86.44	73.33
34		SE	109	47	59	58	94	39	52	49	86.24	82.98	88.14	84.48
35	M.Sc.	CT	47	56	49	34	44	53	40	32	93.62	94.64	81.63	94.12
36		IT	38	59	53	22	36	52	45	20	94.74	88.14	84.91	90.91
37		SE (5 YEARS)		58	55			52	47			89.66	85.45	
38	MBA	MBA	112	115	110	118	104	99	88	103	92.86	86.09	80	87.29
39	MCA	MCA	111	107	112	117	110	99	93	102	99.1	92.52	83.04	87.18

Criterion - III: Research, Consultancy and Extension



“Research shows that the climate of an organization influences an individual's contribution far more than the individual himself.”

- W. Edwards Deming

CRITERION – III: RESEARCH, CONSULTANCY AND EXTENSION

EXECUTIVE SUMMARY

- Research Committee to promote the research activities is functioning
- Motivation and support provided by management for promotion of research culture among the faculty and students
- Thrust areas for research identified
- Budget allocation for research and development activities done
- Seed money of around Rs.52 lakh to promote innovative and inter-disciplinary research projects granted by the management every year
- An amount of Rs.20 lakh is provided by the management to organize Open House Exhibition on Science and Engineering to display innovative projects done by our students
- Research activities promoted by providing financial assistance for registration, TA etc to participating faculty members
- 16 Collaborative Centres for Research established
- 14 research projects with a total grant of Rs. 172.41 lakh were completed by our college faculty during the last four years.
- 80 faculty members qualified with Ph.D. in the last 4 years
- 985 faculty publications done in the last four years
- 1289 papers presented in the conference proceedings
- 9 Patents in hand, 2 patents were filed in 2014 and 4 patents in the pipeline.
- 4 faculty members received best researcher award from Association of Scientist Developers and Faculties, Pondicherry.
- Policy for revenue sharing in consultancy has been fixed at 60:40
- Rs 1.58 crore generated through consultancy and testing services
- Three industry sponsored laboratories for fostering research have been established
- 20 MoUs signed with industries for promoting applied research
- Sense of Societal Responsibility among students is inculcated by promoting activities through NCC, NSS, and society oriented clubs.

3.1 Promotion of Research

3.1.1 Does the College have a research committee to monitor and address the issues of research? If yes, what is its composition? Mention a few recommendations which have been implemented and their impact.

Yes, the college has a research committee headed by Dean (R&D) in order to facilitate and monitor all activities connected with research. The committee comprises one faculty member from each department as Research co-ordinator who co-ordinates the research activities at the department level. The research activities are facilitated by the Research committee and reviewed fortnightly by the Head of the Institution. Faculty members are motivated to submit innovative proposals to various funding agencies and also publish articles in National and International Journals.

The composition of the Research Committee is as follows:

Chairman: Dr.K.Krishnamurthy (Dean / R&D)

MEMBERS:

Sl. No.	Name	Department
1.	Dr.S.Anandakumar	Civil Engineering
2.	Dr.R. Rajasekar	Mechanical Engineering
3.	Dr.S.Sathiyavathi	Mechatronics Engineering
4.	Dr.E.D.Kanmani Ruby	ECE
5.	Dr.S.Albert Alexander	EEE
6.	Dr.T.Kalavathidevi	EIE
7.	Dr.K.Kousalya	CSE
8.	Dr.T.Abirami	IT
9.	Ms.N.Deepa Priya	Chemical
10.	Dr. S. Kandasamy	Food Technology
11.	Dr.S.Venkataasalam	Mathematics
12.	Ms.K.S.Pugazhvadivu	Physics
13.	Dr.M.Karthikeyan	Chemistry
14.	Mr.A.Robby Sebastian Clement	English
15.	Dr.P.Karthikeyan	Management Studies
16.	Mr.P.A.Selvaraj	Computer Applications
17.	Mr.E.K.Vellingiri Raj	CT-UG
18.	Mr.G.R.Sreekanth	CT-PG

Recommendations and their impact

Sl. No.	Recommendation	Implementation	Impact
1.	Budget allocation for R&D activities should be given priority	Heads of the departments carry out discussion with the department faculty and propose the budget requirements for R&D	Equipments needed for carrying out research oriented projects were purchased

Sl. No.	Recommendation	Implementation	Impact
2.	Improvement is needed in Research publications	Seminars / workshops on Research methodologies conducted Faculty members are deputed to other premier institutions. Follow up, review and motivation of faculty.	1289 papers have been presented by the faculty in conferences in the last four years. 985 papers were published by the faculty in reputed journals
3.	Consultancy and testing activities need to be strengthened	Faculty are encouraged to visit industries to identify the potential areas for consultancy through IIP Cell	Consultancy is being given in the form of Energy audit for industries, Testing and providing solutions to problems of the industries. Training programmes conducted for industries and other institution faculty and students have been found to be of great benefit to them
4.	Increase the number of Ph.D holders	Faculty are encouraged to register for their Ph.Ds	80 scholars have completed their Ph.Ds in the past 4 years, taking the present number of Ph.Ds in the institute to 119
5.	Recognition of research centres under Anna University	All the departments have been recognised as research centres	Currently 271 scholars are doing their Ph.Ds under these centres
6.	Reimbursement of expenses for presenting project proposals	Expenses incurred by the faculty for presenting project proposals to various funding agencies are borne by the college	This has resulted in motivating the faculty to submit more proposals
7.	Motivation of faculty to participate in Conferences/ Workshops/Seminars	Budget allocation is provided to enable the faculty to attend conferences, workshops and seminars	This has resulted in faculty members attending more number of workshops/seminars to upgrade their knowledge
8.	Collaborative work with national/international agencies should be developed by the institute	Key areas like embedded systems, system design have been identified for setting collaborative centres	The institute has established collaborative centres with national and international level organisations like Freescale Semiconductors, Texas Instruments, and CTS
9.	Motivation to apply for patents	Reimbursement of the expenses for application of the patents	9 patents have been acquired. 2 Nos. have been registered and 4 Nos. are in the pipeline.
10.	Fund allocation for the sanctioned project	The college has no restrictions in sanctioning funds to carry out projects smoothly.	14 research projects with a total grant of Rs. 172.41 lakh were completed by our college faculty during the last four years

3.1.2 What is the policy of the College to promote research culture in the College?

- The college has set up an R&D cell headed by Dean(R&D). Each department has research coordinators, who are members of the cell. The cell conducts meetings to monitor the progress and quality of research work.
- Travelling expenses are borne by the College for paper presentations by the faculty in National and International conferences.
- ‘Best Paper Award’ is given for the best paper presentation.
- Guest Lectures are conducted by eminent persons from IIT and other reputed Universities and their ideas are implemented to get the project proposals sanctioned and to promote research among the faculty and students.
- All the Departments are recognized as research centres by Anna University, Chennai.
- The faculty members with doctoral degree are encouraged to guide Ph.D. candidates and the internal candidates are given first preference in this regard.
- The faculty members are motivated to use the infrastructure of the institute for their research.
- Inter department research is also encouraged
- Each department thrives to be the Centre of excellence in areas of specialisation.
- Guest lectures are organized on ‘Thesis Writing’ and ‘Literature Review’ frequently.
- Scientists from various research organizations are invited to give special talks
- Research proposals are being sent periodically to various research organizations and industries for getting grant to do major and minor research projects.
- A separate team has been formed to conduct consultancy services in industries. The consultancy team works on giving solutions for the problems in the industries.
- Research Committee of the college scrutinizes research proposals of the teaching staff and assess the research work done by research scholars regularly to enhance the quality of research work.
- Special allotment in budget is done for research for the purchase of equipment, journals, books etc.,
- The college library subscribes e-journals and other journals
- R&D meetings are conducted quarterly to discuss about proposals, seminars, conference, and workshop.
- The members of faculty are provided Special Casual Leave and TA/DA to present papers in National/ international conferences.
- College provides TA/DA for faculty for presentations of major/minor research proposals.
- The members of faculty are encouraged to attend the training programmes on their research areas with TA/DA borne by the college.
- Seminars and various training programmes are organized in the emerging areas of technology to promote research.
- Cash incentive of Rs.10,000/- per month for Ph.D holders in Engineering and Rs. 5,000 per month for Ph.D. holders in Science and Humanities to motivate the faculty to do further research.

- Our institute has instituted four awards to encourage and appreciate researchers as follows:
 - Best Researcher
 - Best performer – Faculty (Research and Development projects)
 - Best performer – Faculty (Publication and outside interaction)
 - Best performer – Student (Paper and Project presentation)
- Every year a faculty and a student will be selected and awarded based on their contribution in research

3.1.3 List details of prioritised research areas and the areas of expertise available with the College.

Prioritised research areas

- Concrete Technology and Structural Engineering
- Engineering Design, Manufacturing, Industrial Engineering
- Metal Casting, Process control, MEMS, Polymer Composite, Powder metallurgy
- Non linear system modeling, Process modeling and optimization
- Networks, Digital Signal Processing, Communication, VLSI, Nano Electronics
- Power Quality, Power Electronics and Drives, Alternate Energy Sources, Applied Electronics, High Voltage Engineering
- Effluent treatment, Alternate fuels, Environmental Chemistry, Food Chemistry
- Data mining, Grid Computing, Wireless and ad hoc networks
- Fuzzy Systems, Lattice theory, Linguistics, Indian Writing in English
- Inorganic Chemistry, Nano Particles Synthesis

Sl. No.	Prioritized Areas	Faculty members with Expertise
1.	Networks	Dr. G. Murugesan Dr. E.D. Kanmani Ruby Dr. S.Malliga Dr. P. Natesan Dr. N. Premalatha
2.	Digital Signal Processing	Dr. N. Kasthuri Dr. T. Meeradevi
3.	Machine Design	Dr. S. Shankar
4.	Manufacturing	Dr. P. Senthilvelmurugan Dr. K. Ponnappa
5.	Engineering Design	Dr.P.Navaneethakrishnan Dr. K. S. K. Sasikumar
6.	Environmental Engineering	Dr. K. Saravanan Dr. R. Baskar Dr. K. Kannan
7.	Concrete Technology & Structural Engineering	Dr. S. Krishnamurthy Dr.K. Nirmalkumar Dr. P. Chandrasekaran
8.	Data Mining	Dr. R.R.Rajalaxmi Dr.S.V.Kogilavani Dr. P.Vishnu Raja Dr. C. Nalini Dr. R.Devipriya

Sl. No.	Prioritized Areas	Faculty members with Expertise
9.	Grid Computing	Dr. K.Kousalya Dr.C.S.Kanimozhi Selvi Dr. P. Suresh Dr. G.K.Kamalam
10.	Ad hoc Networks/Wireless Networks	Dr. S. Varadhaganapathy Dr. J. Premalatha Dr. R.C. Suganthe Dr. C. Poongodi Dr. S. Anandamurugan Dr. K.Sangeetha

3.1.4 What are the proactive mechanisms adopted by the College to facilitate smooth implementation of research schemes/projects?

- Advancing funds for sanctioned projects - ✓
- Providing seed money - ✓
- Autonomy to the principal investigator/coordinator for utilizing overhead charges - ✓
- Timely release of grants - ✓
- Timely auditing - ✓
- Submission of utilization certificate to the funding authorities - ✓

The College allows the faculty to adapt to the above mechanisms to facilitate the smooth implementation of the research projects. Moreover, Technology Business Incubator is also providing funding to our students/faculty to transform their innovative ideas into projects / products.

3.1.5 How is interdisciplinary research promoted?

* Faculty members are encouraged to work on interdisciplinary research projects. The list of interdisciplinary projects is given below:

Sl. No.	Interdisciplinary Research	Faculty Member	Departments Involved
1.	VoIP using Blackfin Processor	Dr. N. Kasthuri Ms. T. Meeradevi Dr. S. Malliga	Electronics and Communication Engineering Computer Science & Engineering
2.	Addressing Rice Mill Cluster through MSME	Dr.P.Navaneethakrishnan Dr.N.Senthilnathan Dr.R.Somasundaram	Mechanical Engineering Electrical and Electronics Engineering Master of Business Administration
3.	Reduction of Calcium content in blow down water	Dr.R.Baskar	Chemical Engineering
4.	Wise Management – Chennai	Dr.P.Navaneethakrishnan Dr.N.Senthilnathan Dr.R.Somasundaram	Mechanical Engineering Electrical and Electronics Engineering Master of Business Administration

Sl. No.	Interdisciplinary Research	Faculty Member	Departments Involved
5.	A Weighted association rule mining for energy conservation in wireless sensor networks	Dr.P.Priakanth Ms.T.Abirami	Information Technology and Computer Technology
6.	Treatability Studies for Textile Waste Water Treatment	Dr.P.N.Palanisamy Dr.R.Baskar Mr.P.Manikandan	Department of Chemistry and Department of Chemical Engineering
7.	Web Enabled Health Monitoring and Control of Disaster prone structures	Mr.P.Natesan	Civil Engineering & Computer Applications
8.	Synthesis and study of prvoskite structured nanocrystalline thin films for the application of information storage devices	Dr.K.Tamilarasan	Physics, Information Technology and Computer Science and Engineering

3.1.6 Enumerate the efforts of the College in attracting researchers of eminence to visit the campus and interact with teachers and students?

- All the departments of the college are organizing various seminars and workshops in which eminent scholars from various reputed institutions deliver talk on research and interact with our faculty and students on research related topics in various domains.
- National Level and/or International Level Conferences are organized every year where researchers of eminence are either brought here to deliver keynote addresses or through video conferencing to interact with our faculty and students.
- Eminent personalities from various areas of specialisation are invited often to our campus to deliver lectures for the benefit of our faculty and students.

Details in Annexure. [will be shown during Peer Team visit]

3.1.7 What percentage of faculty have utilized sabbatical leave for research activities? How has the provision contributed to the research quality and culture of the College?

Faculty members are permitted to take sabbatical leave for carrying out their research work outside the campus. The details of the faculty who have been given sabbatical leave for the past 4 years are given below:

Sl. No.	Name of the faculty	Designation & Department	From Date	Purpose/Institute
1.	P. Muthukumar	Mechanical Engg./ Assistant Professor	January' 14	Full Time Ph.D/IIT Madras
2.	T. Jegadeesh	Mechanical Engg./ Assistant Professor	20.12.2011	Full Time Ph.D/IIT Madras

Sl. No.	Name of the faculty	Designation & Department	From Date	Purpose/Institute
3.	M. Prabha	Mechatronics Engg./Assistant Professor	27.08.2010	Full Time Ph.D/IIT Madras
4.	K. Udayakumar	Mechatronics Engg./Assistant Professor	14.12.2010	Full Time Ph.D/IIT Madras

This provision enables the faculty to go for higher studies or for doing research work in reputed institutions like NITs, and IITs, It paves the way for good quality research works and in turn the students and his/her colleagues of the institution get benefited.

3.1.8 Provide details of national and international conferences organized by the College highlighting the names of eminent scientists/scholars who participated in these events.

Sl. No.	Name of the Department	Conference Organized		Number of the Eminent Scientists / Scholars who participated in the events	
		National	International	National	International
1.	Mechatronics, Mechanical Civil	3	1	3	6
2.	Mechanical Mechatronics MBA	1		1	
3.	EIE	1		1	
4.	ECE	3	1		5
5.	EEE		1		1
6.	CSE	1	1	4	5
7.	IT	2			
8.	MBA	3			
9.	MCA	5		2	
10.	CT-UG	5 1		6	
11.	Mathematics	2		4	
12.	Physics	2		2	
13.	Chemistry	7		23	
14.	English	1	1	1	4
15.	ECE, CSE, IT, MCA CT-UG, CT-PG		1		4
16.	CT-PG (along with CT-UG & MCA)		1		

Details of the above are given in Annexure.[will be shown during Peer Team visit]

3.1.9 Details on the College initiative in transferring/advocating the relative findings of research of the College and elsewhere to the students and the community (lab to land).

- Research scholars who are doing their research here have to present their findings to our faculty and students before submitting their synopsis. The final public viva-voce exam of the faculty who have registered their Ph.Ds under our institution will be conducted in the presence of faculty of all type of cadres and UG & PG students. By this way, the findings of the research will be transferred to the students and faculty community.
- Technology Business Incubator, a unique facility in the campus set up with the grant-in-aid and support of Department of Science and Technology/ Government of India, encourages the students, faculty and budding entrepreneurs and provides all facilities to convert their innovative ideas into useful products and services. Students working with entrepreneurs in TBI gain valuable hands-on experience. Some of the products developed by the incubatees of TBI are given below:
 - “Real Mobile Motor Starter Controller” is useful for farmers for remote operation, monitoring and control of agricultural pump sets. Considering the utility of the device, the Agricultural Engineering Department of Tamilnadu Government accorded approval for the device for use by the farmers at subsidized rates to the extent of 50%.
 - The product ‘Energy Saver’ developed at TBI@KEC is used by the Madurai and Coimbatore corporations for monitoring, control and saving of electrical energy consumed by street lights.
 - Automation of operation has helped printing of various designs in the textile industry easily. This is as a result of product developed at TBI@KEC.
 - The manual operation of Fly Ash Brick manufacturing has been automated by TBI@KEC incubatee.
 - One of the incubatees M/s Kulothung Automotive Systems of TBI@KEC received Outstanding Citizen Award (Instituted by JCI, Erode) from Erode District Collector on 15 September 2013 for the product “Fuel Saver for MPFI Petrol Cars” developed at TBI@KEC.
 - With the assistance of staff and students of Host Institute, TBI incubatee developed a Bio-Suctioner device that removes septic fluid from the body. It is mainly used for the removal of puss from the wound of the diabetic patients.
- In all the development activities, the students and faculty of the Host Institute namely Kongu Engineering College are directly involved with the entrepreneurs resulting in a win – win situation.
- Students and faculty are encouraged by the institute to register their ideas as patents. So far, 9 patents have been awarded and one patent has been sold. 6 more patents are in the pipeline.

3.1.10 Give details on the faculty actively involved in research (Guiding student research, leading research projects, engaged in individual or collaborative research activity etc.)

Guiding student research

- Faculty members are guiding both UG and PG students for doing their projects during their final year. As per the regulations of the curriculum, a project evaluation committee comprising senior professors is constituted for the conduct of periodical reviews to evaluate the progress of the students' projects. The guides will be present during the project reviews of their students.
- Technology Business Incubator, first of its kind in India encourages and guides the students to do applied research. The number of students directly involved with entrepreneurs in product development is 161. TBI has facilitated 98 student projects so far, through which 167 students have got benefited.

Leading research projects

- 14 research projects sponsored by various funding agencies like AICTE, MNRE, DST and UGC with a total grant of Rs. 172.41 Lakh were completed by our college faculty during the last four years. The details are available in the section 3.2.6.

Individual/Collaborative research activity

The details of the individual/collaborative research activity are given below:

Sl. No.	Name of the Department	Number of Ph.D. Guides	No. of Ph.D. Research Scholars being guided
1.	Mechanical	5	24
2.	Mechatronics	4	36
3.	Civil	3	8
4.	EEE	2	7
5.	E&I	2	23
6.	ECE	3	20
7.	CSE	5	50
8.	IT	4	6
9.	Chemical	3	24
10.	Food Technology	1	1
11.	Management Studies	3	14
12.	Computer Applications	2	19
13.	Physics	1	7
14.	Chemistry	1	10
15.	Mathematics	4	20
16.	English	1	9

3.2 Resource Mobilization for Research

3.2.1 What percentage of the total budget is earmarked for research? Give details of major heads of expenditure, financial allocation and actual utilization for last four years.

Budget Vs Actual under the major heads for the last 4 years is indicated below:

Item	Budgeted in CFY (2013-2014)	Expenses in CFY (till ...) 2013-2014	Budgeted in CFY (2012-2013)	Expenses in CFY (till ...) 2012-2013	Budgeted in 2011-2012	Expenses in CFYml (2011-2012)	Budgeted in 2010-11	Expenses in CFYm2 (2010-2011)
Infrastructural build-up	896.50	968.25	324.00	300.68	450.00	294.07	475.00	468.78
Library	165.00	34.25	165.00	158.14	52.00	28.74	66.03	28.63
Laboratory equipment	870.00	272.38	524.00	311.79	325.00	122.56	175.00	140.20
Laboratory consumables	71.75	59.10	61.00	28.60	61.00	39.44	24.00	20.94
Teaching and non-teaching staff salary	3097.00	2602.96	3205.00	2261.27	1900.00	1882.00	1700.00	1642.37
R&D	16.00	10.77	20.00	18.59	20.00	19.77	20.00	4.36
Training and Travel	10.00	2.98	10.00	2.27	5.00	2.05	5.00	3.86
Others – specify (EB, Telephone University fees, function expenses)	1291.50	881.87	1233.50	487.75	435.00	441.15	249.56	249.56
Total	6417.75	4832.56	5542.50	3569.09	3248	2829.8	2714.59	2558.7

A part of the expenditure for Library, Laboratory equipment, Consumables and infrastructure built-up also caters to R&D.

3.2.2 What are the financial provisions made in the College budget for supporting student research projects?

- An amount of Rs. 15 to 20 lakhs is provided by the College Management every year for enabling the students to do innovative projects in Open House Exhibition on Science and Technology conducted every year.
- Travelling assistance is provided for the students who present their papers and projects and got prizes in reputed institutions like NITs and IITs.
- Subscription to e-Journals (Science Direct, Springer, IEEE, ASCE, ASME, ACM, DELNET-Proquest Engineering and Technology)
- Internet Centre / Connectivity with 110 Mbps band width and Wi-Fi connectivity in the Hostels
- Financial assistance is given to the students who display their projects in industry exhibitions like INTEC and EroINTEC conducted by Coimbatore District Small Industries Association and Erode District Small Industries Association respectively.

- TBI@KEC, a unique facility in the campus provides funding to the students for converting their innovative ideas into projects/products. The number of students' projects facilitated so far by TBI is 98. Moreover, TBI has launched Students' Entrepreneurship Scheme to attract the students to transform their ideas into commercial products by providing total support including mentoring and funding.
- Best UG projects at department level are selected and awarded with medal/prizes during annual day function.
- The college is providing guidance and 100% financial support to the students for filing patents in their names. The list of patents is given in section 3.2.4.

3.2.3 Is there a provision in the institution to provide seed money to faculty for research? If so, what percentage of the faculty has received seed money in the last four years?

Yes, there is a provision in the institution to provide seed money to faculty for research. The following list gives the amount of seed fund utilised by the faculty of various departments of the institution:

Sl. No.	Name of the Faculty	Seed Amount (in Rs.)	For what Purpose	Year
1	Dr.V.Sivakumar K.Kannan	5,22,000	Enhancing the Shelf life of Sapota (MANIKARA ZAPOTA) by Value Addition	2012-13
2	Dr.C.Maheswari	1,73,202	Investigations on the reduction of SO ₂ emission from coal fired boilers using wet scrubber with fuzzy PID Controller	2012-13
3	Dr.R.Rajasekar Dr.K.Ponna	10,00,000	To establish lab in the area of material science	2013-14
4	S.Manikandan	6,00,000	To introduce new experiments in the metrology	2014-15
5	A.Somasundraram	6,00,000	To introduce new experiments in Welding Lab	2014-15
6	Food Technology	22,70,000	To purchase High Performance Liquid Chromatography	2014-15

3.2.4 Are there any special efforts made by the College to encourage faculty to file for patents? If so, provide details of patents filed and enumerate the sanctioned patents.

Yes. The College has devised a policy statement for Intellectual Property Rights (IPR). Through this policy, the college is encouraging faculty to apply for patents. The College is providing guidance and support to the faculty / students including

funding for filing patents in their names. The list of patents applied and sanctioned so far is given below:

Sl. No.	Department	Title of the Patent	Award No.	Date
1	Mechanical Engineering	Smart Fish Tank	210082	17.09.2007
2	Chemical Engineering	Complete Mineralization of a Model Pollutant over modified TiO ₂ immobilised on Cylindrical Glass Reactor	211890	13.11.2007
3	Electrical and Electronics Engineering	Self Tracking Solar Panel	212165	26.11.2007
4	Electronics and Communication Engineering	Automatic Gas Stove	219187	25.04.2008
5	Electronics and Communication Engineering	Polymorphic Keyboard for Physically Handicapped	219748	13.05.2008
6	Mechanical Engineering	Mecha-Duster	219747	13.05.2008
7	Civil Engineering	Electronic Level using Sensors	220419	28.05.2008
8	Mechanical Engineering	Foldable Shoe	229355	17.02.2009
9	Information Technology	Locker Control System using Mobile Phone	231152	03.03.2009

The following patents are in the pipeline:

Sl. No.	Department	Title	Date of file
1.	ECE	A fruit harvesting device	23.10.2014
2.	Mechanical	Portable dust collector for removing dust from chalk board eraser	29.09.2014
3.	Chemical	Extraction of natural pesticide from custard apple seeds.	Applications sent for patenting on 04.02.2015
4.	Food Technology	Natural preservative with nutritional value using water melon rind for food products.	
5.	Civil Engineering	Coconut coir roofing sheet.	
6.	EEE	Automatic Onion Planter	

3.2.5 Provide the following details of ongoing research projects:

The following list provides the ongoing research projects:

	Year- wise	Number	Name of the Project	Name of the Funding Agency / Industry	Total Grant Received (Rs Lakhs)
A. College Funded					
Minor Projects	2014	1	Establishment of material science lab	-	10.00
	2014	1	Upgradation of metrology lab	-	6.00
	2014	1	Upgradation of welding lab	-	6.00
B. Other Agencies – National and International					
Minor Projects	2010	1	Utilisation of Textile Effluent for Construction Purposes	DST	3.24
	2011	1	Effective Utilization of fly ash and processed water from rice mills for construction	UGC	8.30
	2011	1	Investigation on the reduction of SO ₂ emission in coal fired boilers using Wet scrubber with Fuzzy PID controller	UGC	7.88
	2011	1	Process integration for production of biogas and zero discharge effluents from paper and pulp industries	UGC	9.59
	2012	1	Study on the use of untreated and treated tannery effluent in construction industry	AICTE	6.00
	2012	1	Advanced Total Station	AICTE	5.00
	2012	1	Enhancing the Shelf Life of Sapota (Manikara Zapota) by Value Addition	DST	5.22
	2013	1	Design and implementation of ARM based automatic precision drip irrigation control system	UGC	1.35
	2013	1	Design and tribo performance evaluation of mechanical face seals for high power applications	UGC	7.62
	2014	1	Design and Development of Optimized Level Controller for Nonlinear Spherical Tank System	UGC	4.00
	2014	1	Socio-Economic online Real Time Blood Bank Management System using Mobile Computing	UGC	1.00
	2014	1	Energy efficient pollution monitoring system using wireless sensor networks	CSI	0.30

	Year- wise	Number	Name of the Project	Name of the Funding Agency / Industry	Total Grant Received (Rs Lakhs)
	2014	1	Design and development of performance enhancement of wind assisted domestic solar hot water system by filling carbon dioxide-methane-nitrous oxide gases in the collector panel for rural areas	UGC	2.10
	2014	1	Socio-Economic status of women sanitary workers with reference to selected municipal corporations of Tamilnadu	UGC	1.85
	2014	1	Mapping of Socio-Economic Status of Beedi Workers in Selected Districts of Tamilnadu	UGC	1.10
Major Projects	2007	1	Seed Support System for start-up in TBI	DST	100.00
	2010	1	Support of Entrepreneurial and Managerial Development of SMEs through Incubators	MSME	66.28
	2010	1	Application of Artificial Neural Networks (ANN) for river water quality modelling and prediction	CSIR	10.21
	2011	1	Seed Support System to Technology Business Incubator-KEC	DST	200.00
	2011	1	Inspection of Warp and Weft lacking in textile web material using wavelet and artificial intelligence	DST	18.30
	2011	1	Improving the vibration energy dissipation ability of steel reinforced concrete by using admixtures	UGC	10.29
	2013	1	Treatability studies for textile wastewater treatment- Phase-I	DST	48.10
	2013	1	Modernization of Thermal Engineering Lab	AICTE	10.44
	2013	1	Tribo performance evaluation of mechanical seal faces by thermal spraying process	AICTE	13.50
	2014	1	Work-related musculoskeletal disorders among hand screen printing workers: An investigative study and ergonomics intervention	DST	18.97
	2014	1	Design and development of hybrid renewable energy system using multilevel inverters for power quality improvement	UGC	14.06

	Year- wise	Number	Name of the Project	Name of the Funding Agency / Industry	Total Grant Received (Rs Lakhs)
	2015	1	Wear prediction of multipoint cutting tool using sensor fusion model based on adaptive neuro fuzzy inference system	UGC	11.42
	2015	1	Investigation on Fabric Quality and Defects using Sensor Based Model with Fuzzy and Neuro Intelligent System	UGC	10.21
C. Industry sponsored					
	2012	1	VoIP using Blackfin Processor	BPL	1.50

3.2.6 How many departments of the College have been recognized for their research activities by national / international agencies (UGC-SAP, CAS, DST-FIST; DBT, ICSSR, ICHR, ICPR, etc.) and what is the quantum of assistance received? Mention any two significant outcomes or breakthrough due to such recognition.

All the departments of the college are recognized Research centres by Anna University.

The following table gives the details of the research projects sanctioned by various national funding agencies for the last four years:

Sl. No.	Name of the Department	Funding Agency	Total Amount received (Rs. in Lakh)	Impact
1.	Civil Engineering	AICTE	5.00	Total Station
2.	Mechanical Engineering	MNRE	27.00	Automatic Solar Radiation Monitoring Station
3.	Mechanical Engineering	UGC	9.33	Fabrication of hybrid refrigeration system was designed and developed
4.	Mechatronics Engineering	AICTE	13.45	Robotics & Automation Laboratory was designed and modernized
5.	Mechatronics Engineering	DST	11.16	Advanced embedded processor control used for roof tile production mechanism was developed
6.	Electrical and Electronics Engineering	DST	52.75	Multilevel inverters for power quality improvement in renewable energy sources was designed and developed

Sl. No.	Name of the Department	Funding Agency	Total Amount received (Rs. in Lakh)	Impact
7.	Electrical and Electronics Engineering	UGC	9.24	Cascaded multilevel inverters for photo voltaic applications was designed and developed
8.	Electrical and Electronics Engineering	AICTE	6.60	Research and training laboratory for measurement and analysis of electrical parameters were constructed
9.	Electronics and Communication Engineering	AICTE	9.44	VLSI Lab was modernized by equipping with state-of-the-art facilities.
10.	Chemical Engineering	AICTE	14.60	Process control laboratory by installation of Non-linear pH control was upgraded
11.		AICTE		Reuse of fouled members by employing integrated chemical cleaning process was developed
12.	Computer Technology – UG	UGC	9.13	Energy conservation by a weighted association rule mining in wireless sensor networks
13.	Computer Technology – PG	AICTE	4.45	Integration of Optimization Algorithms for Network Traffic Scheduling and Travelling Salesman Problem was determined
14.	Kongu CRS	REACH	0.26	AXSHYA TB Awareness Project

Details in Annexure. [will be shown during Peer Team visit]

3.2.7 List details of completed research projects undertaken by the College faculty in the last four years and mention the details of grants received for such projects (funded by Industry/National/International agencies).

14 research projects sponsored by various funding agencies like AICTE, MNRE, DST, and UGC with a total grant of Rs. 172.41 Lakh were completed by our college faculty during the last four years.

* Details are given in the Section 3.2.6.

3.3 Research Facilities

3.3.1 What efforts are made by the College to keep pace with the infrastructure requirements to facilitate Research? How and what strategies are evolved to meet the needs of researchers?

- A separate budget for R&D is being made every academic year to meet infrastructure requirements to facilitate Research like purchase of equipment, software, instruments etc.,

Year	Total budget (Rs. In Lakh)	Budget for research (Rs. In Lakh)
2010-2011	2714.59	20.00
2011-2012	3248.00	20.00
2012-2013	5542.50	20.00
2013-2014	6417.75	16.00

- During budget allotment for every academic year special preference is given for research activities (equipments, journals etc).
- Collaborative laboratories are established jointly with industries like Freescale Semiconductors, Texas Instruments and Cognizant Technology Solutions.
- New laboratory facilities are established with a total grant of around Rs.77 Lakh sanctioned from various funding agencies. The details are given below:

Department	Funding Agencies	Year	Area for infrastructure development	Amount (Rs. in Lakh)
Mechatronics Engineering	AICTE	2010	Modernization of Robotics and Automation Lab	13.45
Mechanical Engineering	MNRE-CWET	2011	Automatic Solar Radiation Monitoring Station	27.00
Chemical Engineering	AICTE	2011	Upgradation of Process Control Lab	5.80
Civil Engineering	AICTE	2012	Advanced Total Station	5.00
Electrical and Electronics Engineering	AICTE	2012	Modernisation of Power Electronics Laboratory	6.60
Mechanical Engineering	AICTE	2013	Modernization of Thermal Engineering Lab	10.44
Electronics and Communication Engineering	AICTE	2013	Modernisation of VLSI Lab	9.44

- Every year Open House Exhibition on Science and Technology is organized and Rs.15 lakh is given to improve the research activities.
- Number of seminars and workshops are organized to promote research.
- The researchers are encouraged to attend and present the national and international level conference.
- Researchers from IITs and Research institutes are invited for special lectures.
- Faculty are encouraged to visit and pursue research in reputed universities. This exposes them to latest scientific and technological development.
- Faculty are encouraged to attend the training programmes on their research areas, with funding from the college.

3.3.2 Does the College have an information resource centre to cater to the needs of researchers? If yes, provide details on the facility.

Yes.

- Our College has set up a R&D cell headed by Dean (R&D). Each department has research coordinators, who are the members of the cell. The R&D cell is an information resource centre to cater to the needs of researchers and the cell conducts meetings to monitor the progress and quality of research work. . The R&D cell maintains the following website rnd.kongu.edu for the benefit of the researchers to get information.
- Moreover, the college has a Library with 72,070 volumes, 274 hardcopy journals, 5284 online resources on different titles, a digital library with 7264 CD ROMs and 529 audio and video cassettes, which can be utilized by the research scholars as a catalyst to their research.
- The TBI @ KEC, a DST/GoI supported venture in the campus, first of its kind in India, provides a congenial atmosphere with state-of-the-art infrastructural facilities – hardware as well as software – in the areas of Electronics and ICT for converting innovative ideas into commercial product and services. It serves as an ideal platform for applied research for students and faculty.

3.3.3 Does the College provide residential facilities (with computer and internet facilities) for research scholars and faculty?

Yes, the college provides residential facility for faculty and research scholars.

- 60 Nos. faculty quarters with 24 Hour power supply and water facility are available in the campus
- Hostel facilities are also available for research scholars.
- Extensive computing facilities with more than 2714 terminals and Wi-Fi connectivity with 110 Mbps leased line are provided for the students and the research scholars in the campus.
- Wi-Fi connectivity is extended to the faculty quarters also.

3.3.4 Does the College have a specialized research centre/ workstation to address challenges of research programmes? If yes, give details.

All the departments of the institution are Anna University approved research centres to promote research. Research facilities are also available in each department to address to the challenges of research programmes. The number of equipments/workstations available in each department is given in the annexure. [will be shown during Peer Team visit]

- The TBI@KEC provides a congenial atmosphere with state-of-the-art infrastructural facilities – hardware as well as software – in the cutting edge technology areas for converting innovative ideas into commercial products and services by offering total support for applied research.
- The college has established laboratories in the frontier areas like Embedded Systems and Analog System Design in collaboration with Freescale Semiconductors India Pvt. Ltd. and Texas Instruments respectively.
- An Innovative Lab has been established in collaboration with Cognizant Technology Solutions for enabling the faculty to do research

3.3.5 Does the College have research facilities (centre, etc.) of regional, national and international recognition/repute? Give a brief description of how these facilities are made use of by researchers from other laboratories.

- Each department is recognized as Research centre by Anna University, Chennai. 269 scholars are doing Ph.D. in KEC research centre, out of whom 136 scholars are from other institutions.
- Kongu Engineering College has established a Technology Business Incubator (TBI) in the campus at a total project outlay of Rs. 4.1 crore. The motto of the incubator is “Concept to Commercialisation” and the prime objective is to nurture start-ups in the emerging Electronics and ICT related technology areas. More than 60 products developed at TBI@KEC have already been launched in the market including the overseas market. TBI@KEC bagged the National Award for Best Technology Business Incubator for the year 2012.
- A number of entrepreneurs from Perundurai, Erode, Coimbatore, Chennai, Bangalore are engaged in product development activities in the TBI.
- Department of Electronics and Communication Engineering has established two labs namely Embedded Systems and Analog System Design in collaboration with Freescale Semiconductors and Texas Instruments respectively.
- Department of Computer Applications (MCA) has established an innovative lab with the collaboration of Cognizant Technology Solutions for carrying out research work.

3.4 Research Publications and Awards

3.4.1 Highlight the major research achievements of the College through the following:

- * Major papers presented in regional, national and international conferences

Year	National / International Conference
2010-11	288
2011-12	303
2012-13	304
2013-14	374

- * Publication per faculty

Year	Total Publications	Faculty members involved	Publications per faculty
2010-11	288	143	2.01
2011-12	303	150	2.02
2012-13	304	151	2.01
2013-14	374	210	1.78

- Totally 985 papers have been published in the National/ International Journals by our faculty for the past 5 years. A total of 1289 papers have been published in National/ International Conferences.

Faculty serving on the editorial boards of national and international journals

Sl. No.	Name of the Faculty	Name of the Journal	Role
1.	Dr. K. Saravanan	Progress in chemical Engineering	Editorial member
		Pollution research	
		Journal of industrial pollution control	
2.	Dr. P.N. Palanisamy	Asian journal of Experimental Chemistry	Editorial member
		Journal of Environmental Nano Technology	
3	Dr. M. Thangamani	Pak Publishing Group, Malaysia	Editorial member
		Bio-info soft computing	Associate Editor
		International Journal of Engineering Research and Sports Science	Associate Editor
		International journal of Latest Scientific Research and Technology	Associate Editor
5.	J. Prakash Maran	International Journal of Agricultural Science & Technology	Editorial member
		Pinnacle Agricultural Research & Management	
		Pinnacle Biotechnology	
		Pinnacle Engineering & Technology	
		American Journal of Engineering, Technology and Society	
		American Journal of Chemistry and Materials Science	
		International Journal of Agriculture, Forestry and Fisheries	
		Global Journal of Food Science and Technology	
		International Journal of Agricultural Sciences and Natural Resources	
		International Journal of Advanced Research in Biological Sciences	
American Journal of Food Science and Nutrition Research			
American Journal of Materials Research			
6.	Dr. V. Hariharan	Journal of Vibration Control (SAGE Publications)	Editorial member
		Journal of Robotics and Autonomous Systems, Elsevier publication	
		Neural Computing and Applications Journal (Springer)	
		Journal of Mechanical Science and Technology	
		Journal of Engineering, Design and Technology,	

Sl. No.	Name of the Faculty	Name of the Journal	Role
7.	Dr.S.Vengataasalam	International journal of research in engineering and advanced	Editor
8.	Dr. A. Tamilarasi	BIOINFO Soft computing	Editorial member
9.	S. Albert Alexander	IJPEDS	Editor
		TIMER	Associate Editor
		CPRI journal	Editorial member
10.	Dr. P. Balasubramanie	ACCST Research Journal, Siwan, Bihar	Editorial member
		Advances in mathematical modeling and simulation (AMSE) –France	
		Indian Journal of Engineering and Technology, BIT Sathy	
		Regional Editor Information Technology Journal (Science Direct)	
		Regional Editor Journal of Software Engineering (Science Direct)	
		Regional Editor Journal of Artificial Intelligence (Science Direct)	
		International Journal Advanced Research in Computer Science	
		Journal of Computing	
		Proceeding of the International conference on Communication and Computational intelligence(INCOCCI 2010), Dec. 27-29, 2010	
		Asian Journal of Scientific research (Science Direct)	
		Singapore Journal of Scientific Research (Science Direct)	
		International journal of advances in Engineering & Technology (IJAET)	
		International journal of advances in Engineering Trends in Engineering and Development(IJETED)	
		International Journal of advanced Scientific and Technical Research (IJASR)	
		RS Publications	
International Journal of Research in Computer Science(IJORCS)			

Faculty members on the organisation committees of international conferences, recognized by reputed organizations / societies.

Sl. No.	Name of the Faculty (Reviewer)	Department	Journal/Conference
1	Dr.K.Saravanan	Chemical Engineering	Progress in chemical engineering
			Pollution research
			Journal of industrial pollution control
2	Dr.M.Thangamani	Computer Technology	Organizing Committee Member in International Conference on Inter Disciplinary Research in Engineering and Technology 2014, 21-22 August 2014
			Organizing Committee Member in ICIDRET 2014 : International Conference on Inter Disciplinary Research in Engineering and Technology
			Organizing Committee in 5 th International conference on Computational and Network Technologies, China
3	Prof.S.Balamurugan	Electronics and Communication Engineering	International Conference on Control, Automation, Communication and Energy Conservation (INCACEC'09)
			International Conference on Communication and Computational Intelligence (INCOCCI 2010)
4	Dr.G.Murugesan	Electronics and Communication Engineering	International Conference on Communication and Computational Intelligence (INCOCCI 2010)
5	J. Prakash Maran	Food Technology	Carbohydrate Polymers
			Talanta
			Food Hydrocolloids
			Journal of Food Engineering
			Ecological Engineering
			International Journal of Biological Macromolecules
			Process Biochemistry
			Alexandria Engineering Journal
			Journal of King Saud University – Science
			Water, Air & Soil Pollution
			Journal of Food Science and Technology
			3Biotech
			Environmental Progress & Sustainable Energy
			Desalination and Water Treatment
			Separation Science and Technology
			Scholars Research Journals
			Current Microwave Chemistry
Journal of Analytical Methods in Chemistry			
Journal of Food Processing & Technology			
Chemical Industry and Chemical Engineering Quarterly			
Journal of Pharmaceutical Sciences & Emerging Drugs			
Indian Journal of Natural Products and Resources			
6	Dr.V.Sivakumar	Food Technology	Bioresource Technology
			International Journal of Green Energy
			Industrial Crops and Products
			Carbohydrate Polymers
			Energy Sources, Part A: Recovery, Utilization, and Environmental Effects
			Journal of Food Processing and Preservation
			The Canadian Journal of Chemical Engineering
			Environmental Progress & Sustainable Energy
Separation Science and Technology			

7	S.Albert Alexander	Electrical and Electronics Engineering	ASDF
8	Dr.N.Senthilnathan	Electrical and Electronics Engineering	IEEE
9	Dr.C.Nalini	Information Technology	Data Science
10	Dr.C.Poongodi	Information Technology	International Journal of Wireless Personal Communications, Springer Publications
11	Dr.D.Kalamani	Mathematics	Advances in Fuzzy sets and systems
12	Dr.S.Vengataasalam	Mathematics	International journal of research in engineering and advanced
13	Dr.A.Tamilarasi	Master of Computer Applications	A.M.S.E , France
			The Arabian Journal for Science and Engineering
			Engineering Applications of Artificial Intelligence
			Journal of Petroleum and Gas Exploration Research
14	Dr.N.Karthikeyani Visalakshi	Master of Computer Applications	BIOINFO Soft computing
			International Journal of Computational Intelligence and Informatics
			International Journal of advances in Engineering & Technology (IJAET)
			International journal of advances in Engineering Trends in Engineering and Development(IJETED)
15	Dr.V.Hariharan	Mechanical Engineering	International Journal of advanced Scientific and Technical Research (IJASR)
			RS Publications
			Maejo International Journal
			Imaging Science Journal
16	Dr.P.Balasubramanie	CSE	International Conference on Communication and Computational Intelligence (INCOCCI 2010)
			International Conference on Communication and Computational Intelligence (INCOCCI 2010)
			Annual International conference on Emerging Research areas
			First International Conference on Advanced Computing Technology ICACT 2011)
			National Conference on Computer Applications (NoCoA 2012)
			National Conference on Networks, Information, Knowledge, Computing and Ontology
			Second International Conference on Advanced Computing Technology ICACT 2012)
			Int. Conference on Pattern Recognition, Informatics and Medical Engineering (PRIMS-2012) March 21 to 23, 2012
			CSIR Sponsored Third National conference on Challenges in Computing Technologies
			DRDO Sponsored National conference on Recent trends in information, communication & VLSI
			Journal of Vibration Control (SAGE Publications)
			Journal of Robotics and Autonomous Systems, Elsevier publication
Neural Computing and Applications Journal (Springer)			
Journal of Mechanical Science and Technology			
Journal of Engineering, Design and Technology,			

3.4.2 Does the College publish research journal(s)? If yes, indicate the composition of the editorial board, publication policies and whether it is listed in international database?

As of now, the college is not publishing any research journal. The college is planning to publish a journal in future.

3.4.3 Give details of publications by the faculty:

- * Number of papers published in peer reviewed journals (national / international)
- * Monographs
- * Chapters in Books
- * Editing Books
- * Books with ISBN numbers with details of publishers
- * Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)
- * Citation Index – range / average
- * SNIP
- * SJR
- * Impact factor – range / average
- * h-index

1.	Number of papers published in peer reviewed journals (national / international) for the past 5 years	985
2.	Chapter(s) in Books	06
3.	Editing Books	02
4.	Books with ISBN numbers with details of publishers	50
5.	Number listed in International Database	988
6.	Citation Index – Range / average	Min:0.03, Max:42 Average: 1.669
7.	SNIP	Min:0.010,Max:3.276
8.	SJR	Min:0.030,Max:6.19
9.	Impact Factor – Range / average	Min:0.06,Max:5.71 Average: 1.153
10.	h-index	Min:1, Max-152

3.4.4 Indicate the average number of successful M.Phil. and Ph.D. scholars guided per faculty.

The average number of research scholars who have successfully completed their Ph.D per approved supervisor is 5.

Sl. No.	Name of the Supervisor	Department	No. of Ph.Ds Completed
1.	Dr. K. Saravanan	Chemical	13
2.	Dr. R. Baskar	Chemical	1
3.	Dr. P.N.Palanisamy	Chemistry	5
4.	Dr. N. Kasthuri	ECE	1

Sl. No.	Name of the Supervisor	Department	No. of Ph.Ds Completed
5.	Dr. T. Manigandan	EEE	7
6.	Dr. V. Sivakumar	Food Tech	8
7.	Dr. R. Asokan	IT	1
8.	Dr. C. Duraisamy	Mathematics	4
9.	Dr. S. Vengataasalam	Mathematics	2
10.	Dr. R. Viswanathan	Mathematics	2
11.	Dr. D. Kalamani	Mathematics	1
12.	Dr. D. Muruganandam	MBA	2
13.	Dr. A. Tamilarasi	MCA	11
14.	Dr. P. Navaneethakrishnan	Mechanical	1
15.	Dr. P. Balasubramanie	CSE	17
16.	Dr. K. Krishnamurthy	Mechatronics	1
17.	Dr. K. Tamilarasan	Physics	1

3.4.5 What is the stated policy of the College to check malpractices and misconduct in research?

Research works are monitored regularly and periodically by making the scholars to present their findings as seminars in an open forum. The research findings and dissertations submitted by the scholars are checked by Anna University.

3.4.6 Does the College promote interdisciplinary research? If yes, how many interdepartmental / inter disciplinary research projects have been undertaken and mention the number of departments involved in such an endeavour.

Yes, The list of interdisciplinary research projects carried out so far is given in Section 3.1.5.

3.4.7 Mention the research awards instituted by the College.

Our institute has instituted four awards to encourage and appreciate researchers.

They are:

1. Best Researcher
2. Best performer – Faculty (Research and Development projects)
3. Best performer – Faculty (Publication and outside interaction)
4. Best performer – Student (Paper and Project presentation)

Every year a faculty and a student will be selected and awarded based on their contribution in research.

3.4.8 Provide details of

*** Research awards received by the faculty**

As mentioned in Section 3.4.7, the following faculty members are recognized with awards and citations for their contribution towards research:

Sl. No.	Name of the Faculty	Department	Year
1	Dr.U.S.Ragupathy	E&I	2012
2	Dr.V.Sivakumar	FT	2013
3	Dr. S. Shankar	MTS	2014
4	Dr.R.Baskar	Chemical	2014
5	Dr.P.N.Palanisamy	Chemistry	2014
6	Dr.P.Balasubramanie	CT - PG	2014

*** Recognition received by the faculty from reputed professional bodies and agencies**

Sl. No.	Name of the Award	Received by	Issued by	Year
1.	Finalist of Manthan Award	Kongu Community Radio	Fifth International Conference on Digital content and Services and Manthan Award South Asia 2010, New Delhi	2010
2.	Branch Membership growth award	IEEE student branch of Kongu Engineering College	IEEE Madras	2010
3.	Active branch award	Number of activities conducted and reported at KEC	IEEE Madras	2010
4.	Best Faculty Award	Dr.M.Sivaraja, Assistant Professor of Civil Engineering	Nehru College of Educational and Charitable Trust, Coimbatore	2010
5.	Anbana Asirayar award	Mr.R.Thamilselvan	CIBI IAS Academy on 11 th December 2011 at Coimbatore.	2011
6.	Shri P.K.Das Memorial Best Faculty Award	Dr.P.Balasubramanie	Nehru group of Educations	2011
7.	Shri P.K.Das Memorial Best Faculty Award	Dr.K.Nirmalkumar	Nehru group of Educations	2011
8.	Shri P.K.Das Memorial Best Faculty Award	Dr.P.Karthikeyan	Nehru group of Educations	2011
9.	Big Brands Education Excellence award for Best Engineering College in South India	Kongu Engineering College	Brands Academy, India	2011
10.	Best Academic Researcher Award	Mr.S.Albert Alexander, Faculty, EEE	Association of Scientistis Developers and Faculties, Pondhicherry	2012
11.	Best Academic Researcher Award	Dr.Balasubramanie, Faculty, CSE	Association of Scientistis Developers and Faculties, Pondhicherry	2012
12.	Cognizant award	Dr.P.N.Palanisamy	CTS	2012
13.	Cognizant award	Dr.N.Kasthuri	CTS	2013
14.	VIT Award of Excellence	Kongu Engineering College	Institutions of Higher Education in India	2013
15.	2 nd Best Performance National award	KEC students Net	CII – Yi	2013
16.	Outstanding service award	KEC students	Indian Association for the Blind, Madurai	2013
17.	National award	Technology Business Incubator @ Kongu Engineering College	National Science & Technology Entrepreneurship Development Board (NSTEDB), Department of Science and Technology, Government of India	2013

Sl. No.	Name of the Award	Received by	Issued by	Year
18.	National Award for AICTE – CII Award	Best Industry Linked Technical Institutes in India for Electrical and Electronics Engineering Department	Mr.Kapil Sibal, Central Minister for Communication and Information Technology in CII Global University-Industry Congress and 5 th Higher Education Summit	2013
19.	Bharatiya Vidya Bhavan National Award for Best Engineering College Principal	Prof.S.Kuppuswami, Principal of Kongu Engineering College	Indian Society for Technical Education during the Inaugural Function of the 43 rd Annual Convention of ISTE on 19 th December, 2013 at Tatyasaheb Kore Institute of Engineering and Technology, Warananagar, Kolhapur Dt, Maharashtra.	2013
20.	Outstanding Citizen Award	Mr.S.Nehru, M/s. Kulothung Automotive Systems, an entrepreneur of TBI @ KEC	JCI, Erode	2013
21.	Best Academic Researcher Award	Dr.U.S.Ragupathi, Prof.& Head, EIE	Association of Scientistis Developers and Faculties, Pondhicherry	2013
22.	Best Academic Researcher Award	Dr.R.Baskar, Professor, Chemical	Association of Scientistis Developers and Faculties, Pondhicherry	2013
23.	Best Professor Award	Dr. U.S. Ragupathy, Professor & Head, EIE Dept, KEC	ASDF Global Awards, Puducherry on 30.12.2013	2013
24.	First and Third Prize in the ISTE – Srinivasa Ramanujan Mathematical Competitions – Zonal and National Level Engineering College Teachers Category	Dr.R.Basker, Professor, Chemical Dept., KEC	Bapuji Institute of Engineering & Technology, Davangere on 14 th March, 2014.	2014
		Dr. D.Kalamani, Associate Professor, Mathematics Dept., KEC		
25.	Second and Consolation Prize in the ISTE – Srinivasa Ramanujan Mathematical Competitions – Zonal and National Level Engineering College Teachers Category	Dr. M.Dhavamani, Associate Professor, Mathematics Dept., KEC	Bapuji Institute of Engineering & Technology, Davangere on 14 th March, 2014.	2014
26.	Best paper award	Dr. M.Thangamani Assistant Professor CT UG Department	International Conference on Advances in Science and Technology at Pattaya, Thailand on 15 th February 2014.	2014

Sl. No.	Name of the Award	Received by	Issued by	Year
27.	Best Industry Institute Partnership Initiative Award	Kongu Engineering College	INTEC 2014 Exhibition organized by CODISSIA, Intec Technology Centre at CODISSIA Trade Fair Complex, Coimbatore during 6 th to 10 th June 2014	2014
28.	Sustainable Institute Industry Partnership (SIIP) – 2014 Award for the institution in Society for Educational and Entrepreneurship Development, Chennai	Kongu Engineering College	sustainable Institute Industry Partnership on 26 th August 2014 at IIT, Madras, Chennai	2014
29.	Cognizant award	Dr.P.Navaneetha krishnan	CTS	2014

3.4.9 State the incentives given to faculty for receiving state, national and international recognitions for research contributions.

Special allotment in budget is done for research for the purpose of the following:

- The members of Faculty are provided TA/DA to present papers in National/ international conferences.
- College provides TA/DA for faculty to attend interviews and do presentation for major/minor research proposals.
- The members of Faculty are encouraged to attend training programmes on their research areas, TA/DA borne by the college.
- Travelling expenses are borne by the College for paper presentations in National and International conferences.
- 100% filing charges are provided by the college to the students/faculty to apply for patents.

3.5 Consultancy

3.5.1 What is the stated policy of the College for structured consultancy? List a few important consultancy services undertaken by the College.

- To facilitate structural consultancy the college actively makes use of Industry Institute Partnership Cell (IIPC) established in the college with a grant from AICTE in 2002 as a part of the extension activities of the college.
- The various Engineering, Science, Humanities departments are set revenue targets at the beginning of the year to undertake consultancies in their areas of expertise. The targets are provided in a meeting attended by heads of the departments, Chief Co-ordinator (CCO) IIPC and presided by the Principal.
- The departments are encouraged to undertake visits to relevant nearby industries and identify consultancy activities to be taken up by them.
- The activities are regularly monitored by CCO/ IIPC and also in the HOD-s meeting with Principal every fortnight.
- The college has a liberal revenue sharing policy by which faculty members undertaking consultancy share the revenue earned as a result of the consultancy work. Either 40% or 60% of the revenue goes to the faculty depending on whether they use or don't use the college facilities for the purpose.

Some Important consultancy services undertaken by KEC are

- Govt agencies: (i) Neyveli lignite corporation, Neyveli- Measurement of harmonics and power factor in their power supply system and recommendations. ; (ii) Tamilnadu Electricity Board - Measurement of harmonics at typical industries and providing report; (iii) MSME development Institute, Coimbatore – Conducting training programmes for Kangayam Rice mill Cluster members regarding Energy conservation; (iv) DIET, Perundurai- Organizing training programmes on different subjects as required by DIET.
- Non Govt. Industry organizations like Coimbatore Productivity Council (CPC), Confederation of Indian Industries (CII), Coimbatore District Small Industries Association (CODISSIA), Erode District Small Industries Association (EEDISSIA), Perundurai SIPCOT Association (PERSIA): KEC is member of all these industry organizations; takes part in the programmes organized by these agencies; provide training programme to member industries; takes part in the Industry Exhibitions like INTEC, Ero Intec being organized by them by displaying innovative student projects.
- Energy and Power Quality Audits: 6 faculty members of KEC are energy auditors certified by BEE. The college has a number of energy auditing equipment and undertakes Energy and Power Quality Audits in various nearby textiles, food processing, steel, paper and other industries; number of industries serviced are more than 25.
- Testing for Govt. departments: Many Govt. and semi govt. departments make use of the testing faculties of the college for various constructional and structural activities regularly.
- BPL, Palakkad – Collaborative research project for development of Voice over Internet Protocol was undertaken by KEC during 2011-13 and successfully handed over to the industry for commercial application.

Details of consultancy works taken by the college are enclosed as annexure. [will be shown during Peer Team visit]

3.5.2 Does the College have College-industry cell? If yes, what is its scope and range of activities?

Yes, it is Industry Institute Partnership Cell (IIPC).

The IIPC undertakes five major activities involving the various faculty members of individual departments of the Institute:

1. Consultancy and Energy Audit activities.
2. Testing activities for Government department and Industries.
3. Training activities for Industry and other Institution.
4. Participation in Trade Fairs to showcase the achievements.
5. Co-ordination for project competition and industry survey.

IIPC also supports industry training for students and faculty. The Consultancy activities are taken up and implemented as per 3.5.1. Similarly the IIPC Co-ordinator of the departments in consultation with individual heads of the departments undertake testing and training activities (relevant to the departments). The revenue earned through them is also reported to CCO (IIPC) for overall co-ordination and periodic reviewing and reporting.

3.5.3 What is the mode of publicizing the expertise of the College for consultancy services? Mention the departments from whom consultancy was sought.

The modes of publicizing the expertise of the College for consultancy services are

1. Through www.kongu.ac.in/iipc website.
2. Periodic information sent to industries directly and through industry agencies like Confederation of Indian Industry(CII), Coimbatore District Small Industries Association (CODISSIA), Erode District Small Industries Association (EEDISSIA), Perundurai SIPCOT Association (PERSIA)
3. Brochure of IIPC participation in Trade fairs in different parts of the country.

All the departments of the Institute participate in consultancy activity and targets are fixed for each department in this respect.

3.5.4 How does the College encourage the faculty to utilise the expertise for consultancy services?

- As already mentioned under 3.5.1 & 3.5.2 the departments are given targets to achieve revenue earning through consultancy, testing and training activities. There is a liberal revenue sharing policy for the activities under taken by the faculty members. (Either 60% or 40% of the consultancy revenue goes to the faculty)
- The activities are also listed in the website. Major activities implemented are published as technical papers.
- Some of the major products developed are displayed in INTEC Exhibition at Coimbatore and Ero INTEC Exhibition at Erode. (in which Kongu Engineering College is a regular participant).
- Also innovative projects/ products are taken up for patent applications involving the faculty/ students.
- AICTE-CII Survey - 2013 for the best National Industry Linked Institutes announced the EEE department has won the top national award and other Departments have all been rated in the top band.

3.5.5 List the broad areas of consultancy services provided by the College and the revenue generated during the last four years.

The broad areas of Consultancy services including Testing, Training services provided by KEC and are as follows:

1. Machinery valuation for Industrial equipment and plants.
2. Energy Audit for Textile, Leather, Foundry, Paper and Steel Industries.
3. Preparation of detailed part drawings for manufacturing Industry.
4. Emission Test and reporting for Automobile engines.
5. Design of hydraulic system for industries.
6. Boiler and flue gas analysis and report.
7. Power quality and harmonic study
8. Design of solar heater coil for the renewable energy products as component.
9. Various fabrication items for in house requirements.
10. Machining special components using the in house CNC machines.
11. Analysis of structures etc. using Ansys software.
12. Electrical Equipment design for specific applications.
13. Servicing of electrical / electronic items.

14. Checking electrical insulation integrity for industrial plants.
15. Large electrical system study and failure analysis of a component.
16. Long time measurements for power factor, harmonics for industries to optimize power factor of operation, harmonics generated etc. for textile and foundry industries.
17. Automation for MIS and other requirements of process plants.
18. Product development (R&D Collaboration) for industries to develop hardware and software.
19. Certification for stability in construction industry.
20. Truss analysis – Civil construction.
21. Construction – Providing plan, Soil test and safe bearing capacity, providing design for specific construction activities.
22. Survey work for industry.
23. Design of concrete mix for prefab cubes.
24. Development of web pages for industries.
25. System development for sending reminders for service industries.
26. Software for Hospital management, Stock maintenance, Payroll, Fees collection, Spares management and other applications.
27. Training programmes in various software packages for Government, NGO and other agencies.
28. Design of waste water treatment plants.
29. Effluent treatment for textile, leather and coffee industries.
30. Food products – Providing testing procedures and training for testing nutritional values, Analysis for micro-organisms.
31. Project guidance for other institute students, as required.
32. Analysis of Industry project data with SPSS
33. Development of ISO Consultancy work for other industries – ISO 9000, ISO 14000.
34. Preparation of HR development related written / oral test questionnaire for industries.
35. Market study for super markets and retailers
36. Providing training to industries, other institute faculty, and students in the state of the art advanced technologies.
37. Testing work for civil constructions, manufactured mechanical items and water quality etc.
38. Initiating work on Carbon Foot print and corporate sustainability report.
39. Environmental impact assessment

Consolidated Revenue Earned through Consultancy Services, Energy Audit, Training Courses and Testing details for last five years are given below

Particulars	No of Activities	Total Amount (Rs.)	Sub Total (Rs.)
2010-2011			
Consultancy	121	11,38,810	
Training of personnel from Industry, faculty & students of other Institutions	60	18,20,237	
Testing	876	7,15,627	36,74,674

Particulars	No of Activities	Total Amount (Rs.)	Sub Total (Rs.)
2011-2012			
Consultancy	80	7,33,487	
Training of personnel from Industry, faculty & students of other Institutions	87	25,74,580	
Testing	468	3,99,085	37,07,152
2012-2013			
Consultancy	220	17,38,525	
Training of personnel from Industry, faculty & students of other Institution	59	19,95,070	
Testing	387	4,65,113	41,98,708
2013-2014			
Consultancy	105	8,90,527	
Training of personnel from Industry, faculty & students of other Institution	87	28,10,697	
Testing	249	2,76,046	
Miscellaneous (AICTE-Award)	-	50,000	40,27,270
Total revenue earned by Consultancy services, Energy Audit, Training courses and Testing			Rs. 1,56,07,804

This consultancy work helps to understand industries expectations from the students. This helps in framing curricula to meet the diverse needs of industries. Experts from industries are included in the Board of studies.

Interaction with the experts from industries helps to understand the problems faced and scope for improvement in different sectors of the industry. This opens up avenues for internship and training during summer and winter vacation. Such Interactions are platforms for the improvement in the industries, and enhances the performance of the industry in terms of energy conservation, environment protection etc.,

This interaction paves way for the faculty to train the industry personnel to upgrade their skills and remain updated with the latest technological advances and in turn the faculty also gains exposure to the practical applications of the theoretical concepts.

3.6 Extension Activities and Institutional Social Responsibility (ISR)

3.6.1 How does the College sensitize the faculty and students on Institutional Social Responsibilities? List the social outreach programmes which have created an impact on students' campus experience.

The college sensitizes the students and faculty on ISR through various forums like NSS, NCC, Community Radio Service, Interaction with NGOs, Blood camps etc.

The Technology Business Incubator in the campus addresses to the needs of the society by developing innovative products useful for the society with the active involvement of students and faculty with the entrepreneurs.

NSS

The institute encourages the students and faculty to take part in the NSS activities. Every year the NSS unit of KEC conducts special camps in the villages/ neighborhood schools. Special awareness programs on rain water harvesting, environment cleanliness, use of bio fertilizers etc., are conducted by the faculty and students of our college for the benefit of the nearby villages and agriculturists. Such programme promotes friendship and brotherhood with the local community people which in turn contribute to the community development. During NSS camps student volunteers do white wash in the schools, clean the neighborhood areas and plant tree saplings which improve the institute community interaction.

NCC

Students of KEC are very actively taking part in the NCC activities. The NCC unit of KEC assists local police in local body elections, and helps the local temple to improve the housekeeping and sanitation. Some of the NCC activities to quote are: Annual Training camps, Rain Water Harvest rally, Blood Donation Camps, Trekking & Social service camp, Awareness Rallies and Village School Adoption.

Kongu CRS

Kongu Community Radio Service (CRS) has been established to serve the public in the neighborhood. The programs focus on education, health, environment, agriculture, rural and community development. The format, presentation, language, and subject will reflect and exude the local flavour and fragrance. At least 50% of the programme will be from the local community members. Students are given opportunities to present programme on various topics. This not only improves students' knowledge but also enhances the presentation and communication skills. Programme featuring group/panel discussion involve students and local community leaders. These programme improve to understand the local issues and open up avenues for local and rural development based projects, which in turn earns the good will of the community people. 219 programme have been broadcasted during last 5 years

TBI

TBI functions with the motto of Concept to Commercialization which involves the students in the product development with the entrepreneurs in the TBI. These projects which students take up help them to gain the practical application of theoretical concepts and intricacies associated with the entrepreneurship. The students not only contribute to SME product development but are also enthused to get new ideas to start new ventures. The entrepreneurs are able to develop new products and processes at very low cost.

IIP Cell

IIPC enables the students of the institution to display/exhibit their socially by relevant projects at various forums like INTEC, Coimbatore, EroINTEC, Erode and TAFE, Chennai. Our students have received 6 prizes out of 10 prizes announced by TAFE last year and 7 out of 10 prizes in the previous year.

EMDC

KEC Entrepreneurship and Management Development Centre was founded in 1996. The All India Council for Technical Education, New Delhi has sanctioned a grant of Rs. 7 Lakh to increase the level of EMD CENTRE in KEC. The EMDC conducts regular awareness programmes, workshops, seminars, visits to industries and students interaction with industrialists to identify the entrepreneurship skills and promote the spirit in them and nurture the spirit for career development

Android Application Development Club

This club enables and encourages the students to develop various social by relevant apps which will be useful for the public.

Thoorigai

This club conducts events every year for the differently abled Community. This is a one day programme in which differently abled people participate in various cultural competitions organized by the students. This programme enables the faculty and students to hone their organizational skills and understand the joy of caring and sharing.

3.6.2 How does the College promote College-neighborhood network and student engagement, contributing to holistic development of students and sustained community development?

NSS

Special awareness programs on rain water harvesting, environment cleanliness, use of bio fertilizers etc., are conducted by the faculty of our college for the benefit of the nearby villages and agriculturists. Such programme promote friendship and brotherhood with the local community people which in turn contribute to the community development. During NSS camps student volunteers do white wash in the schools, clean the neighborhood areas, plant tree saplings which improve the institute community interaction.

IIP Cell

As a part of the curriculum, the students take up projects in the neighbouring SME's like Common Effluent Treatment Plant Perundurai. Projects on water treatment solid waste management in SIPCOT Perundurai, Energy Management etc., are carries out. Outcome of such projects have been implemented in practice. This helps the students to gain knowledge and improve the interaction between local industrial communities and the institute.

Kongu Trophy

Kongu Trophy, a state level intercollegiate sports tournament which is conducted every year promotes friendship and brotherhood among students. Above 2000 players from various parts of the state come and stay on campus for this mega event.

Citizen Consumer Club

Citizen Consumer Club is a consumer forum of Civil Supplies and Consumer Protection Department, Government of Tamil Nadu. This works for creating awareness among students at a very young age and through them the general public. It aims to build in children conscientiousness for doing what is right and

boldness to question the wrong. Motto of this forum is “AWARE! ALERT!! And ACT!!!”. Officials including District collector and members of District Consumer protection Centre participated in various events conducted by this club

Energy and Environment Conservation Club

Energy and Environment Conservation Club was started in the year 2012 to promote awareness and research towards the energy conservation. The main objective of this club includes conducting workshops/seminars pertaining to energy and environment conservation, enhancing research and development in the areas of solar photovoltaic systems, wind energy and biomass, power quality improvement techniques and procedures. This club also serves as the Tamil Nadu State Chapter.

Other Extension Activities

- Popularization and improvement of scientific temper and aptitude among the school children by the display of their models in the Open House Exhibition on Science and Technology conducted regularly in KEC
- Award of scholarship to 10th and 12th standard toppers of different schools in the neighborhood districts motivates the students to perform better.
- KEC conducts training programme for police personnel for improving their managerial skills
- Student volunteers are willingly involving in Tree plantation in the neighborhood

3.6.3 How does the College promote the participation of students and faculty in extension activities including participation in NSS, NCC, YRC and other National/ International agencies?

NSS

The institute encourages the students and faculty to take part in the NSS activities. NSS unit of KEC is conducting an average of 10 programmes per year. Some of the NSS activities are given below

- Annual special camps at adopted villages: Every year the NSS unit of KEC conducts special camps in the villages/ neighborhood schools to improve the infrastructure of schools such as painting/colour washing of walls, replacement of benches and black boards are carried out. Special lectures are given by the faculty on the various topics base on environment, public health, sanitation, self development, drip irrigation etc. Members of our college management team, the principal and professors actively participate in the camp and interact with the community.
- Annual one day symposium with themes like ‘Save wild life & forest’ “technology transfer for rural development”
- Blood Donation Camp & Eye checkup Camps associated with hospitals and blood banks
- Camps / functions for celebrating NSS Day, 150th birth anniversary of Swamy Vivekanandha, National Voluntary Blood Donation Day

- “Kongu Changers Programme” at Chennivalasu to carryout Social works, several awareness programmes and competitions for school children and village people.
- Other social activities: Rallies for social awareness. Participation in awareness programme and discussion regarding Crime rate in Perundurai. Campus cleaning programme

NSS unit of the Institution received award for the contribution of NSS volunteers and students of Kongu Engineering College in blood camps.

Ms. G.Vidya of Final year EEE of our college was selected as a Best NSS Student Volunteer and won the University NSS Award for the academic year 2011-2012.

NCC

The institute encourages the students and faculty to take part in the NCC activities. The NCC unit of KEC assists local police in local body elections, and helps the local temple to improve the housekeeping and sanitation. NCC unit of KEC is conducting an average of 10 programme per year. Some of the NCC activities to quote are:

- Annual Training camps
- Rain Water Harvest rally
- Blood Donation Camp
- Trekking & Social service camp
- ‘B’ and ‘C’ Certificate Examination
- Awareness Rallies
- Village School Adoption
- NCC Day, UN International Day & Environmental Day celebrations,

YI – KEC

Young Indians (Yi) is an integral part of the Confederation of Indian Industry (CII), a non-government, not-for-profit, industry led and industry managed organisation playing a proactive role in India's development process. YI –KEC net is very active in organizing various programmes.

Rotract Club

A rotract club is a Rotary club-sponsored organization devoted to young adults at the age group 18 to 30, residing, employed or studying within the vicinity of the sponsor Rotary club, whose purpose is to provide opportunity for them to enhance the knowledge and skills that will assist them in personal development, to address to the physical and social needs of their communities, and to promote better relations between all people worldwide through a framework of friendship and service. Rotract club of the institute organizes various programme for the destitute children and various awareness programs for community.

Some of them are listed below:

- Dlp-Digital Literacy Program
- Visit to School For The Differently Abled
- Walkathon – Rally against Child Labour
- Swaram (Fund raising Programme - annual)- (Contribution to Hospitals , Differently abled children Govt. Schools and Orphanage)
- Free Dental and Eye Check Up Camp

- Blood Donation Camp
- Sirius (College Level Competitions)
- Visit to Orphanages and extending financial help
- Awareness rallies
- Conference on Environmental Issues and Measures with the help of Environmentalist and Social Activist.

3.6.4 Give details on social surveys, research or extension work (if any) undertaken by the College to ensure social justice and empower the under-privileged and most vulnerable sections of society?

- The college has a Women Development Cell (WDC) centre to uplift, empower, and improve the women contribution towards the society. The cell organizes programme and activities to achieve the goal. Anemia Awareness Camp is conducted annually.
Some of the notable guest lecture arranged: Awareness on Civil Rights, Empowerment of Youth, Career Planning, Personal Hygiene, Women Wellness and Health Awareness
- Kongu FM Community Radio Service has got a grant of Rs.16 lakh from the Department of Science and Technology under Rashtriya Vigyan Evam Proyogiki Samachar Parishad Scheme (RVPSP) for broadcasting programmes on “Science for Women” everyday. This programme helps to improve the rural women folk network and improves the awareness on science and thus empowers them.
- ‘Thoorigai’ a multi event programme featuring painting, running, dancing, singing etc., for the differently able children of the neighbour hood schools is being organized every year from 2008. This motivates the children, helps them to integrate with the society and brings out the hidden talents in them. Eminent personalities are invited as chief guests to motivate and encourage them.
- College has established a Technology Business Incubator (TBI) jointly with Department of Science and Technology (DST), New Delhi provides opportunities for aspiring entrepreneurs to convert their ideas in to products in emerging areas. Technology Business Incubator of the College extends the facilities to the nearby people to start their own business ventures that benefits the society. For example, one of the products developed at TBI-KEC ‘Agricultural Pump set Starter Controller through mobile’ is very beneficial to agricultural society
- College organizes different programmes for NGOs upgrade their professional and skills.
- College also conducts computer literacy programme for children
- Every year the NSS unit of KEC conducts special camps in the villages/schools in the neighborhood in order to improve the infrastructure of schools such as painting / colour washing of walls, replacement of benches and black boards. Special lectures are given by the faculty on the various topics like environment, public health, sanitation, self development, drip irrigation etc., to create awareness among the people

3.6.5 Give details of awards / recognition received by the College for extension activities / community development work.

- TBI@KEC bagged "National Award for Technology Business Incubator for the year 2012" The award was presented by President of India
- Community FM radio, second of its kind in Tamilnadu; bagged "Best Community / Campus Radio" Award from Radio Duniya conference at New Delhi.
- NIQR –TVN KIDAO Award for the outstanding Educational Institution at all India Level by National Institution for Quality and Reliability (NIQR)
- Awarded as one of the best five Educational Institution of Nation in Engineering by Research and Processing Centre, Indore.
- The performance of 43 IIP Cells throughout the country was reviewed by AICTE at New Delhi during 2003 out of this Kongu Engineering College - IIP Cell was selected as the best among the 43 IIP Cells and awarded with grade of 'A' Excellent with an additional financial support from AICTE.
- One of the TBI Entrepreneurs received the ISBA Entrepreneurship award 2008 at National award for excellent business achievement.
- Another Entrepreneurs of TBI received Best citizen award

3.6.6 Reflecting on objectives and expected outcomes of the extension activities organized by the College, comment on how they complement students' academic learning experience and specify the values and skills inculcated?

The college has Industry Institute Partnership Cell (IIPC cell) to promote and disseminate technical advances to various sectors of the industry, train the young faculty, and improve the students' employability skill through the projects and industrial internship. The cell helps the industries in analyzing and testing of water, soil, and other samples. The cell also has members of faculty who conduct energy audit at industries. The cell has helped many local industries, leather and textile industries to design and operate the effluent and waste disposal systems. The activities in which the students are involved help them familiarize with the practical applications of energy management, environmental protection which are subjects included in the curricula of many disciplines.

The MOUs signed with various industries facilitate activities like industrial visits, faculty/student training, and training of industrial personnel. These activities improve the practical orientation of the curricula to meet the changing needs of the industries.

Experts and Professors from reputed organizations, and institutions are regularly invited as guest faculty to impart knowledge on specific topics to enhance the faculty/students knowledge and practical orientation in different fields of Engineering and Technology. Knowledge imparted by guest faculty / and resource persons are integrated with the academic curricula.

The Kongu Community Radio service has been established to serve the people in the nearby areas. The faculty and students regularly give programs on various topics such as health, education, environment, energy conservation, agriculture, and community, and social development, which are integrated into the academic schedule. This not only helps to improve the knowledge but also enhances the communication and presentation skills of students.

The opportunity provided by TBI@KEC for the students to work with entrepreneurs hand-in-hand gives them invaluable practical experience. Other services provided by TBI, like value added training and project facilitation in cutting edge technology area helps the students to understand the concepts better.

The college conducts several outreach programmes for the benefit of school children, faculty of neighbouring colleges, labourers and employees of different organizations. For the past five years 104 such programmes has been organized. Few of them to point out are:

- Computer Familiarity Course
- Hygiene Slaughtering and Slaughter House Management to Butchers
- Training on basics of Instrumentation
- Multimedia
- Management Development programme to Industries like Suguna Poultry, MALCO
- Soft Skills, E-Pedagogy for faculty of DIET

3.6.7 How does the College ensure the involvement of the community in its outreach activities and contribute to the community development? Detail the initiatives of the College which have encouraged community participation in its activities.

Every year the NSS unit of KEC conducts special camps in the villages/schools in the neighborhood in order to improve the infrastructure of schools such as painting / colour washing of walls, replacement of benches and black boards. Special lectures are given by the faculty on the various topics like environment, public health, sanitation, self development, drip irrigation etc., to create awareness among the people. College organizes different programme for NGOs, police professional etc., to upgrade their professional and managerial skills.

The Kongu Community Radio service has been established to serve the people in the nearby areas. The faculty and students regularly give programs on various topics such as health, education, environment, energy conservation, agriculture, and community, and social development, which are integrated into the academic schedule. Speeches given by outside experts also broadcasted. This not only helps to improve the knowledge but also enhances the communication and presentation skills of students.

3.6.8 Does the College have a mechanism to track the students' involvement in various social movements / activities which promote citizenship roles?

Students are actively involved in various social events like organizing rallies for awareness creation. For all such activities there will be a faculty Incharge to guide and help them.

Student permission card is used to track the students' involvement in various Co curricular and extracurricular activities. Students are provided on duty to participate in the activities. Students record their participation in the permission card and get it sanctioned from the head of the department

3.6.9 Give details on the constructive relationships (if any) with other institutions in the nearby locality in working on various outreach and extension activities.

Some of the outreach and construction activities carried out by the Institution are listed below:

1. Construction of bus shelters with seats at Perundurai has helped the passengers to comfortably halt under its roof.
2. Widening of the Roads around the college and in some villages has enabled less traffic jam and has broadened the walking space of the public.
3. The college regularly white / colour washes the school class rooms, repairs and replaces the furniture and provides conducive atmosphere for the children to learn well.
4. Extension of the schools by constructing new building and class rooms helps the school authorities to have combined and individual class rooms for the children.
5. The wash rooms are regularly white washed and water facilities with over head tanks are further improved by our college which helps students.
6. Awareness programmes on environment, deep irrigation, health and hygiene are regularly organized by our college for the public and it has benefited the local community in many ways.
7. Timely help of blood donation by our students and staff has saved many lives.
8. Our students also visit the schools nearby and conduct computer classes for the children to improve their computer literacy.
9. Our institute has donated computers to the neighbourhood schools which have enabled the teachers to expose the children practically to computers.
10. Free programmes are offered to skilled and semi skilled laborers of the neighbourhood industries (SIPCOT) which helps the labourers to improve their personal skills which in turn helps the industries also.
11. The college assists industries to solve the problems on pollution, energy conservation, production management etc. that helps the industries to perform better.
12. Assisting the local industries in analyzing and testing of soil water etc., in many ways indirectly helps to protect the environment.
13. Automatic Weather Station measures various meteorological parameters and transmits through Kongu CRS for the benefit of local community
14. The Kongu CRS has helped the local community to improve their awareness and knowledge about science education, environment health, self development etc.,
15. The Technology Business Incubator (TBI) has helped entrepreneurs to develop and commercialize more than 70 products that find application in agriculture industry, health care, power, education, textiles etc., It also provides seed fund support upto Rs. 50 lakh for innovation projects.
16. Popularization and improvement of scientific temper and attitude among the school children by the display of their models in the Open House Exhibition on Science and Technology are conducted regularly in KEC motivates them to prove better and assess their intelligence
17. Open House Exhibition on Science and Technology has helped to improve the local community's awareness on Science, Engineering and Technology.
18. Award of scholarship to 10th and 12th standard toppers of different schools in the neighborhood districts motivates the students to perform better
19. College in liaison with YiNet, CODISSIA, EEDISSIA, etc., organizes various outreach and extension activities

3.6.10 Give details of awards received by the institution for extension activities and/contributions to the social/community development during the last four years.

- Community FM radio, second of its kind in Tamilnadu bagged “Best Community / Campus Radio 2008” Award from Radio Duniya conference at New Delhi.
- Received NIQR –TVN KIDAO Award for the outstanding Educational Institution at all India Level by National Institution for Quality and Reliability (NIQR)
- Awarded as one of the best five Educational Institutions of Nation in Engineering by research and Processing Centre, Indore.
- The performance of 43 IIP Cells throughout the country was reviewed by AICTE at New Delhi during 2003, out of which Kongu Engineering College - IIP Cell was selected as the best among the 43 IIP Cells and awarded with grade of 'A' Excellent with an additional financial support from AICTE.
- One of the TBI Entrepreneurs received the ISBA Entrepreneurship award for Excellent business achievement.
- Another Entrepreneurs of TBI received Best citizen award
- TBI@KEC bagged "National Award for Technology Business Incubator for the year 2012" The award was presented by President of India
- Received AICTE-CII award for best industry linked institution in India for department of electrical and electronics engineering based on AICTE-CII 2013 survey
- EMDC has been awarded “Best Entrepreneurship Cell” by NEN

3.7 Collaboration

3.7.1 How has the College’s collaboration with other agencies impacted the visibility, identity and diversity of activities on the campus? To what extent has the College benefitted academically and financially because of collaborations?

The institute has interactions with academic institutions, government bodies, Industry Associations, regulatory authorities, certification bodies, consultants, professional bodies, nearby industries for enhancing teaching-learning, administration, research, training and placement and infrastructure maintenance.

Sl. No.	Collaborating agency	Benefit(s) to the institution	Academic/ Financial
1.	Professors from Anna University, MIT, Chennai	Inputs for refinement of the curriculum and syllabi	Academic
2.	NPTEL, Chennai	Courseware on core engineering	Academic
3.	British Council Library	Advanced Certification on English language to interested students	Academic

Sl. No.	Collaborating agency	Benefit(s) to the institution	Academic/ Financial
4.	Association with industries: TCS Infosys CTS Freescale semiconductors Texas Instruments	Sponsored Laboratories and Teaching aids	Academic & financial
5.	Student chapters of Professional bodies: IEEE, IET, IETE, ISTE, CSI, IChE	Conducting seminars, workshops, symposiums to hone the professional and organizing skills of the students	Academic & Financial
6.	TUV Nord, Germany	Implementation and Maintenance of Quality Management System in Academic and Administration through ISO 9000 Certification	Academic
7.	Industry Associations / Trade Bodies and Nearby Industries	Internships and industry visits to the students, development of syllabi, Guest lectures, Project exhibitions	Academic & Financial
8.	Karur Vysya Bank	Implementation of on-line payment system of students fee, salary to employees	Academic & Financial
9.	National Board of Accreditation	Implementation of Outcome based education, Good governance and administration	Academic
10.	DST (NSTEDB)	About Rs. 4 crore funding provided by DST/GoI for setting up Technology Business Incubator in the campus, a huge value addition for the teaching-learning process by giving a practical orientation	Academic & Financial
11.	DST (TDB)	Grant of Rs. 1 crore towards seed fund for entrepreneurs helps in applied research involving students and faculty	Academic & Financial
12.	MSME	Sanction of Rs. 66.8 lakh for promoting 10 innovative ideas for commercialisation	Academic & Financial
13.	IIT Bombay-e-Yantra	A project sponsored by MHRD through the National Mission on Education through ICT (NMEICT)	Academic & Financial
14.	IIT Bombay and Kharagpur	Remote centre for National Mission on Education through ICT (NMEICT)	Academic & Financial

3.7.2 Mention specific examples of, how these linkages promote

★ Curriculum Development

- MoU signed with TCS, Chennai helped the college to upgrade the teaching methodology of the faculty members and improve the teaching learning process by using the tool provided by TCS.
- NPTEL videos help the faculty to utilize them as reference materials in their teaching learning process.
- ISO 9000 certification provides a framework to carry out the teaching learning process in an efficient way and properly maintain the documents regarding academics as well as administration.
- Establishment and successful operation of various students' associations and chapters helps to identify various resource persons to address the students so that the gaps between the curriculum and industry expectations are addressed to a large extent.
- Interaction with Industry Associations and various industries helped to identify the resource persons /experts for curriculum development through suitable suggestions during Boards of Studies and Academic Council Meetings. Every Board of Studies has at least two members from the reputed industries, offering their suggestions, which are minuted.
- CII in association with IIPC of the college helps the students to exhibit their innovative talents through project exhibitions. Also, it strengthens the relationship of the institute with the nearby industries.
- Inclusion of courses like Business Intelligence, Building Enterprise applications suggested by Infosys and Information Storage Management by ICTACT in the curriculum

★ Internship, On-the-job training

Interactions with local industry and industry associations provide opportunities for internship to the students. Some of the major industries that provide in-plant training to our students are given below:

<ul style="list-style-type: none"> ▪ TNEB ▪ BSNL ▪ The Deccan Industries ▪ SAIL, Salem ▪ AIR, Coimbatore ▪ Doordarshan ▪ TNPL, Pugalur ▪ TAFE ▪ Defence Avionics Research Establishment (DARE) ▪ ROOTS ▪ Sakthi Sugars Pvt. Ltd. ▪ Ashok Leyland Pvt. Ltd. ▪ Agni Steels Pvt. Ltd., ▪ SUZLON Infrastructure Ltd. Coimbatore ▪ Chennai Port Trust ▪ AIRTEL 	<ul style="list-style-type: none"> ▪ Accent Circuits Pvt. Ltd ▪ Novateur Electrical and Digital Systems (P) Ltd. ▪ TNSTC ▪ Chettinad Cement Corporation ▪ Hello FM ▪ Caterpillar Ltd., Hosur ▪ Titan Industries Pvt. Ltd., Hosur ▪ SPB Ltd., Pallipalayam ▪ Videocon Appli-com Ltd. ▪ Southern Pilot training Academy ▪ Bannari Amman Sugars (P) Ltd. ▪ Chennai Petroleum Corporation Ltd. ▪ Tirumalai Chemicals Pvt. Ltd ▪ Indira Gandhi Centre for Atomic Research, Kalpakkam ▪ Thermal Power Plant, Mettur ▪ ITC Ltd
---	---

★ **Faculty Development**

- ICTACT enables the faculty to get exposed to the current trends that are happening in the IT industries and in the field of Entrepreneurship.
- 63 faculty members have undergone industrial training in various engineering industries for the past four years.
- An energy auditing team comprising 11 faculty members in the cadre of Dean, Professor and Assistant Professor has conducted energy auditing for 26 industries. 6 faculty members of this energy auditing team are recognized as certified energy auditors by Bureau of Energy Efficiency, Ministry of Power , Government of India, New Delhi
- A team of faculty members from Computer Science and Engineering and Information Technology visited Motorola, Bangalore to understand and analyse the qualities of various ranges of Wireless access points to be implemented in Campus Wi-Fi.
- A team of faculty members visited Mahatma Gandhi Institute of Medical Sciences to identify projects related to Medical Data Analysis using data mining techniques.
- Technology Business Incubator organizes faculty development programme on “Entrepreneurship” every year for the benefit of faculty members and entrepreneur-aspirants. TBI also has introduced a new concept “Faculty Entrepreneur Scheme” for enabling the faculty members to convert viable techno-commercial ideas into useful products/services by utilizing the facilities of TBI.

★ **Research, Publication**

- Interaction with BPL Telecom Ltd., Palakkad enabled the faculty members of Electronics and Communication Engineering and Computer Science and Engineering to conduct a research on VOIP blackfin processors culminating into an innovative commercial product for BPL as an outcome of the research.

★ **Consultancy, Extension Activities**

- Consultancy in the form of testing, software development and energy auditing is done continuously by various departments of the college through IIPC of the college.
- Technology Business Incubator of the College attracts potential entrepreneurs to venture into new businesses.
- TBI@KEC also organizes in association with EMDC Faculty Development Programmes and Awareness camps in the College on regular basis.
- Extension activities like conducting socially relevant programmes, marathons, roadshows etc. are conducted with the help of various clubs and cells in the college.

★ **Student Placement**

- CII has extended support to the College and provided a platform to interact with many of its member industries for placement and training.
- Karur Vysya Bank has placed students from Management Studies and other branches of Engineering.

- Inclusion of courses like Business Intelligence, Building Enterprise applications suggested by Infosys and Information Storage Management by ICTACT has facilitated placement of students of Computer Science and Engineering and Information Technology.
- The College is well connected with the leading software companies like Cognizant Technology Solutions, Infosys and Wipro through various initiatives.

★ **Any other, Please Specify**

- The College has a tie-up with the Karur Vysya Bank Limited for collecting the students' fee.
- Industry sponsored laboratories are established by the College in collaboration with industries like Free scale Semiconductors, CTS and Texas Instruments

3.7.3 Does the College have MoUs nationally / internationally and with institutions of national importance/other universities/ industries/corporate houses etc.? If yes, explain how the MoUs have contributed in enhancing the quality and output of teaching- learning, research and development activities of the College?

Yes. The details are given below:

Sl. No.	Department	Name of the Institution/ Corporate	Year	Outcome of MOU
2010-2011				
1.	IIPC & FT	Vinu Food Products, Salem	2010	2 numbers of Consultancy work undertaken for the industry; More in pipe line
2.	Management Studies	BSM	2011	Certificate programmes on project management principles and leadership, team building
2011-2012				
3.	IIPC & EEE	Wise Management Systems, Chennai	2011	2 numbers of energy audit work undertaken through the company
4.	IIPC& MECH and MTS	Coimbatore Productivity Council (CPC), Coimbatore	2012	2 numbers of training programmes undertaken for CPC at CPC Coimbatore ; Started Kongu Students' Productivity forum in the college
5.	Mechanical	Centre for Wind Energy Technology (C-WET) & Solar Radiation Resource Assessment (SRRA), Chennai	2011	The department regularly records the wind and solar data and shares with the party
6.	IIPC / CSE&ECE	BPL Telecom Private Ltd, Palakkad.	2011	2 numbers of consultancy work done. Industrial visit of students to the industry on a regular basis.
7.	CT-UG	Cisco Networking Academy	2011	Training for students in the area of networking
8.	Chemical	Akzo Nobel Coatings India P Ltd.	2012	Academic scholarship provided by the company, Students Inplant training/ Internship/Placement and faculty industrial training

Sl. No.	Department	Name of the Institution/ Corporate	Year	Outcome of MOU
2012-2013				
9.	Chemical	Perundurai Common Effluent Treatment Plant	2012	Guest Lecture, Students Industrial Visit, Inplant training, Placement, UG & PG Projects and faculty industrial training
10.	IIPC/ EEE& Mech	Enzen Global Solutions (P) Ltd, Bangalore	2013	Collaborative energy audit projects envisaged
11.	Chemical	STAR Global Energy Solution, Coimbatore	2013	Guest Lecture
12.	IT	IBM India Private Ltd	2013	Faculty Training on Rational rose software
2013-2014				
13.	EEE	Cranes Software international Ltd, Bangalore	2013	Processor kits to train the students of the institution so as to take up the projects.
14.	ECE	M/s Ed Gate Technologies (P) Ltd	2014	Faculty development programme, Workshop, Training programmes.
15.	IT	ICT Academy of Tamil Nadu	2014	Faculty development programme, Workshop and Training programmes to students
16.	MTS	Protocol Automation Technology P Ltd	2014	The organization is training the students and faculty of the Institute so as to take up the projects to be out sourced
17.		Fluidics	2014	Consultancy, software development, Industrial project/ Internship/ In plant training, Industrial visit, Guest lecture
18.	Computer Applications	Nakulan Tex, Erode	2014	Training provided to industry personnel, Guest Lecture
19.	FT	Flytrap Technologies Erode	2014	Software development, student projects, Employment opportunities, In plant training, Industrial visit, Guest lecture, training programme
20.	Management Studies	DIET, Perundurai	2014	Students visits, student project work at the DIET, Faculty training, Guest lecture, training programme, Kongu Community Radio programmes.

3.7.4 Have the College industry interactions resulted in the establishment / creation of highly specialized laboratories / facilities?

Yes. Institute has continuous interaction with industries and established the facilities as given below:

Sl. No.	Department	Collaborating Industry	Facilities Established
1.	Master of Computer Applications	CTS	Innovative lab
2.	Electronics and Communication Engineering	Freescle Semiconductors India Pvt. Ltd.	Embedded systems lab
		Texas Instruments	Analog system design lab

Additional Information regarding Research, Consultancy and Extension, which the institution would like to include

1) Technology Business Incubator

Kongu Engineering College (KEC), has established a Technology Business Incubator (TBI) in the KEC Campus, at a total project outlay of Rs.4.1 Crore - which includes Rs.15 lakh towards Incubation Fund - with the support and grant-in-aid from the National Science and Technology Entrepreneurship Development Board of Department of Science and Technology (DST), Government of India (GoI). Additionally, the Technology Development Board of DST/GoI has provided a grant of Rs. 1 Crore and NSTEDB has provided a grant of Rs.2 Crore to TBI towards Seed Support. Also, Ministry of Micro, Small and Medium Enterprises (MSME)/GoI has sanctioned Rs.66.28 lakh to TBI@KEC for implementation of the Scheme “Support for Entrepreneurial and Managerial Development of SMEs through Incubators”.

The motto of the Incubator is “Concept to Commercialization” and the prime objective is to nurture start ups in the emerging Electronics and ICT related technology areas with particular reference to Embedded Systems, Digital Signal Processing, Electronic Card Design, Assembly, Testing & Repair, Multimedia, Wireless Technology.

The TBI @ KEC, first of its kind in India, provides a congenial atmosphere with state-of-the-art infrastructural facilities – hardware as well as software – in the above areas so that the entrepreneur-aspirants including SMEs can convert their innovative ideas into commercial product and services.

The support for the entrepreneurs at TBI@KEC includes

- Secured and Independent air conditioned office facilities with Computers
- Development Centres, designed to cater to both independent as well as group working – and, provided with the latest hardware and software tools.
- Uninterrupted power supply with 100% standby
- Communication facilities with round the clock internet access.
- Infrastructural facilities of KEC
- Direct involvement of students and faculty in product/ process development

Support services and other facilities provided to the entrepreneurs of TBI include:

- Back Office Support
- Marketing and legal assistance
- Business Planning & Development
- Technical Expertise
- Packaging of Concept
- Assistance for IPR related issues
- Post incubation services
- On campus accommodation

The TBI also provides seed fund support to the deserving incubatees upto Rs.25 lakh per project as soft loan under TDB scheme and upto Rs.50 lakh per project under NSTEDB scheme. Under the MSME scheme, the TBI provides a

grant of Rs.6.25 lakh per entrepreneur. Financial assistance is provided to deserving projects of students and faculty also.

Other services of TBI include training, project, consultancy, repair, fabrication and re-engineering services in the focus areas.

A number of entrepreneurs from Erode, Coimbatore, Chennai and Bangalore are engaged in product development activities in the TBI.

More than sixty products developed at TBI@KEC have already been launched in the market including the overseas market. These products find applications in varied sectors like agriculture, healthcare, industry, finance, power, textiles, education etc.

TBI@KEC won the coveted National Award for the best TBI in the country for the year 2012 in recognition of its consistently good performance. The award, instituted by DST/GoI, was presented to TBI@KEC by the President of India on the Technology Day on 11 May 2013.

2) Industry-Institute Partnership Cell (IIPC)

The Industry Institute Partnership activity (by which the academic activities of the Institute is synergized with the industries' requirement) is a well established activity of Kongu Engineering College. Since its inception in the college in the year 2002 with grant in aid from AICTE, New Delhi the KEC IIPC was awarded 'A' Excellent in 2003 by the review team. The total grants received were in three installments of Rs. 8 lakh, Rs.2 lakh and Rs.1 lakh in 2002, 2003 and 2006 respectively. The IIP Cell is presently fully self supporting and provides support to the nearby industries in general as well as other industries.

IIP Cell is presently undertaking 1) testing assignments 2) Training activities and 3) Consultancy and Energy auditing activities. While the testing activities are directly handled by the departments and consolidated monthly activity lists and revenue reports are submitted to the Cell, the other activities are undertaken with prior scrutiny by the CCO, IIP cell and with the approval of the Principal.

All the three revenues (through the above mentioned three different activities) are credited into a separate IIPC grant-in Aid account. Out of the total net revenue, for the activities undertaken using College Facilities, 40 % is distributed to the concerned faculty and the non-teaching staff while for the activities undertaken without using college facilities, 60 % is distributed to the concerned faculty and the non-teaching staff.

The Weekly News Magazine OUTLOOK, July 27th, 2011 has published data on India's Top 45 Private Engineering Colleges, out of more than 2000 private Engineering Colleges in India. One of the five Criteria / Parameters used in evaluating the ranking is Industry Interface / personality development. KEC has got 14th Position in India and 3rd Position in Tamil Nadu against this criterion.

INTEC 2013: Participation in the exhibition at CODISSIA in June 2013; Won Special award.

AICTE-CII Survey For the best Industry Linked Institutes : Submitted data Online for the survey during July 2013 followed by back-up data proof in September ; Resulted in the experts' visit to KEC for scrutiny ; In the results announced in November , KEC- EEE department has won the top award and other Departments have all finished in the top band.

Clubs and Cells in Extension Activities

ISO

Systems and procedures for the academic and other administrative activities were established in the year 2001. Depending on the requirements, the system manual and procedure manual are updated regularly. Internal audits have been conducted periodically and third party audit is also conducted to ensure quality in education.

IGNOU Study Centre

Indira Gandhi National Open University (IGNOU), New Delhi, has promoted Kongu Engineering College into one of the Study Centres to conduct programmes viz BA, BCA, B.Com, MA, MBA, MCA, CDM and CETM. At present, 102 students are pursuing their studies.

Publication Cell

The purpose of the publication cell is to prepare and publish academic calendar for the college to carry out the academic activities in a scheduled manner. It also prepares and publishes a news bulletin for the college every year.

Human Resource Development Cell

This cell takes initiative to train faculty members in pedagogy and technological training and periodically refresher courses are arranged for developing the teachers.

Android Application Development Club

Kongu Engineering College has established a club during the year 2013-14(August) on mobile application development in Android. The name is Android Application Development Club (AADC). Student members of Android Application Development Club (AADC) are focused to develop applications (APPS) useful for. AADC is desired to explore technical areas of interest outside class hours. community with service-motives Club members of various disciplines have met since then to discuss trends, plan events, host special speakers, and work on “tech” projects together.

Students Counseling Cell

Every department has two senior counselors coordinated by counseling cell headed by Prof. M. Gnanajothi and Prof. R. Meenakumari. The students who need counseling are identified by the class advisors and other teaching faculty and systematic counseling efforts were taken to resolve their problems. Difficult cases are handled at the senior level.

Women Development Cell

The objectives of this cell are to empower the women students to face the challenges in life, to furnish the inborn creativeness and to march towards success, to inculcate the collectivism and prepare us from what we are to where we have to go.

Criterion - IV: Infrastructure and Learning Resources



"The human mind is our fundamental resource"
- John F. Kennedy

CRITERION - IV: INFRASTRUCTURE AND LEARNING RESOURCES

EXECUTIVE SUMMARY

Kongu Engineering College has one of the best infrastructures to provide holistic learning experience for the students and the faculty. There are 196 class rooms, many of them are located in separate buildings; Most of the Class Rooms are equipped with projectors with Wi-Fi connectivity. Seminar Halls, Auditorium and Convention Centre etc provide the out-of-the-classroom learning experience. The laboratories are adequately equipped and focused on providing hands-on experience. Several research laboratories, many located in and around the laboratories induce the research interest in students to take up projects even while studying in the early semesters.

The ICT facilities created, maintained and managed by an exclusive System group headed by System Manager with commendable technical expertise, are on par with the global trends. There are 2714 computers in the College (including 20 servers). The Internet Bandwidth is 110 Mbps. The Wi-Fi campus, LAN, student – computer ratio of 3.5:1 and a computer with internet facility for most of the faculty members make e-learning a pleasure in the campus. All departments have separate computer centre with relevant software packages. All hardware and software are upgraded regularly

Main library has all study materials, books, e-journals/e-book and digital contents. A considerable amount of the annual budget is utilized for purchase of books, e-Journals, Print-journals and Periodicals. The entire operation (entry, exit, issue/return, OPAC, etc.) of Library is automated through 'Integrated Library Management System'. The facilities of the Library include: Online Public Access Catalogue (OPAC), Air-conditioned Reading Halls, Book Bank, Air-conditioned Reference Section, Inter-Library Loan, Current Periodical Display, Reprography, Digital Knowledge Centre, etc. The Library also offers services such as: Stack Help, Lending, Tele-reference Current Awareness, Research Report, etc.

College promotes sporting interest among the students by creating excellent infrastructure for sports. The major facilities include: Foot-ball/Hockey/Cricket ground, 2 Basketball Courts, 2 Tennis Courts, Weight-lifting Platform, Kho-Kho/Kabadi courts, High Jump/Long Jump Pits, Throwing arena, Walking Path, Athletic Tracks and indoor stadium with 3 Badminton Courts, Table Tennis Boards, modern gymnasium and adequate sports equipment to conduct various sports/games events. Annual sports day, KONGU Trophy and other sporting events are conducted regularly and the institute students have won several prestigious awards. Even faculty/staff teams are active and regular competitions are conducted in indoor and outdoor sports

College has an exclusive transport department, which takes care of transport arrangements for various academic purposes. There are around 88 vehicles including buses, vans, cars and tractors for the use of students and staff. Bank with 5 ATMs, Post office, amenity centre and food court are available inside the campus for student use. Separate dispensary with full time doctor with two ambulances are also available for medical care.

College has different maintenance team like civil, electrical, water, garden, AC maintenance and housekeeping to maintain the entire campus. Sufficient water is available throughout the year and 24 hour power supply maintained in the campus with sufficient generators.

4.1 Physical Facilities

4.1.1 How does the College plan and ensure adequate availability of physical infrastructure and ensure its optimal utilization?

PHYSICAL INFRASTRUCTURE

- The college has the infrastructure facilities necessary to successfully conduct the programmes offered in undergraduate, postgraduate and research level.
- The college spans over 167 acres of sprawling, serene and lush green campus. The vast campus has well planned network comprising separate blocks for each department, more than 196 class rooms, 7 drawing halls, 36 tutorial halls, 200 laboratories, 12 department seminar halls, 14 department libraries in addition to central library, state of the art convention center, computerized library and play grounds.
- Totally nine hostels for men and women students are available.
- The campus also houses residential buildings for both teaching and non-teaching fraternity.
- VIP guest house and alumni guest house are available.
- Extensive computing facilities with 2714 terminals and Wi-Fi connectivity with 110 Mbps leased line available throughout the campus.
- Technology Business Incubator (TBI) established in the campus with the support and grant-in-aid from Department of Science and Technology (DST) and Government of India. The TBI@KEC, first of its kind in India, provides state-of-the-art infrastructural facilities and assistance
- Student's amenity centre provides all required stationery items.
- Kongu FM community radio service is covering programmes focusing on education, health, environment, agriculture, rural and community development.
- On campus health centre available with a residential doctor and supporting staff with 2 ambulances for round the clock for emergency.
- Fully computerized Karur Vysya Bank functions inside the campus with 5 ATMs located inside campus.

GREEN CAMPUS

- The most of area of college is covered with beautiful lawn and tress. The campus is green and create excellent environment for students in the summer days also.

TRANSPORT

- The college provides extensive transport service to the staff, students and visitors.
- There are 76 buses, 2 ambulances and 12 other vehicles to meet the demand.
- The buses ply through various routes in about 50 km radius.
- Hence, the transport facilities available in the college are more than adequate.
- Shuttle trip transport facility is provided on all days from College to Perundurai bus stand and vice-versa.

WATER SUPPLY

- There are 3 wells and 5 borewells available. In addition to this, the college has made arrangements to bring 10 to 13 lakh litres of Cauvery water per day from outside to meet out the needs at a cost of about Rs.18 lakh per month.
- To provide quality water, a Reverse Osmosis (RO) plant with a capacity of 12000 litre per hour is installed in the college campus.

SEWAGE TREATMENT PLANT

- A sewage treatment plant (Activated Sludge Process) with a capacity of 8000 litres per hour is installed in the college and the treated water is used for gardening purposes.

POWER SUPPLY

- The college has acquired exclusive electrical High Tension (HT) and Low Tension Supply.
- The power supply is backed up by diesel generators with a total installed capacity of 3250 kVA.
- The computers housed in various labs of all the departments are supported by Uninterrupted Power Supply (UPS) systems.

BIO MASS GASIFIER

- The college has a 100 kW Bio Mass Gasifier which converts the bio mass waste such as left over and vegetable from hostel into electrical energy.

SOLAR POWER WATER HEATER

- The hostels and staff quarters are equipped with solar power water heaters which reduce the consumption of the electrical energy. Solar powered lights have also been installed and are working successfully in the college campus.

SOLAR POWER PLANT

- 100 kW roof top solar power plant is getting ready above the Mechanical and Mechatronics block to give green power to the buildings.

ENSURING OPTIMAL UTILIZATION OF THE INFRASTRUCTURE

Professors are nominated as in-charges of various responsibilities associated with updating and taking care of the institute's infrastructure.

There are faculty members nominated for taking care of the infrastructure facilities like the seminar halls, laboratories and other facilities of the department. Each department has a faculty in-charge for infrastructure maintenance. There is a member of the faculty for each lab to act as the lab in-charge to ensure that the labs are maintained and utilized properly.

The institute has estate office, project manager and a team of engineers and supervisors to ensure proper maintenance and optimum utilization of the infrastructure facilities available in the Institute.

The infrastructural facilities are upgraded / updated on a continuous basis based on the recommendations of various departments.

MASTER PLAN

- The master plan of the college campus indicating the existing building and the projected expansion is enclosed.



4.1.2 Does the College have a policy for creation and enhancement of infrastructure in order to promote a good teaching-learning environment? If yes, mention a few recent initiatives.

Yes.

This commitment of creating infrastructure to foster learning is also elucidated as a part in the institute's policy for providing quality education.

RECENT INITIATIVES

ICT Enabled Classrooms

Most of the classroom in the college is made as a smart classroom. The college adopts a unique teaching learning process to encourage interactive learning. To enable and support this creative learning methodology, most of the classrooms are transformed into ICT enabled classrooms equipped with roof mounted multimedia projectors (MMP), personal computer / Laptop, LAN and internet connectivity. All the Departments are provided with multimedia projectors (MMP) and Over head projectors (OHP). There are 90 multimedia projectors and 100 OHPs presently available in the college.

Academic Buildings

- Exclusive academic block for each department is available.
- New additional buildings were constructed for Department of Civil Engineering (78,400 sq.ft), Mechatronics Engineering (44,850 sq.ft), Electronics and Communication Engineering (86,550 sq.ft), Electrical and Electronics Engineering / Electronics and Instrumentation Engineering (74,689 sq.ft), Food Technology (29,892 sq.ft) and Chemical Engineering (95,690 sq.ft). The areas indicated are the total areas after the construction of additional buildings.
- Work in progress for extension of administrative block (35,000 sq.ft) and additional hostels (2 Nos. with total capacity of 1000).

4.1.3 Does the College provide all departments with facilities like office room, common room, separate rest rooms for women students and staff?

Yes

The institution has provided the following facilities in each department like common room for women, wash/rest room for all students and staff in each block of the college campus.

- Office room with computers, printers, scanners and photocopying facility
- Separate lunch room for boys and girls
- Air conditioned seminar halls for each department
- Separate rest rooms for women students

4.1.4 How does the College ensure that the infrastructure facilities meet the requirements of students/staff with disabilities?

- Lift facilities is provided in the MBA & MCA Block.
- The differently abled students are provided with transport facilities to pick up and drop them at their respective blocks.
- Hostel accommodation is provided in the ground floor.
- Exams are conducted in the ground floor.
- Ramps with handrails are available in all the blocks.
- Specially designed toilets are available.

4.1.5 How does the College cater to the residential requirements of students? Mention

- **Capacity of the hostels and occupancy (to be given separately for men and women)**

There are 5 hostels for boys with 834 rooms and 4 hostels for girls with 616 rooms.

Hostel	Name of the Hostel	Total Rooms	Occupancy
Boys	Dheeran	216	662
	Ilango	152	550
	Bharathi	137	533
	Valluvar	152	535
	Kamban	177	286
Total			2566
Girls	Vaigai	114	355
	Bhavani	171	478
	Kaveri	206	534
	Amaravathi	125	324
Total			1691

- **Recreational facilities in hostels like gymnasium, yoga center, etc.**

Apart from the basic amenities required for the hostel inmates, the following additional facilities are provided in the hostel premises.

- A sixteen station gymnasium facility for men and a 6 station gymnasium for women are provided.
- Residential medical officer is available round the clock.
- A separate study room is also provided for the hostel inmates.
- Solar and Electrical water heaters are installed for providing hot water facility.
- Popular magazines are kept in common room and daily newspapers are provided to each room.
- A TV room is provided to the inmates.
- There is a sick room in all the hostels.
- Resident wardens and matrons in adequate numbers for each hostel to take care of the students.
- Two Nos. of meditation hall and yoga centers are available.
- **Broadband connectivity / Wi-Fi facility in hostels.**
 - All the hostels are connected with 110 Mbps (1:1 Leased Line) Internet and Wi-Fi services are available to both the staff and students
 - Browsing centers for the inmates of the hostel.

4.1.6 How does the College cope with the health related support services for its students, faculty and non-teaching staff on the campus and beyond?

On campus medical health care is provided. A full time doctor is available on the campus to provide medical attention to the students, staff, residents and visitors.

- The dispensary with 5 treatment rooms with required infrastructure is available.
- A staff nurse and an Attendant are on regular rolls.
- Two ambulances are always kept ready for the needy persons.

- First Aid boxes stacked with required medicines/items are provided in each department.

4.1.7 What special facilities are made available on the campus to promote interest in sports and cultural events?

SPORTS

- The play ground is spread over 8 acres which provides ample opportunities to the athletes and players for regular practice.
- A well maintained athletic track, cricket ground, foot ball ground, tennis court, basket ball court, shuttle court, ball badminton court, kabbadi court, co-co field are available.
- Basket ball court, volley ball court and tennis court are provided with flood light facility.
- The indoor stadium has 3 badminton courts and 5 table tennis courts and a multi gym.
- There is a 16 station gymnasium facility for boys and a 6 station gymnasium facility for girls.
- A director and directress of Physical Education are available for training the students.
- Construction of swimming pool has been planned in 2015.
- Acupuncture pathway is available.

The facilities available for sports and games in the college are furnished below:

Sl. No.	Play Field Available	No. of Field
1	Athletic track with football field and Kho-Kho	1 No.
2	Cricket field with 2-net practice pitches	1 No.
3	Hockey / Football field	1 No.
4	Volleyball courts	3 Nos.
5	Basketball court	3 Nos.
6.	Tennis Court with fence	2 Nos.
7.	Ball Badminton courts	2 Nos.
8.	Kabaddi court	1 No.
9.	Badminton (Indoor)	3 Nos.
10.	Indoor Games: Table tennis board Carrom and Chess	2 Nos. 10 Nos.
11.	Handball court	1 No.
12.	Gym for men Gym for women	1 No. 1 No.
13.	Tennikoit court	1 No.

CULTURAL EVENTS

The following infrastructural facilities are available for cultural events:

1. Kongu convention centre

The air conditioned convention centre is one of the largest auditoriums in Educational institutions with a seating capacity of 4500. It has all modern audio systems and modern infrastructural facilities. Institution level cultural events are conducted here.

2. Maharaja Auditorium for conducting department level events.
3. Each department has a Seminar hall for conducting department level events.
4. Kongu FM Community Radio Service (90.4 MHz) for proving students to perform cultural events.
5. College encourages the students to exhibit their talents during New year celebrations, Pongal celebrations, Sports day and Annual day celebrations, Department level national symposiums, Hostel day, Enthusia, Swaram etc. Adequate funds are provided to procure the required instruments for musicals and other accessories.
6. Many clubs have been formed to enhance and nurture the extracurricular, co-curricular and cultural activities.

List of various clubs and their faculty in-charges are furnished below:

Sl. No.	Name of the Club	Faculty I/C
1.	Yoga & Meditation Club	Dr.R.Thamilselvan Dr.P.Vadivel
2.	Photography Club	Mr.M.Vijayanand Mr.P.Prabhakaran
3.	Staff Club	Dr.K.Tamilarasan
4.	Cultural Club	Ms.N.Anitha Ms.S.Uma Maheswari
5.	Ravi Varma Creative Club	Dr.K.Nirmalkumar
6.	Citizen Consumer Club	Dr.P.Karthikeyan
7.	Red Ribbon Club	Mr.P.Manikandan
8.	Aero Modelling Club	Dr.P.Navaneethakrishnan Mr.A.Mohankumar
9.	English Proficiency Club	Dr.T.Sasisekaran Ms.R.Ramya Sri
10.	Rotaract Club	Ms.P.S.Kothai
11.	Robotics Club	Mr.V.Arun Kumar Mr.T.Mohanraj
12.	CII-Yi Chapter	Mr.P.Sivarajadhanavel
13.	Tamil Mandram	Ms.J.Indra Mr.R.Mouleeshuwarappabhu
14.	Energy and Environment Conservation Club	Mr.S.Albert Alexander Mr.M.S.Kamalesh
15.	Android Application Development Club	Dr.S.Anandamurugan Dr.T.Abirami

4.2 Library as a Learning Resource

4.2.1 Does the library have an Advisory Committee? Specify the composition of such a committee. What significant initiatives have been implemented by the committee to render the library, student/user friendly?

Yes. The library has an advisory committee headed by Principal with Deans & Head of the Departments, Librarian and Assistant librarians as members. Some of the recommendations of the committee and the action taken by the library are given below.

Sl. No.	Register Number/Year	Recommendations	Action Taken
1	Department Library Issue register Every Year	Providing periodicals to the Department Library for reference by students and Faculty	Implemented
2	Periodical Register (LB-04) 2011-15	To subscribe E-Journals	Implemented
3	Periodical Register (LB-04) 2011-15	Renewal of Journal subscription with the consent from HoDs	Implemented

4.2.2 Provide details of the following:

- * **Total area of the library (in Sq. Mts.).**
Total area of the central library is 3286.43 Sq.Mts.
- * **Total seating capacity: 450**
- * **Working hours (on working days, on holidays, before examination days, during examination days, during vacation).**

Week Days	Sundays & Holidays	Saturday
Working Hours: 8:40A.M-10.00 P.M. Issues/Returns: 8:40 A.M -8:00 P.M Reprography Services: 8:40A.M – 8:30 P.M	Working Hours: 8:40A.M -5:30 P.M. Issues/Returns: 8:40 A.M -5:30 P.M Reprography Services: 8:40A.M – 5:30 P.M	Working Hours: 8:40A.M -8.00 P.M. Issues/Returns: 8:40 A.M -8:00 P.M Reprography Services: 8:40A.M – 8:00 P.M

- **Layout of the library (individual reading carrels, lounge area for browsing and relaxed reading, IT zone for accessing e-resources)**

Ground Floor	I Floor	II Floor
Counter section Stack area Study room OPAC Technical Section Reference Section Journals Periodicals Reference Periodicals Reading Hall Discussion Room Copier Section New Arrivals Librarian Office Assistant Librarian office Property counter WiFi Rest Room	Digital Library Newspaper Reading Hall Discussion Room OPAC WiFi Research Scholar Room Course reserved Book Bank Back Volume Discussion Room Laptops Plugin Rest Room	Reserved for Future Expansion

Note: Above details can be verified during experts visit

- **Access to the premises through prominent display of clearly laid out floor plan; adequate signage; fire alarm; access to differently abled users and mode of access to collection.**
 - * Library has been constructed, strategically, at centre position to the academic blocks, boys and girls hostels to access easily.
 - * Library has ramp from either sides to reach the main gate, besides the steps.
 - * Barcode ID provides easy access to enter the Library, thereby avoiding signing the Entry Registers, manually.
 - * Sign boards are provided in every point / hall on various facilities available.
 - * Both side steps are available for moving from one floor to another.
 - * Automated cataloguing system is followed to identify the location of the books and references.
 - * Smoke detectors and fire alarms are installed in every floor of the Library.

4.2.3 Give details on the library holdings

- a) **Print (Books, back volumes and thesis).**
- b) **Non Print (CD, AV).**
- c) **Electronic (e-books, e-Journals).**
- d) **Special collection.**

(eg. Text books, Reference books, standards, patents)

Two storied, air-conditioned and computerized library is well-stocked with 72,070 volumes, 274 National and International Journals, 7264 CD-ROMs and a Digital Library with 80 PCs and 5000 e-journals. 112 NPTEL video courses are part of the resources. KEC is an Institutional member of the British Council Library(BCL), Chennai, CIPET(Central Institute of Plastic and Engineering Technology), Chennai, DELNET, New Delhi and INDEST Consortium, New Delhi, AIRC (American Information Resource Centre), Chennai and ACM (Association for Computing Machinery).

Item	Category	Sub-category	Numbers Available
1.	Books	Volumes	72070
		Back volumes	8318
		Thesis (PhD)	127
2.	Non-print	CD / DVD	7264
		NPTEL	112
3.	E-Books / E-journals	IEL (IEEE-ASPP), ASCE, ASME, ELSEVIER Science DIRECT, Springer Link,J-Gate Management DELNET-Proquest Engineering and Technology DELNET- Management	5284
4.	Periodicals, Journals and Magazines	Various Disciplines	274
	Reference Books, Standards	All Disciplines	5260

4.2.4 What tools does the library deploy to provide access to the collection?

- **OPAC**

On Line Public Access Cataloguing (OPAC) system has been implemented for searching various books and references. OPAC provides following information to the users:

- * Bibliographic information about all the available library materials.
- * Availability of books by typing the keywords of Title, Author's Name, Book Number etc.
- * User's Library Account details.
- * **Electronic Resource Management package for e-journals**
Cloud based e-journals are subscribed, as recommended by the All India Council for Technical Education (AICTE), New Delhi. These journals are accessed through the link provided in the college www.kongu.ac.in/campuslife/library. Besides 80 dedicated computers are available in the Library to access the e-journals by the students and faculty members.
- * **Library Website**
www.kongu.ac.in/campuslife/library and www.kongu.edu/intranet/library
- * **Federated searching tools to search articles in multiple databases**
Federated searching tools provided by the various service providers are purchased and made available to the students. These tools collate the results of the search from various sources / journals and provide the summarized results. List of such services are IEEE-ASPP, ASME, ASCE, Springer, Access Engineering, J-GATE, ELSEVIER, ASTM, EBSCO and Nature Publishing Group.
- * **In-house/remote access to e-publications**
 - ❖ In-house access to e-publications can be made from the internet centre in the digital library.
 - ❖ In the remote locations, these e-learning materials can be accessed using the IP address and Google Cloud.
 - ❖ Apart from this the students and faculty have got access to more than 19000 e-databases.

4.2.5 To what extent is the ICT deployed in the library?

- **Library automation**

The Library of the College is fully automated through NIRMALS software with Barcode and Surveillance Systems. Check-in, searching for titles, issues and check-outs are with Barcode Library Management Systems. Both side steps connecting all the floors of the library. Besides, smoke alarm, in case of fire accidents and emergency exits are also provided.

- * Total number of computers for public access -80 computers
- * Total numbers of printers for public access – 3 High speed printer.
- * Internet bandwidth speed – 110 Mbps.
- * Content management system for e-learning.
 - ❖ CDs and DVDs are maintained separately for easy access
 - ❖ NPTEL Lecture and Web courses are accessed through dedicated IP address
 - ❖ 5284 e-journals are easily accessed, campus wide

- ❖ 80 computers are provided in the Digital Section to access these e-learning materials.
- ❖ An Assistant Librarian has been appointed to take care of e-learning systems.
- ❖ An Assistant Librarian has been appointed to take care of documentation section.

* **Participation in Resource sharing networks/consortia**

Library subscribes Institutional Membership of following agencies:

- DELNET
- British Council Library
Besides the links for the other library networks are being provided in the library portal to share the resources from the other library networks in India as well as abroad.
- Links to other Libraries
 - ❖ Indian Institute of Technology Bombay
 - ❖ Indian Institute of Technology Delhi
 - ❖ Indian Institute of Technology Guwahati
 - ❖ Indian Institute of Technology Kanpur
 - ❖ Indian Institute of Technology Kharagpur
 - ❖ Indian Institute of Technology Madras
 - ❖ Indian Institute of Technology Roorkee
 - ❖ Indian Institute of Science Bangalore
 - ❖ Information Center for Aerospace Science and Tech.
 - ❖ National Centre for Science Information, Bangalore
 - ❖ Indian Institute of Management, Kozhikode.
 - ❖ Indian Institute of Management, Calcutta
 - ❖ Indian Institute of Management, Bangalore
 - ❖ Indian Institute of Management, Indore
 - ❖ Indian Institute of Management, Ahemdabad.
 - ❖ Indian Statistical Institute, Calcutta
 - ❖ National Institute of Technology, Calicut
- **National Networks**
 - ❖ Ahemdabad Library Network
 - ❖ Bombay Library Network
 - ❖ Calcutta Library Network
 - ❖ Developing Library Network
 - ❖ Information & Library Network Centre
 - ❖ Pune Library Network
 - ❖ Mysore Library Network
 - ❖ Library Servers via WWW
- **International Networks**
 - ❖ Massachusetts Institute of Technology
 - ❖ Georgia Institute of Technology
 - ❖ California Institute of Technology
 - ❖ Canada Institute for Scientific and Technical Information
 - ❖ Stanford University
 - ❖ Library of Congress
 - ❖ British Library
 - ❖ University of Technology Sydney

- ❖ RMIT
- ❖ Canberra Institute of Technology
- ❖ European Library
- ❖ Virtual Technical Reports Center
- ❖ Hong Kong University of Science and Technology
- ❖ UMIST UK
- ❖ Virginia Tech. University Library
- **ACM(Association for Computing Machinery), Newyork**
- **CIPET (Central Institute of Plastic and Engineering Technology), Chennai.**

4.2.6 Provide details (Per month) with regard to

Library usage

Average number of walk-ins	15211
Average number of books issued/returned	2386
Ratio of library books to students enrolled	9.20:1
Average number of books added during last three years	2154
Average number of login to OPAC	2410
Average number of login to e-resources	14450
Average number of e-resources downloaded/printed	13236

4.2.7 Give details of the specialized services provided by the library

- **Manuscripts**
72070 books are available for lending purpose, to both the students and faculty.
- **Reference**
A separate section is allotted for reference materials like project reports, reference books and other reference materials.
- **Reprography**
A reprographic center is functioning in the ground floor to enable the users to get the photocopies and prints
- **ILL (Inter Library Loan Service)**
Library extends the borrowing facilities, to the users, from other libraries in the country with the help of DELNET and British Council Library.
- **OPAC**
OPAC facility can be viewed throughout the campus through LAN. Users can view the availability and status of books through Library Web Portal also.
- **Internet Access**
In the Digital Library, 80 computers are available with internet access connected with a bandwidth of 100 Mbps.
- **Downloads**
In Digital Library, users can download articles from the e-journals subscribed by College and other learning materials from Worldwide Web.
- **Printouts**
Users can take printout from the reprographic center

- **In-house/remote access to e-resources**
Wi-Fi facility is available in College, Staff Quarters and Hostel Campus. Hence the users can access the e-resources throughout College, Hostel and Staff Quarters.
- **User Orientation**
Orientation programmes are conducted to I year students regarding the usage of library resources. Hands-on-training is also given to the students on need basis.
- **Assistance in searching Databases**
Qualified and trained staff members are available for assisting the students in searching databases.
- **Institutional Membership**
Library subscribes for Institutional Membership for DELNET, British Council Library, AIRC & CIPET.
- **Book Banks**
Book bank facilities are available for the reserved category students who can avail the books for longer durations.
- **Discussion rooms**
A number of discussion rooms are available for the research scholars to discuss simultaneously while referring the books.

4.2.8 Provide details on the annual library budget and the amount spent for purchasing new books and journals.

- Rupees in Lakh

Year	Budget	Amount Spent (Books Cost)	Amount Spent (Journals Cost)	Total Amount Spent
2013-2014	165.00	14.35	17.57	31.92
2012-2013	165.00	10.72	22.94	33.66
2011-2012	52.00	3.69	22.57	26.26
2010-2011	66.00	9.32.00	18.92	32.00

4.2.9 Does the library get the feedback from its users? If yes, how is it analysed and used for improving the library services.

Yes.

A feedback register is available in the library to get the feedback from all the users. Various requirements regarding purchase of new titles, journals and periodicals are obtained from users and the processes of purchase are addressed based on the requirement. Complaints and suggestions are sorted-out then and there to improve the quality of the service provided. Some of the actions taken, during 2013-14, based on feedback are:

- Photocopy hours extended up to 8:30pm.
- Competitive examinations and General Self help books have been increased.
- Wi-Fi facility has been extended to I floor besides Ground floor.

4.2.10 List the infrastructural development of the library over the last four years.

Library infrastructure has been improved with careful planning to suit the future requirements also. The following table gives the comparison of the various developments over a period of last four years.

Infrastructure	Status in 2010	Status in 2015
Library Area (Sq.m)	3286	3286
Total Seating Capacity (No.)	450	450
Cataloguing System	Automated	Automated
Automation System	Barcode	Barcode
Book Issue / Return	Automated	Automated
Total Volumes	62756	72070
Total E-journals	3000	5284
Total Periodicals (print)	185	274
CD /DVD (No.)	6100	7254
Inter Library Loan Services	Yes	Yes
Digital Library	20 Systems	80 Systems
IT Bandwidth (Mbps)	40 Mbps	110 Mbps
Total Employees Engaged	10	15

4.2.11 Did the library organize workshop/s for students, teachers, non-teaching staff of the College to facilitate better Library usage?

Yes.

During the library hours, hands-on-training on usage of library e-resources and other resources is being given to students and faculty members. First year orientation programme is conducted to educate the freshers about library usage.

4.3 IT Infrastructure

4.3.1 Does the College have a comprehensive IT policy addressing standards on IT Service Management, Information Security, Network Security, Risk Management and Software Asset Management?

Yes,

The College has a comprehensive IT policy addressing standards on IT Service Management, Information Security, Network Security, Risk Management and Software Asset Management.

1. IT Service Management

- College has IT Service Management team lead by System Manager. The common servers, networking infrastructure and common licensed software and hardware are maintained by the system administrative team.
- System maintenance committee has been framed to improve the efficiency and effectiveness in decision making. The committee activities are aligned with academic as well as administrative needs.
- College makes use of IT services for all the functionalities of the college to attain perfection, accuracy and transparency like Academic (InsProPlus software -Student attendance maintenance, Continuous mark assessment, Academic record maintenance), Governance (Payroll), Admission.

2. Information Security and Network Security

- The Fortinet Fortigate 1000C a Unified Threat Management (UTM) installed in the network performs multiple security functions within one single appliance. It works as network firewall, network intrusion prevention system and network zones are created and managed through this equipment.
- The Internet band width 110 Mbps stream is regulated and policies are created in the firewall for students and staff for proper usage of Internet.
- Internet services use web filtering, content filtering and gateway antivirus in order to restrict the access to unwanted websites.
- Information and network security is provided through firewalls to manage misuse of IT services provided. Symantec Antivirus Endpoint Protection 12.1.4 is installed in all common servers of the college to handle malware risks.
- The mail services inside the college are configured to block spams and malicious attachments.

3. Risk Management

- Backup procedures have been established and carried out on the college servers to handle risk of information loss. Proper infrastructure (Dedicated Space, Air-conditioners) has been provided for IT Infrastructure/Management.
- Security updates and vulnerability patches to the servers and other critical systems are carried out regularly.
- The system administrator and team monitor attacks on the network or systems.
- The websites with insecure contents are blocked for access to prevent the risk of access to untrusted websites.

4. Software Asset Management

- Common purchase committee is the authority to purchase computers and network related equipments for the college.
- Adheres to the terms and conditions of license agreements of IT resource software.
- Open source software are installed as operating system for certain servers, DBMS and other software for learning and in-house consultancy.
- Microsoft Campus Agreement is being renewed for each academic year.
- Windows based license is available for all the machines with windows operating system.
- Oracle 10g license for unlimited users is available for working with databases.
- IBM Rational software Architect and Enterprise Suite V 6.0 license for 60 users is available for working with software development and testing.
- Students are given opportunity of learning and using free and open source software.

5. Green Computing

Under the objective of reducing the electronic hazards and improving the energy efficiency the following policies are adopted:

- Replacing CRT monitors with LCD/TFT monitors.
- Thin clients are being used instead of Desktops, wherever meeting the requirements.
- Disposing electronic materials are not permitted in the campus.

- Non-usable electronic materials are identified by the department and certified by the committee for condemned items and replaced later under buy-back scheme.

4.3.2 Give details of the College's computing facilities (hardware and software).

HARDWARE FACILITIES

- Every department has separate computer centers with required software and hardware with internet connectivity as per AICTE regulations.
- No. of systems available: 2600 (includes 20 servers).
- Number of Printers are about 225 in number.(Dot matrix, Laser jet & Inkjet).
- Computer student ratio (1:4) for UG and (1:2) for PG.
- Dedicated computing facility:
 - Mail server-Microsoft exchange server 2007 - 900 users.
 - Oracle server – processor licensed – unlimited users.
 - Symantec antivirus server- 100 users.
 - Rational rose enterprise suite- 60 users.
 - DNS server.
 - DHCP Server.
 - Radius Authentication Server.
 - Kongu.edu web portal.
 - Novel network server.
 - Wireless authenticate server.
 - Ridgeline Network Management Server.
 - Cacti Bandwidth Management Monitoring Server.
- LAN facility: A strong network backbone of 1G(10G for distribution centers) as a structured deployment with 3 distribution points, covering campus area of 167 acres (including hostel and staff quarters) with wired and wireless components.
- The active network components include:
 - Core switches – 1 No. with 1G and 10G support(24 FOC ports and 48*2 =96 copper ports).
 - Distribution switches- 22 Nos. with 1G support , 2 Nos. with 10G support.
 - Edge switches - 180 switches.
 - Wireless- Indoor and Outdoor- 320 Nos.
 - Motorola controller -2 Nos.
 - Ruckus – 1 No. with 10 access points.
 - Wireless air defense -1 No. with 3 sensors.
 - Ridgeline- Extreme network management software.
 - Router- 1 No.
 - UTM- 1No.(Firewall with VPN services)
 - Internet facility about 2500 number of computers.
 - WIFI connectivity: Campus wide wireless network with 330 access points.
 - Online teaching/learning resources: Web based audio/video educational contents through CFD and NPTEL server -2Nos. with 500 GB hard disk.
 - For teachers: System with Internet facility is provided for effective teaching and quality research.
 - Knowledge data center, web portal, digital library with e-resources.

- ICT enabled class rooms: Each department has ICT enabled class room with LCD Projector OHP, wireless access points and other accessories.
- Annual budget for update/deployment/ maintenance of computers: Rs.35lakh.

Software facilities available in various departments

1. Computer Science related departments

Sl. No.	Software	License
1.	Linux 7.3	Licensed/N users
2.	Fedora Linux 10.0	Free/N users
3.	Open SUSE Linux 11.3	Free/N users
4.	CentOS Linux 5.4	Free/N users
5.	Oracle 10g	Box/N users
6.	MSDN Enterprise 7.0	Box/N users
7.	WinSL 8 SNGL OLP NL Acdmc Legalization	Licensed /75 Users
8.	IBM Rational Software Architect & Enterprise Suite v 6.0	Licensed /60 Users
9.	Novell Netware 6.0	Licensed /250 Users
10.	Java - Java accessories	Free/N users
11.	Symantec Antivirus End Point Production 12.1.4	Licensed
12.	Macromedia Freehand 8.0/ Flash 3.0/ Extreme 3D/ Authorware 5.0/ Director 6.5	Box
13.	Adobe package	Licensed
Microsoft Campus Agreement		
14.	Microsoft Windows XP SP3	
15.	Microsoft Windows Vista	
16.	Microsoft Windows 7	
17.	MS Exchange Server 2007 & 2010	
18.	MS SQL Server Standard 2008	
19.	MS Office Package	
20.	MS Visual Studio .Net Professional 2010	
21.	Microsoft Visio 2007 & 2010	

2. Electronics and Instrumentation Engineering

Sl. No.	Software	License
1.	DCS Centum Vp Software	Licensed
2.	ORCAD Release 9.2	Licensed
3.	MATLAB Release 12(+)	Licensed
4.	IDE 51	Licensed
5.	FPGA Development Board(Altera)(including hardware)	Licensed
6.	GE Fanuc simplicity software	Licensed
7.	GE fanuc- Versapro	Licensed
8.	PLC Automation	Licensed
9.	Wonder ware in touch	Licensed
10.	Siemens-Simatic step7 (including hardware)	Licensed

Sl. No.	Software	License
11.	OMRAN programming software with hardware	Licensed
12.	ABB Programming Software with hardware	Licensed
13.	ECG analysis software	Licensed
14.	Lab VIEW 2011with hardware	Licensed
15.	C51 professional developers kit Vision 3 (Keil P51)	Licensed

3. Civil Engineering

Sl. No.	Software	License
1.	STADD PRO 2001	Licensed
2.	STRAP Ver 11.0 Bridge Module	Licensed
3.	STRAP-Ver 12.0	Licensed
4.	NISACIVIL (Designs)Std 50,000 degrees of freedom	Licensed
5.	Architectural Development Desktop Ver. 3.3 (ADT)	Licensed
6.	Land Development Desktop Ver. 3.3 (LDDT)	Licensed
7.	Autodesk Civil 3D-2007	Licensed
8.	MS Project (Server based 5 User License)	Licensed
9.	MS Project (Stand Alone)	Licensed
10.	Primavera Ver 3.1	Licensed
11.	NiSA CIVIL 2003 Ver 2.11, DESIGN/FEA	Licensed
12.	STAAD Pro V8i	Licensed

4. Mechanical Engineering

Sl. No.	Software	License
1.	Pro/Engineer-Wildfire4	Licensed
2.	Ansys-14	Licensed
3.	Catia- V5-6 R2012	Licensed
4.	ABAQUS -V6.12	Licensed
5.	Auto CAD - R2010	Licensed
6.	Auto CAD Inventors -R2013	Licensed
7.	NX Nastran-V5	Licensed
8.	MSC-ADAMS-2006	Licensed
9.	NX (IDEAS& UNIGRAPHICS)- NX4	Licensed

5. Mechatronics Engineering

Sl. No.	Software	License
1.	VR ROBOT PACKAGE 5 SEATS	Licensed
2.	ABB Robot Studio	Licensed
3.	MultiSIM Education Version (SPICE Simulation tool for Analog and Digital mix mode circuit) – S. No: 7202-05008-322-49266	Licensed
4.	Multi MCU (Microcontroller Co- Simulation Interface-) S No: 2522-52040-4604-28031	Licensed
5.	Panel Builder 32 Software CAT No. 2711-ND3	Licensed
6.	RS Logix 500 Standard CAT NO. 9324RL0300ENE	Licensed

Sl. No.	Software	License
7.	Logo Soft comfort V5.0 Programming Software(Siemens PLC)	Licensed
8.	Rockwell software bundle - 5 Licenses of 85 + Different industrial software	Licensed
9.	Versa Pro	Licensed
10.	Micro Product Design software intelligence Products	Licensed
11.	ESPRIT 11.2	Permanent
12.	Master CAM Version X4	Permanent
13.	Solidworks Educational Campus Licenses-2013-14	Campus license permanent

6. Electrical and Electronics Engineering

Sl. No.	Software	License
1.	Power Electronics Simulation Software PSIM 7.1	Licensed
2.	Mathematical /Matrix Simulation tool MATLAB 7.1 Release 14.0	Licensed
3.	MiPower Version 4.0 Computer Aided Power System Analysis Software Package	Licensed
4.	NI LAB VIEW SOFTWARE	Licensed
5.	DSPACE 1104	Licensed

7. Electronics and Communication Engineering

Sl. No.	Software	License
1.	Exata Network Emulator	Licensed
2.	Netsim Networking Simulator	Licensed
3.	MatLab5	Licensed
4.	Simu Link	Licensed
5.	Micm Sim Design Lab	Licensed
6.	FPGA advantage RENIOR	Licensed
7.	US FND FLI PC ILINX Foundation Serious	Licensed
8.	CHIPSCOPE ILA with Multilink cable system generator	Licensed
9.	XILINX Foundation ISE series Software	Licensed
10.	Synopsys Asia Pacific Front End University Bundle(Part No.3900-0) Synopsys Asia Pacific Back End University Bundle(Part No.3901-0)	Licensed

8. Chemical Engineering

Sl. No.	Software	License
1.	Aspen software	Licensed
2.	HTRI – X changer suite	Licensed
3.	g-PROMS simulation software	Licensed

9. Food Technology

Sl. No.	Software	License
1.	Statease Design Expert	Licensed

10. Management Studies

Sl. No.	Software	License
1.	CMIE PROWESS	Licensed
2.	TALLY	Licensed
3.	SPSS 12.0 v Base Module, Regression and Tables Module	Licensed
4.	TORA	Licensed

11. Library

Sl. No.	Software	License
1.	Nirmals pro 3.2.0 Software Library Management	Licensed

12. English

Sl. No.	Software	License
1.	Orell Digital language lab	Licensed

4.3.3 What are the institutional plans and strategies for deploying and upgrading the IT infrastructure and associated facilities?

- The institution updates IT infrastructure periodically to facilitate effective management of IT services.
- The institution is constantly upgrading both the software and hardware at par with the industry and academic standards.
- The IT infrastructure is upgraded year on year with major budget allocation.
- The Internet facility and Networking facility as of now available in the college can accommodate video conferencing.
- College has IT Service Management team. All the departments will submit their proposals to the system administrator. The system administrator consolidates the requirements and submits the proposal to purchase committee members. For the approved proposals, purchase and deployment will be carried out by the system administrator and the concerned department respectively.
- WiFi campus facility is available with 320 access points.

4.3.4 Give details on access to online teaching and learning resources and other knowledge, and information provided to the staff and students for quality teaching, learning and research.

On-line access to the teaching and learning materials provided to the students through various facilities established in the college as mentioned below:

- Every department is provided with computer centers as per AICTE norms with internet connection. Apart from this, campus wide wireless network with 350 access points is available to access E-resources
- Digital Library has been created in our College with objectives of promoting E-Learning Resources and providing opportunities for self-learning beyond regular curriculum and syllabus among our students through College Intranet and WiFi connectivity.

- The E-Learning Resources contain NPTEL Videos, NPTEL Web courses, E-Books, and other CFD resources. The online materials such as Webinars, videos and other knowledge providing facilities are provided to the staff and students for quality teaching, learning and research
- Apart from the above online Teaching Learning Resources, the teachers are trained by various online Courses conducted by IIT Kharagpur and IIT Mumbai. Our College acts as Remote Centre for both IIT's. Wi-Fi connectivity and high speed network connectivity enable faculty members to access e-resources from anywhere on campus for Teaching-Learning and research.
- Online learning programmes of MOOC like courseera.com can be accessed via the digital library facilities that are provided to all the students and staff members to improve the experience of teaching, learning and research.

4.3.5 Give details on the ICT enabled classrooms/learning spaces available within the College and how they are utilized for enhancing the quality of teaching and learning.

- Digital Classroom project features information, resources and professional development opportunities in understanding, planning and developing environments and experiences for students learning in digitally-rich contexts.
- The resources provide practical ideas for teachers to enhance learning through ICT, when planning exercises for students. Curriculum examples are supported with practical ideas for classroom management, including ideas for working and learning digitally, managing digital content and for developing digital citizenship.
- The teaching and learning with ICT placemats supports students to demonstrate practical ideas and teachers to implement in the classroom. Apart from enhanced teaching/learning environment with smart board, ICT enabled class rooms facilities are provided during special lectures and seminars to the students.
- The ICT enabled class rooms' facilities include a wireless interactive device, a document camera, multimedia projector and magnetic / ceramic white board.
- Each department has individual ICT enabled class room facilities. All classrooms are equipped with multimedia Projectors. Few labs and seminar rooms are equipped with smart boards along with multimedia Projectors and PA system. WiFi connectivity is available in all the academic areas.

4.3.6 How are the faculty facilitated to prepare computer aided Teaching-learning materials? What are the facilities available in the College or affiliating University for such initiatives?

- All the class rooms, are provided with a OHP.
- Most of the class rooms are equipped with multimedia projectors.
- All the department seminar halls are provided with multimedia projectors.
- The seminar halls are connected through campus wide fiber optic networks and entire campus is WiFi enabled.
- Most of faculty rooms are equipped with computer and internet connection; it becomes convenient for the faculty to prepare computer aided learning material.

4.3.7 How are the computers and their accessories maintained? (AMC, etc.)

- Computers available in the college are maintained by the 12 member strong system maintenance group. In addition to that, each department is provided with a system staff to maintain the systems available in the department.
- The departments have entered into contract for Annual Maintenance (AMC) for UPS.
- Symantec Endpoint protection 12 Antivirus is also procured and installed in all Servers, desktops and Laptops for the maintenance of computers in the college.
- TBI provides repair facilities for PCs and laptops.

4.3.8 Does the College avail of the National Knowledge Network connectivity directly or through the affiliating University? If so, what are the services availed of?

Yes.

The college is availing the national knowledge network connectivity through our library in which our college subscribes for

- IEEE e-Journals.
- All Society Transactions and Magazines.
- Elsevier journals.
- Posses the membership of American Information Research center, Chennai.
- INSDAG.
- ACM, Newyork.
- CIPET, TERI.
- Posses the membership of DELNET.
- IIT remote center.
- Distance education center of Indira Gandhi National Open University.

4.3.9 Provide details on the provision made in the annual budget for update deployment and maintenance of the computers in the College?

The entire IT infrastructure in the college is regularly updated, deployed and maintained. Every year, Budget proposal is submitted by each department to Principal. The proposal includes purchase of equipment/devices/instrument / computer systems / software /consumables and maintenance of those. This will be discussed in the HOD’s meeting and the management will sanction the budget to every department in the beginning of every financial year.

Since every department has its own computer center, the budget for purchasing and maintenance of computer systems/software and their up gradation will be met over from the department budget itself. The Annual budget for the above is given in Table 4.3.9 a & b.

Table 4.3.9 (a) Annual budget for deployment of the computers

Sl. No.	Academic Year	Annual budget for update and deployment of the computers	
		Sanctioned Amount (in Rs.)	Utilized Amount (in Rs.)
1.	2010-11	36.00	61.45
2.	2011-12	65.00	14.71
3.	2012-13	218.00	251.86
4.	2013-14	127.00	38.01

Table 4.3.8 (b) Annual budget for maintenance of the computers

Sl. No.	Academic Year	Annual budget for maintenance of the computers	
		Sanctioned Amount (in Rs.)	Utilized Amount (in Rs.)
1.	2010-11	8.00	4.28
2.	2011-12	9.00	4.12
3.	2012-13	18.00	12.40
4.	2013-14	9.00	10.19

4.4 Maintenance of Campus Facilities

4.4.1 Does the College have an Estate Office / designated officer for overseeing maintenance of buildings, class-rooms and laboratories? If yes, mention a few campus specific initiatives undertaken to improve the physical ambience.

Yes

The college have different departments / sections to take care of additional requirements and maintenance in different areas as follows.

Sl. No.	Name of the Department / Section	Nature of Work
1	Estate office & Civil maintenance	Maintenance of class rooms, Labs, Buildings and Campus
2	Electrical maintenance	Maintenance of all electrical work in the entire campus
3	Furniture maintenance	Purchase of new furniture maintenance of furniture
4	AC maintenance	Purchase of AC, Water cooler and defreezer and maintenance of equipments
5	Water and plumbing maintenance	Maintenance all water lines and carry out plumbing work in the campus
6	Horticulture	Entire green campus maintenance and development of more green area.
7	House keeping	Clean the entire campus, class rooms, labs and toilets

➤ Enhancement of Physical ambience

- The college has estate office to look after the development of campus facilities and their maintenance.
- Laying of tar roads connecting all the academic and hostel blocks.
- Concealed/underground system for electrical cables.
- Paver's blocks in the platforms for the pedestrians.
- Maintenance of green atmosphere in the campus.
- Rain water harvesting system.
- Waste water treatment facility for the entire campus.
- Vehicle parking system with rain and sun cover.
- Adequate manpower to maintain the cleanliness of the entire campus.
- All laboratories, class rooms, hostels, staff quarters and other student amenities are protected with earth leakage circuit breakers.
- Qualified technicians are employed, further trained to handle unforeseen situations like personal accidents, fire accidents and so on.
- Provision of exhaust fans, wherever required, to remove fumes and gases.

4.4.2 Does the College appoint staff for maintenance and repair? If not, how are the infrastructure facilities, services and equipment maintained? Give details.

Yes, College has appointed adequate number of staff for maintenance and repair of infrastructure facilities, services and equipment. These activities are carried out under the supervision of senior faculty members, supervisors and the required man power as listed below.

Sl. No.	Facility / Service	In-Charge	Supporting Staff-Head
1	Power Supply-EB, DG sets, Solar power	Electrical & Electronics Engineering	Electrical Maintenance Engineer
2	Water Supply, River water, Bore well	Civil Engineering	Plumbers
3	Reverse Osmosis(RO)	Chemical Engineering	Plant operators
4	Sewage water treatment	-	Landscape Manager
5	Transport services	-	Workshop superintendent
6	Hostel & Mess	Senior Deputy wardens	Senior Manager, Assistant wardens, Matrons
7	Dispensary	Residential Doctor	Nurse, attendant
8	Building, repair, maintenance	Project manager	Quantity surveyor, Assistant engineers
9	Furniture Maintenance	Associate Professor - Civil Engineering	Senior furniture assistants
10	AC maintenance	Mechanical Engineering	Technicians
11	Bank/ATM	Manager, Bank	Staff, Bank
12	Computer system and networking	Computer Science and Engineering	System manager, System administrator and Technicians.
13	Security service	Security In-charge	Security guards
14	Fire extinguisher	-	Electrical engineer

Criterion - V: Students Support and Progression



“Treat people as if they were, what they ought to be and you help them become what they are capable of becoming.”

- Johann Wolfgang Goethe

CRITERION – V: STUDENT SUPPORT AND PROGRESSION

EXECUTIVE SUMMARY

Mentoring support provided to the students of Kongu Engineering College include Career Guidance and Counseling through the conduct of training programmes in the areas of communication skills, personality development, leadership skill, soft skills and interpersonal relationship. Special coaching classes are conducted periodically to enhance their performance in the competitive exams, in the areas of numerical ability, arithmetical skills, verbal and non verbal reasoning, aptitude and attitude, language skills, programming skills etc. Students are also motivated and prepared to succeed the competitive examinations like GATE, TOEFL, IELTS, GRE and UPSC.

The college also provides avenues for overall development of the students through activities which involve professional bodies like IEEE, IETE, ISTE, CSI, IE (I), ASME, ICTACT, etc. An array of Cells and Clubs to cater to the varied interests of students function in the campus like English Proficiency, Foreign Language, Rotaract club, Young Indians, Creative Club, Yoga and Meditation, Aero modeling, Robotics Club, Cultural club, Citizen Consumer, Red Ribbon, Tamil Mandram, Energy and Environment club, Android development club, and Photography club.

Technology Business Incubator (TBI) and Entrepreneurship Management and Development cell (EMDC) with their synergized efforts imbibe the spirit of entrepreneurship in students. The Industry Institute Partnership cell (IIPC) focus on exposing the students to industry practices.

On campus accommodation is provided in the lush green college campus for about 4300 boy and girls in 9 hostels. To ferry the day-scholar students, the college operates 76 buses.

The college has been following some best practices to promote the latent talents of the students

- Paper / Project Presentation in reputed technical institutions in both India and abroad. (Travel concession provided). Students also participate in cultural events and competitions organized by televisions and radio.
- The college organizes an annual Open House Exhibition on science and technology which provides a platform for the students to exhibit their technical innovations.
- The students are provided with state-of-the-art sports facilities and encouraged to participate in various sports/games and cultural activities at different levels of competitions. The students have won many medals/awards in various Zonal/Inter-University/State/National level competitions.
- The college has NSS, NCC, Rotaract Club and Community Radio Service whose major activities promote social responsibility among students. The NSS every year conducts variety of activities like camp at various surrounding villages and Blood donation camp. The Rotaract Club conducts an annual fund raising event called SWARAM (Musical Event) for noble causes.

5.1 Student Mentoring and Support

5.1.1 Does the College have an independent system for student support and mentoring? If yes, what are its structural and functional characteristics?

Yes. Several cells are functioning in the college to cater to the mentoring and support services to students.

- A full-fledged Placement and Training (P&T) Cell exists in the institution. The P&T cell is headed by a senior placement officer, assisted by one more officer and secretarial staff. Two faculty members from each department works in tandem to coordinate the placement and training activities. Efforts are taken to conduct training programmes to the students in the areas of communication skills, personality development, leadership skill, soft skills and interpersonal relationship. Special coaching classes are conducted periodically to enhance their performance in the competitive exams, in the areas of numerical ability, arithmetical skills, verbal and non verbal reasoning, aptitude and attitude, language skills, programming skills etc.
- Another cell in the name “Women Development Cell (WDC)” is functioning in the college.
- To meet the needs of students who aspire for entrepreneurship, a cell **Entrepreneurship and Management Development Centre (EMDC)** is functioning from 1996. The AICTE in 2003 supported the cell with a grant of Rs. 7 lakh.

Apart from the major activities listed above, there are quite a number of student centric activities like:

- Student Associations in all the departments.
- Student Chapters of Professional bodies like IEEE, IETE, IE(I), ISTE, CSI, SAE, IICLE, ICT Academy etc.,
- NSS and NCC
- Student Counseling cell with Senior Professors as members
- Yoga and meditation club
- Photography Club
- Cultural Club
- Ravi Varma Creative Club
- Citizen Consumer Club
- Red Ribbon Club
- Aero Modeling Club
- English Proficiency Club
- Rotaract Club
- Robotics Club
- CII – Yi Yuva Kongu Engineering College Chapter
- Tamil Mandram
- Energy & Environment Conservation Club
- Android Application Development

Students are actively involved in the above associations/clubs/cells with necessary guidance from faculty advisors

5.1.2 What provisions exist for academic mentoring apart from class room work?

- Remedial measures are taken for weak students (Students who scored below 50 marks in module test) depending upon the need.
- At the end of term – end examination the result passing board recommends supplementary examination for the courses with pass percentage less than 80%. Under such circumstances remedial classes are conducted for the students who opt for supplementary examination.
- The Students who are admitted under lateral entry in the third semester (Direct Second Year) generally find it difficult to cope up with the engineering syllabus. Hence special classes are arranged for such students also.
- The college also has a unique facility namely, Technology Business Incubator (TBI) supported by DST/GoI for nurturing entrepreneurial skills and providing all facilities for converting innovative ideas into useful products.
- Open House Exhibition on Science and Technology, an annual event provides opportunity for the students to exhibit socially relevant projects developed by their innovative ideas.
- Value added courses cutting edge technologies are offered to the students to fill the gaps in the curriculum.
- Apart from the above activities, motivation and guidance to participate in various domain related events like paper presentation, project displays, and seminars workshops etc. are also provided to the students.

5.1.3 Does the College provide personal enhancement and development schemes for students? If yes, describe techniques employed e.g., career counseling, soft skill development, etc.

Every year the following types of programmes are conducted to enhance the personality development of the students:

Sl. No.	Programme Name
1.	Soft Skill Development
2.	Communication Skills Development
3.	Verbal ability Training & Logical Reasoning
4.	Aptitude Training & Shortcut Methods
5.	Introduction to GD, HR & Technical Interview
6.	GD Input
7.	Common placement Training Programme
8.	Training for competitive exams like GATE/GRE/CAT/UPSC/IBPS

- Slots for Students Personality Development, Career Counselling and Seminar classes are in-built in the time table.
- Various Programmes like technical, cultural programmes are organized at the department level as well as the Institute level with the active participation of students hone their organizational ability in addition to improving their personality.
- Yoga classes are conducted periodically in our yoga centre with the help of experts from outside.

- Additionally, each department has their own schedule for training the students for effective placement. The main objective of the departments is to prepare the students in such a way that either they get placed in reputed industry or take up higher education in India / abroad or become an Entrepreneur.
- Sharing of experience of the immediately passed out students with present final year students through get together meetings and technical association meetings is done on regular basis. Every department conducts value added courses regularly (during evening hours and holidays) to impart technical and soft skills in order to augment the content of syllabi.

5.1.4 Does the College publish its updated prospectus and handbook annually? If yes, what are the activities / information included / provided to students through these documents? Is there a provision for online access?

Yes. The institution publishes an Academic Calendar every year. The contents of the calendar include:

- Introduction about the college
- Programmes offered
- Student centric activities
- Extension activities
- Rules of conduct and discipline
- Hostel rules
- Names and contact numbers of all faculty
- Information about scholarships
- University ranks
- College bus and public transport information
- Composition of the Trust
- Central facilities
- IPR Policy
- Club and Cell activities
- Information about anti-ragging committee with phone numbers
- Dress code
- Hostel wardens
- Endowments and Awards
- Placement details
- Phone numbers of important services and other general information

Additionally, intranet and a manual system of disseminating urgent and important information through circulars keep the students and staff updated on information. The intranet has provision for creating forums to discuss on various topics like placement, Research and Development, Curricular and co-curricular activities and important communication from the Controller of Examinations.

The institution has an effective way of disseminating information through circulars which are displayed on Notice Boards located in several places like Administrative block, Dept, and Hostels. Moreover, the college and every department periodically publish news-letters containing glimpses of important events and other creative contribution of students and faculty. These news letters are available both in print and soft copies. A Regulation book is also available with each student in hard bound copy and the same is also available on the Intranet.

Online access for all the relevant information is available through the following college website:

- www.kongu.ac.in and www.kongu.edu

5.1.5 Specify the type and number of scholarships / freeships given to students (UG/PG/M.Phil/Ph.D./Diploma/others in tabular form) by the College Management during the last four years. Indicate whether the financial aid was available on time.

Type of scholarship		No. of Students Who received Scholarships from the Management			
		2013-14	2012-13	2011-12	2010-11
Academic Excellence (Top 5%)		301	282	260	246
AICTE-Fee Waiver Scheme		57	111	110	108
Sports Quota		37	41	33	24
KVITT- Kongu Vellalar Sangam		7	9	8	8
Staff's Children		18	18	25	28
KVITT free	Govt. Schools	50	25	1	1
	Kongu National Matriculation School	9	4	--	--
Total No. of Students		479	490	437	415
Total Amount in Rs.		2,03,90,065/-	1,29,40,250/-	1,01,96,750/-	1,05,84,250/-

In addition, students are also covered by group insurance through 'National Insurance Company Ltd.' under two different schemes: Accident policy and Student – Parent risk policy.

The aforesaid scholarships / freeships are given to the students every year in the month of March / April.

5.1.6 What percentage of students receives financial assistance from state government, central government and other national agencies? (e.g., Kishore Vaigyanik Protsahan Yojana (KVPY), SN Bose Fellow, etc.)

Sl. No.	Name of the Scholarship	No. of students received the scholarship			
		2013-14	2012-13	2011-12	2010-11
1	BC/MBC Scholarship	2362	1658	1748	1319
2	SC/ST Scholarship	484	435	362	277
3	SC/ST Special Loan	213	131	172	113
4	CM Award	32	37	45	35
5	Merit-cum-Means Scholarship	0	20	35	30
6	Farmer Scholarship	0	0	0	41
7	Anna Award Scholarship	5	6	5	6
8	Municipal Corporation/ Municipal School Students Education Scholarship	1	2	2	2
9	Central Sector Scheme Scholarship	0	0	31	17
10	Tamil Nadu Educational Trust Scholarship	7	6	4	6

Sl. No.	Name of the Scholarship	No. of students received the scholarship			
		2013-14	2012-13	2011-12	2010-11
11	Financial Assistance for Education to the Children Scholarship	0	0	0	1
12	Oil and Natural Gas Corporation Ltd	1	1	1	1
13	Other Private Trust Scholarship	47	40	25	21
Total		3152	2336	2430	1869
Percentage		42%	32%	36%	29%

5.1.7 Does the College have an International Student Cell to cater to the needs of foreign students? If so, what measures have been taken to attract foreign students?

No.

5.1.8 What types of support services are available for

- **Overseas students:** Nil

- **Physically challenged / differently-abled students**

For differently-abled students, ramps and elevators have been provided in the institution. Vehicles are provided for transporting in the campus. Hostel accommodation is provided in the ground floor and specially designed toilets are available both in Hostel and academic blocks. Duration of examinations is extended for students depending on their disability. Awards are given every year to encourage physically challenged students. The differently-abled students who are doing well are awarded every year for their outstanding performance in curricular and co-curricular activities. Separate endowments have been created by the management for these awards.

- **SC/ST, OBC and economically weaker sections**

A separate book bank facility in the central library is made available to SC/ST students. Various scholarships from the state and central governments are provided. In addition, special training programmes have been conducted by the college for the past two years in association with TAHDCO and ICT Academy with a view to facilitating their placement. An exclusive SC / ST cell is functioning to take care of these categories of students.

- **Students to participate in various competitions/conferences in India and abroad**

Students are mentored by motivation, guidance and training by experienced faculty to prepare them to participate in various competitions like paper presentations, quiz competitions, project contests etc., in India and abroad. Students who participate and win prizes in conferences organized by reputed institutions in India and abroad are given complete travel and accommodation charges and registration fee is also re-imbursed.

- **Health centre, health insurance etc.**

- a) On campus medical health care is provided. A full time doctor is available in the campus to provide medical attention to the students, staff, residents and visitors. Two ambulances are also available round the clock for emergency purposes. Whenever necessary the students are taken to outside hospitals with escort for treatment.
- b) A group insurance scheme is provided for students through 'National Insurance Company Ltd.' under two different schemes.
 - i. Accident policy – It provides an amount of Rs.1,00,000/- in case of death and a maximum of Rs. 2,00,000/- for the medical expenses
 - ii. Student – Parent risk policy – It provides support for the tuition fees for the student in case of the death of the parent (Rs. 1,00,000/- per year till the completion of the programme).

- **Skill development (spoken English, computer literacy, etc.,)**

Skill Development in Spoken English and Computer Literacy is provided through special training programmes and value added courses, in addition to regular courses built into the curriculum. English Proficiency Club with a professor as in-charge supported by a faculty and students as members helps the students who have difficulty in spoken English. With respect to computer literacy all programmes have basic computer courses in the curriculum itself. It is also planned to conduct courses in Hindi and foreign languages like German and French.

Development of the skills in various domains is also achieved by motivating the students to participate actively in the clubs mentioned in Clause 5.1.1

- **Performance enhancement for slow learners / students who are at risk of failure and dropouts**

Slow learners and lateral entry students are given extra care in their curricular activities. The class advisors identify such students and remedial classes are arranged as needed to avoid failures and dropouts. When a student approaches the department with the idea of quitting a programme, he/she is counseled to find any specific problems and remedial measures are taken.

- **Exposure of students to other institutions of higher learning/ corporate / business houses, etc.**

- A cell by the name Higher Education and Competitive Examination Cell is functioning with an objective of exposing the students to opportunities for going in for higher education in India / abroad. This is done by means of seminars delivered by experts from different institutions in India/ abroad. The cell also conducts training programmes for various competitive exams like GATE/GRE/CAT/UPSC etc.,
- Students undertake Industrial Visit (IV) to leading corporate and public sector companies to know the technical processes involved.
- During the vacation periods the second year and third year students undergo in-plant training in leading corporate and public sectors companies for a couple of weeks for gaining practical knowledge in the respective domains.
- Students are encouraged to go for training and project internships in reputed industries.
- Student are motivated to do their project in reputed industries

- Interaction Session with industry personnel during department association programmes, workshops, seminars, Value Added Courses etc.,
- Students are motivated and guided to participate in competitions organized by Institutions of higher learning like IITs, IISc, IIMs, NITs etc.,
- Students are given all facilities to work with entrepreneurs in the TBI@KEC for developing innovative products in cutting edge technology areas.

- **Publication of student magazines**

The college and every department periodically publish news-letters which contain creative works of students and faculty. These news-letters also provide information about the activities in the respective departments. In addition to the department newsletters there are magazines and news- bulletin published at college level.

5.1.9 Does the College provide guidance / coaching classes for Civil Services, Defense Services, NET/SLET and any other competitive examinations? If yes, what is the outcome?

Yes, The College has a Higher Education and Competitive Examination Cell whose responsibility is to provide training in competitive examinations like GATE, GRE, GMAT, etc., and examinations for Administrative service. The institution also provides facilities for BEC courses. The students have cleared many such competitive examinations as shown in clause no. 5.2.4.

5.1.10 Mention the policies of the College for enhancing student participation in sports and extracurricular activities through strategies such as Additional academic support, flexibility in examinations

The students who participate in inter-university/state-level/national level/international level tournaments are given flexibility in writing continuous assessment test (Module Test) and end-semester examinations.

Special dietary requirements, sports uniform and materials

Special dietary requirements are provided in the college mess and canteens to students involved in sports. Uniforms are given free of cost for the University team members representing various sports teams

Any other

Tuition fee and hostel fee are waived for the students, who are admitted through sports quota. Further, even if the students are not admitted through sports quota, they enjoy the fee waiver on the basis of their performance in sport activities. The fee paid by them is refunded by the Institution.

No. of Students who were given Concession in Tuition Fee			
2013-2014	2012-13	2011-12	2010-11
37	41	33	24

5.1.11 Does the College have an institutionalized mechanism for placement of its students? What services are provided to help students identify job opportunities, prepare themselves for interview, and develop entrepreneurship skills?

Yes. A Placement and Training Cell exists in the institution. Every year P&T cell identifies around 200 potentially good companies which include existing employers. New companies are identified based on criteria like nature of their

business, turnover and employee strength. In the contact phase, the aforesaid companies are contacted over telephone and discussions are held. In the closing phase that occurs one month before the start of campus recruitment, the companies are again contacted and lined-up for campus recruitment. Apart from the P&T cell, every department also identifies relevant companies and help students for placement and project work.

Training programmes are conducted for the students in the areas of communication skills, personality development, leadership skill, soft skills and interpersonal relationship. Special coaching classes are conducted periodically to enhance their performance in the competitive exams, in the areas of numerical ability, arithmetical skills, verbal and non verbal reasoning, aptitude and attitude, language skills.

The college has established a Technology Business Incubator (TBI) in its campus sponsored by DST with a project outlay of Rs. 4.1 crores. The motto of the TBI is “Concept to Commercialization”. Its prime objective is to nurture start-ups in the electronics and ICT related technologies. The TBI provides assistance in business planning and development, mentoring, package of concepts, etc. The students and faculty of KEC are directly involved in the product development resulting in a win-win situation. Value added hands-on training, project facilitation, workshops, etc. are organized for students and others periodically. The TBI also provides seed fund support to the deserving incubatees upto Rs.50 lakh per project as a soft loan. For students it is given as grant. Entrepreneurship Awareness Camp for students and Faculty Development Programme for faculty conducted periodically in TBI in association with Entrepreneurship and management development centre (EMDC) helps in propagating entrepreneurial culture among them.

EMDC is also functioning in the institution with the objectives of promoting entrepreneurial culture among the students by organizing various events. These include interaction sessions with successful entrepreneurs, guidance for participation in events like IDEA Spark, My Idea-My Business, EWeek, TiEcon, etc.

5.1.12. Give the number of students selected during campus interviews by different employers (list the employers and the number of companies who visited the campus annually for the last four years).

The following table shows the brief history of placement record in the past four years.

Academic Year	No. of Students Placed	No. of Major Companies Visited
2010 – 11	1086	83
2011 – 12	1024	80
2012 – 13	746	62
2013 – 14	640	73

List of Companies Visited:

2013-14	<p>□ Accenture □ Akzo Nobel □ Aon Hewitt □ Arizon Solution □ Ascendant Technology □ Aseptic Fruit Products □ Asian Peroxide □ Aspire Systems □ Athena Health □ Calibor Point Business Solutions □ City Union Bank Ltd □ Cognizant Technology Solutions □ eGrove Systems □ Elforge □ Focus Academy & Career Management □ Harvest Futures Consultants India (P) Ltd □ Hcl Infosystems Limited □ HCL Technologies Ltd □ HDFC Standard Life □ International Agricultural Processing (P) Ltd., □ IBM □ India Infoline Ltd □ INDFRAG □ Intimate Fashions (I) Pvt. Ltd. □ Infosys □ ITC Ltd □ ITC Ltd Agri Business Division □ Jaro Education □ L & T Infotech □ L & T IDPL □ Maagirta Exports Ltd □ Manali Petro Chemicals □ Marico Ltd □ Maveric Systems □ Meghraj Food Processing India (P) Ltd. □ Mel Systems & Services □ Melss Automation □ Mind Tree □ Minimill Technologies Services International (P) Ltd □ Naga Limited □ Newgen Software Technologies Ltd □ Noni Biotech (P) Ltd □ Parle Agro □ Prico □ Ramalingam Construction Company (P) Ltd □ Renaatus Projects Pvt Ltd □ Rishi Associates □ Robert Bosch □ Rydon Group □ Saiper India Projects □ Samsung R&D Institute India □ Sans Paril IT Services (P) Ltd □ Savorit Ltd □ Shriram Transport Finance Company Ltd □ Sim Info Systems □ Sri Pathy Associates □ Srinivasan Associates (P) Ltd □ Star Global Energies □ Strategi Automation Solutions (P) Ltd □ Stepstone Promoters (P) Ltd □ Subex Systems □ Sundaram Fasteners Limited □ Suntec Business Solutions □ Sutherland Global Services □ TATA Communications □ Taj Hotels Resorts And Palaces □ Tarnea Tehnology Solutions □ TCS □ Tech Mahindra □ Technip □ Technotree □ Texmo Industrie □ Thorogood □ Titan Industries □ Trinethra □ Turbo Energy □ TV Motor IT □ Urc Constructions □ Valued Epistemics (P) Ltd (GREdge) □ Va Tech Webag □ Vembu Technologies (P) Ltd □ Virtusa Consulting Services (P) Ltd □ Wipro □ Wipro Wase & Wista/VLSI □ YSI Automotive (P) Ltd □ Zoho Corporation.</p>
2012-13	<p>□ Accenture □ Aditi Technologies □ Altair Innovation Intelligence □ Ambalal Shares & Stocks (P) Ltd □ Aon Hewitt □ Ascendant Technology □ Aseptic Fruit Products (I) Pvt. Ltd., □ Asian Peroxide □ Aspire Systems □ Athena Health □ AV Properties (P) Ltd □ Bas Automation □ Cavinkare (P) Ltd □ CCCL □ Covai Property Center (India) Pvt Ltd □ Cognizant Technology Solutions □ Dell Services □ Delphi TVS □ Dev Bother □ Emerson Process Management □ Enzen Global Solutions Ltd □ Hakuna Matata Solutions □ I Gate □ International Agricultural Processing (P) Ltd. □ International Centre for Technological Innovations □ Intergraph □ ITC Ltd □ Karnataka Microelectronics Design Centre (P) Ltd (KarMic) □ Kothari Petro Chemical □ Lucas TVS □ Mahindra Satyam □ Maveric Systems □ Mind Tree □ Minimill Technologies Services International (P) Ltd □ MPF Advisory (India) Pvt Ltd □ NTT Data Global Delivery Services Ltd □ Parle Agro □ Proscap LLC</p>

2012-13	<p>□ Rangaswamy & Associates Inc □ Renold Chair India (P) Ltd □ Rishi Associates □ Robert Bosch □ Saipem India Projects □ Samvit Technologies □ Sanmar Engineering □ Sap Labs □ Seshasayee Paper And Boards Ltd. □ Shoppers Stop Ltd □ Srichem □ S&T Engineers (P) Ltd □ Strategi Automation Solutions (P) Ltd □ TATA Communications □ Taj Hotels Resorts And Palaces □ TCS □ Tech Mahindra □ Technip □ Thorogood □ Titan Industries □ Tvs Logistic □ TVS Motor IT □ Tvs Motor Company □ URC Constructions □ Vagus Technologies □ Vedanta □ Wind Care India □ Wipro □ Wipro Wase & Wista / VLSI</p>
2011-12	<p>□ Accenture □ Aditya Trading □ Aditi Technologies □ Akzo Nobel □ Apna Technologies □ Aseptic Fruit Products (I) Pvt. Ltd. □ Asiar Peroxide □ Avalon Technologies □ Base Automation □ Bharthi Axa □ Britannia □ Computer Science Corporation (CSC) □ CCCL □ CSS Corp (P) Ltd □ Dalmia Cement □ Damodar Foods □ Dev Brothers □ eGrove Systems □ Embedur □ Enmas □ Foxconn □ HCL Technologies Ltd □ HDFC Standard Life □ HITECH Air Power (P) Ltd □ International Agricultural Processing (P) Ltd., □ IBM □ INDFRAG □ Intimate Fashions (I) Pvt. Ltd. □ Infosys- BPO □ ITC Ltd- Agri Business Division □ JSW □ Karvy Stock Broking □ Keane India Ltd □ Kerla News Print □ Kone Elevators □ Kothari Petro Chemical □ L&T IDPL □ Lakshmi Vilas Bank □ Leadage □ Maa Fruits □ Mangalore Chemicals & Fertilizer □ Manali Petro Chemicals □ Mass Flow Systems □ Meghraj Food Processing India (P) Ltd., □ Mel Systems & Services □ Naga Limited □ NTT Data Global Delivery Services Ltd □ Parle Agro □ Patni □ Pricol □ Ramalingam Construction Company (P) Ltd □ Rane □ Rangaswamy & Associates Inc □ Rishi Associates □ Rydon Group □ Saipem India Projects □ Samruddhi Cement □ Savorit Ltd □ Scop International (P) Ltd □ Secon (P) Ltd □ Seshasayee Paper And Boards Ltd., □ SGR Foods (P) Ltd □ Shriram Transport Finance Company Ltd □ Slash Support □ SPB □ Stepstone Promoters (P) Ltd □ Suntec Business Solutions □ TATA Communications □ TCS □ Teja Machinery □ Temenos □ Tetcos □ Trinethra □ TVS Motor IT □ TVS Motor Company □ TVSNET Technologies □ Ultratech Cement Ltd □ Vagus Technologies □ Virtua Consulting Services (P) Ltd □ Vs Homes Health (P) Ltd □ Wipro Wase & Wista / VLSI □ YSI Automotive (P) Ltd □ Zoho Corporation.</p>
2010-11	<p>□ Accenture □ Aditya Trading □ Aditi Technologies □ Alap Integrated Project □ Altair Innovation Intelligence □ Apna Technologies □ Arizon Solutions (P) Ltd □ Aseptic Fruit Products (I) Pvt. Ltd. □ AV Properties (P) Ltd. □ Beroe Inc. □ Bgr Energy Systems □ Bharthi Axa □ Birla Soft □ Birla Sunlife Insurance</p>

2010-11	<input type="checkbox"/> Britannia <input type="checkbox"/> Calibor Point Business Solutions <input type="checkbox"/> Cater Pilla <input type="checkbox"/> Chlorid Alloys <input type="checkbox"/> City Union Bank Ltd <input type="checkbox"/> CCCL <input type="checkbox"/> Covai Propert Center (India) Pvt Ltd <input type="checkbox"/> Cognizant Technology Solutions <input type="checkbox"/> Dalmia Cement <input type="checkbox"/> Damodar Foods <input type="checkbox"/> Delphi TVS <input type="checkbox"/> Dev Brother <input type="checkbox"/> Dharar Sugars <input type="checkbox"/> Dhyan Infotech (P) Ltd <input type="checkbox"/> Emerson Process Management <input type="checkbox"/> Excelacom <input type="checkbox"/> Geoji Bnp <input type="checkbox"/> Geometric <input type="checkbox"/> Hakuna Matata Solutions <input type="checkbox"/> Hexaware Technologies <input type="checkbox"/> Hitech Air Power (P) Ltd <input type="checkbox"/> Hoctie <input type="checkbox"/> HP <input type="checkbox"/> IGate <input type="checkbox"/> InternationalAgricultural Processing (P) Ltd., <input type="checkbox"/> IBM <input type="checkbox"/> Infosys- BPO <input type="checkbox"/> International Centre for Technological Innovations <input type="checkbox"/> ITC Ltd – Agri Business Division <input type="checkbox"/> JSW <input type="checkbox"/> Kalis Taste Makerrs <input type="checkbox"/> Karvy Stock Broking <input type="checkbox"/> Kaynes Technology India (P) Ltd. <input type="checkbox"/> Le Poles Outsourcing (P) Ltd. <input type="checkbox"/> Maa Fruits <input type="checkbox"/> Mangalore Chemicals & Fertilizer <input type="checkbox"/> Marico Ltd. <input type="checkbox"/> Melss Automation <input type="checkbox"/> Mind Tree <input type="checkbox"/> Musigma <input type="checkbox"/> Oracle Financial Services <input type="checkbox"/> Pago Kitchens & Baths <input type="checkbox"/> Precision Equipments <input type="checkbox"/> Rajiv Gandhi Polytechnic College <input type="checkbox"/> Rydon Group <input type="checkbox"/> Samruddhi Cement <input type="checkbox"/> Samsung R&D Institute India <input type="checkbox"/> Savorit Ltd <input type="checkbox"/> Scope International (P) Ltd. <input type="checkbox"/> Seshasayee Paper And Boards Ltd. <input type="checkbox"/> Shoppers Stop Ltd. <input type="checkbox"/> SPB <input type="checkbox"/> SPI Infrastructure (P) Ltd. <input type="checkbox"/> Srichem <input type="checkbox"/> SRC Projects (P) Ltd. <input type="checkbox"/> Sri Pathy Associates <input type="checkbox"/> Stepstone Promoters (P) Ltd. <input type="checkbox"/> Sundaram Fasteners Ltd. <input type="checkbox"/> Suntec Business Solutions <input type="checkbox"/> TATA Communications <input type="checkbox"/> Tech Mahindra <input type="checkbox"/> Technotree <input type="checkbox"/> Temenos <input type="checkbox"/> Teradata Corporations <input type="checkbox"/> Trinethra <input type="checkbox"/> TVSNET Technologies <input type="checkbox"/> hicon <input type="checkbox"/> Vedanta <input type="checkbox"/> Veelsons <input type="checkbox"/> Vinu Foods <input type="checkbox"/> Vs Homes Health (P) Ltd. <input type="checkbox"/> Wipro Wase & Wista VLSI <input type="checkbox"/> YSI Automotive (P) Ltd.
---------	---

5.1.13 Does the College have a registered Alumni association? If yes, what are its activities and contributions to the development of the College?

The college has an Alumni association which is very active in bridging the passed out students with the college activities. The major activities of the alumni association are as follows:

- Every year the out-going batch of students is inducted into the alumni association.
- The association conducts Decade Meet every year wherein the students belonging to the batch that completes 10 years meet.
- In 2010, a grand Silver Jubilee meet was conducted. This meet received very good response from the alumni.
- In 2013 and 2014, Silver Jubilee meets for the batch of graduating students (1988 and 1989) respectively were held with very good turnout of alumni.
- The USA Chapter of the alumni association was inaugurated by our Principal in June 2013.

The contributions from the alumni in the academic activities are listed below.

- Providing financial assistance to economically weak students
- Active Members for Board of Studies (BoS) in all Departments
- Guidance in improving HR and Technical skills, Group Discussion, etc., of the students.
- Assistance in Higher Education and giving Technical Guest Lectures

Presently, alumni chapters are functioning in Chennai, Coimbatore, Bangalore, Hyderabad and USA.

For the benefit of alumni, the institution has built an alumni guest house with an area of 14,000 sq. ft with all amenities.

5.1.14 Does the College have a student grievance redressal cell? Give details of the nature of grievances reported and how they were redressed.

Yes. A grievance redressal cell is functioning in the campus. Grievances are received through e-mail, suggestion box, and personal contact. The problems are sorted out through the authorities concerned.

- Class committee meetings are organized for each class with student representatives, HOD and faculty representatives. The meeting is conducted three times a semester
- Suggestion box is available in each department. Actions on the suggestions given by the students are initiated by the respective HOD.
- Apart from the above, a separate hour for career counseling is allotted in the time table itself. A faculty member is assigned for each 22 students.

In addition to the above, each department has nominated two senior faculty members (one male and one female) as Student counselors to take care of the students problems at department level.

Moreover, the student council also serves as a grievance redressal forum. The council is formed with student representatives from each branch along with the Principal to address the issues faced by the students. The prime objective of the council is to initiate steps to act on valid suggestions to address the grievances of the students. The Principal is the chairman of the council, the Dean (Curriculum Development and Student Affairs) is the Member Secretary. Members include a male and a female student from each department and three male and three female students from the first year BE / BTech programmes. In addition, there are Student council members for each hostel.

5.1.15 Does the College have a cell and mechanism to resolve issues of sexual harassment?

Yes. The College has Women Development Cell to discuss the gender related issues at College level. The College has appointed a Security Officer to mitigate such issues in the campus. Hence, no incidence has been reported.

5.1.16 Is there an anti-ragging committee? How many instances (if any) have been reported during the last four years and what action has been taken on these?

Yes. An anti-ragging committee is functioning in the college with deans and senior professors as members. No incidents of ragging reported so far.

5.1.17 How does the College elicit the cooperation from all stakeholders to ensure overall development of the students considering the curricular and co curricular activities, research, community orientation, etc. ?

The following are the major stakeholders who participate in the overall development of the students.

• **Institution**

The institution provides necessary platform and facilities to students for enhancing their curricular and co - curricular activities, research, community orientation, etc.

- Travel concession is provided for students who win prizes in Paper / Project Presentation in reputed technical institutions in both India and abroad. Students are also encouraged to participate in non technical events and competitions organized by televisions and radio.
- Some of the best models of students are displayed in the technical exhibitions conducted by the industrial/Entrepreneurial association in the area. Best models fabricated by students in Science and Technology Exhibitions are identified and our college helps them to secure IPR with the expenses borne by the college.
- The central library of the college subscribes both online and printed national / International Journals, Magazines and monographs. The library is kept open till 10.00 PM so that student can access the facility freely and enhance their knowledge which motivates them in their research career.
- Various e-Learning Resources like NPTEL Videos, NPTEL Web courses, e-Books, and other CFD resources are also made available for students.
- The college has NSS, NCC, Rotaract Club and Community Radio Service whose major activities promote social responsibility among students. The NSS every year conducts variety of activities like camp at various surrounding villages and Blood donation camp. The Rotract Club conducts an annual event called SWARAM (Musical Event) and the income generated is donated for noble causes. Apart from the institute's contribution, the students voluntarily in groups/individually support orphanages/old-age homes financially.
- The institution has well qualified, dedicated and committed faculty and technical staff who cater to the curricular needs of students.

• **Parents**

Each department conducts parent - teacher meet once a semester. The agenda of the meeting is to discuss about the welfare of the student in terms of the **curricular and co – curricular activities**. For example, Parents felt a need for coaching classes for competitive exams like GATE, IAS, etc.

• **Employers**

The Placement and Training Cell collects and consolidates the feedback from the employers and submit to the department. Based on the **feedback** the department concerned takes remedial measures for improvement.

5.1.18 What special schemes/mechanisms are in place to motivate students for participation in extracurricular activities such as sports, cultural events, etc?

Cultural Activities are organized in the institution through various clubs and associations in order to encourage the music and dramatic excellence of the budding engineers.

- Realizing the enormous talents of the students, the Institution is organizing an exclusive cultural extravaganza – ENTHUSIA which brings out the bottled-up talents of the students in various fields like Music, Dance, Skit, Mimicry, Fashion show, Photography, Cinematography, Art and Craft, etc. Apart from that cultural activities are organized during the College and Hostel day Celebrations as well.
- Students are motivated to participate in the various sports events outside also. They are given special permission for this purpose and the periodical module tests falling during that time are repeated for them.
- Tuition fee and hostel fee are waived for the students who are admitted through sports quota. Further, even if the students are not admitted through sports quota they enjoy the fee waiver on the basis of their performance in sport activities. The fee paid them is refunded by the Institution.
- Another cultural event by the name SWARAM organized by the KEC Rotaract Club with the objective of mobilizing funds for helping the poor, differently enabled students in schools enhances organizing skills of the students.
- There are a number of clubs and cells functioning in the college (vide 5.1.1 above) to encourage the students in various extra curricular activities.

5.1.19 How does the College ensure participation of women in ‘intra’ and ‘inter’ institutional sports competitions and cultural activities? Provide details of sports and cultural activities in which such efforts were made?

The Physical Education department has a lady physical director to motivate the women students in sports. Two lady faculty members are in-charge of the cultural activities and they motivate the girl students and ensure their participation in good numbers. The ladies hostel is equipped with a modern gym to help the students to maintain a good physique. The female students of the college participate in all cultural and sports activities on par with male students. Details in annexure-5 (will be shown to peer tem during visit)

5.2 Student Progression

5.2.1 Provide details of programme-wise success rate of the College for the last four years. How does the College compare itself with the performance of other autonomous Colleges / universities (if available)

Sl. No.	Programme	Branch	Pass Percentage			
			2010-11	2011-12	2012-13	2013-14
1	B.E./B.Tech.	Civil Engineering	96.15	91.54	93.18	88.81
2		Mechanical Engineering	95.45	94.62	94.29	92.91
3		Mechatronics Engineering	98.46	93.65	96.21	91.1
4		Electronics and Communication Engineering	94.66	96.24	94.81	84.03
5		Electrical and Electronics Engineering	98.44	94.62	96.09	92.62
6		Electronics and Instrumentation Engineering	95.38	99.21	91.97	89.66
7		Computer Science and Engineering	98.48	92.74	92.31	90.34

Sl. No.	Programme	Branch	Pass Percentage			
			2010-11	2011-12	2012-13	2013-14
8	B.E./B.Tech.	Chemical Engineering	100	100	82.86	91.89
9		Information Technology	96.94	78.03	94.96	88.74
10		Food Technology	88.37	83.33	67.92	76.19
11	M.E./M.Tech.	Construction Engineering and Management	100	100	100	93.75
12		Construction Engineering and Management (PT)		100		
13		Structural Engineering				100
14		Engineering Design	100	96	100	96
15		Engineering Design (PT)	100			
16		CAD / CAM	100	100	93.75	100
17	M.E./M.Tech.	CAD / CAM (PT)	100			100
18		Mechatronics Engineering	100	100	77.78	93.33
19		Mechatronics Engineering (PT)	100		100	
20		VLSI Design	94.12	100	94.44	100
21		VLSI Design (PT)	100			100
22		Communication Systems			100	89.47
23		Embedded Systems				94.44
24		Applied Electronics	100	91.67	96	100
25		Power Electronics and Drives			94.44	100
26		Control and Instrumentation Engineering		100	94.44	100
27		Computer Science and Engineering	100	91.67	100	100
28		Computer Science and Engineering (PT)	100	100	100	
29		Computer and Communication Engineering		100	94.12	100
30		Chemical Engineering	100	90.91	100	91.67
31	Chemical Engineering (PT)	100				
32	B.Sc.	Computer Technology	89.91	85.71	85.25	87.72
33		Information Technology	93.97	89.83	86.44	73.33
34		Software Engineering	86.24	82.98	88.14	84.48
35	M.Sc.	Computer Technology	93.62	94.64	81.63	94.12
36		Information Technology	94.74	88.14	84.91	90.91

Sl. No.	Programme	Branch	Pass Percentage			
			2010-11	2011-12	2012-13	2013-14
37	M.Sc.	Software Engineering (5 Years)		89.66	85.45	
38	MBA	Master of Business Administration	92.86	86.09	80	87.29
39	MCA	Master of Computer Applications	99.1	92.52	83.04	87.18

5.2.2 Provide the percentage of students progressing to higher education or employment (for the last four batches) highlight the observed trends.

Student progression in %	2013-14	2012-13	2011-12	2010-11
UG to PG	6.17	9.05	9.18	9.18
PG to M.Phil.	--	1.64	0.06	1.33
PG to Ph.D.	--	1.44	2.22	2.90
Employed				
• Campus selection	50.5	60.04	63.77	57.2
• Other than campus recruitment	36	30	27	33

5.2.3 What is the Programme-wise completion rate/dropout rate within the time span as stipulated by the College/University?

Passed out Batches	Degree	Total Students on Roll	Completion Nos. (%)	Drop - out Nos. (%)
2013-14	UG	1532	1356 (89%)	12 (0.78%)
	PG	498	461 (93%)	19 (3.82%)
2012-13	UG	1532	1392 (91%)	9 (0.59%)
	PG	451	400 (89%)	7 (1.55%)
2011-12	UG	1484	1360 (92%)	13 (0.88%)
	PG	417	382 (92%)	8 (1.92%)
2010-11	UG	1405	1333 (95%)	9 (0.64%)
	PG	381	371 (97%)	10 (2.62%)

5.2.4 What is the number and percentage of students who appeared/qualified in examinations like UGC-CSIR-NET, UGC- NET, SLET, ATE / CAT / GRE / TOFEL / GMAT / Central / State services, Defense, Civil Services, etc.

A separate cell by the name Higher Education and Competitive Examinations cell is functioning to support students who wish to pursue higher studies or write various competitive examinations. The details are furnished below:

Year	Exams	No. of students completed the Programme	No. of students appeared	% of students appeared	No. of students Qualified	% of students Qualified
2013-14	UGC-CSIR-NET,	1313	--		--	
	UGC-NET,		--		--	
	SLET,		--		--	
	ATE / CAT / GRE / TOFEL / GMAT / Central / State services,		544	41.4%	98	18.01%
	Defense,		--		--	
	Civil Services, etc.		--		--	
2012-13	UGC-CSIR-NET,	1314	--		--	
	UGC-NET,		--		--	
	SLET,		--		--	
	ATE / CAT / GRE / TOFEL / GMAT / Central / State services,		469	35.6%	72	15.35%
	Defense,		--		--	
	Civil Services, etc.		27		1	3.7%
2011-12	UGC-CSIR-NET,	1245	--		--	
	UGC-NET,		--		--	
	SLET,		--		--	
	ATE / CAT / GRE / TOFEL / GMAT / Central / State services,		468	37.6%	111	23.71%
	Defense,		--		--	
	Civil Services, etc.		--		--	
2010-11	UGC-CSIR-NET,	1165	--		--	
	UGC-NET,		--		--	
	SLET,		--		--	
	ATE / CAT / GRE / TOFEL / GMAT / Central / State services,		277	23.8%	61	22.02%
	Defense,		--		--	
	Civil Services, etc.		2		1	50%

5.2.5 Provide details regarding the number of Ph.D/D.Sc./D.Litt. theses submitted, accepted, resubmitted and rejected in the last four years.

The following table shows the number of theses that have been Accepted for the past four years

	No. of Thesis Submitted	No. of Thesis Accepted	No. of Thesis Re-submitted	Degree Awarded
2013 –14	24	22	2	24
2012 – 13	23	21	2	23
2011 – 12	18	18	0	18
2010 – 11	15	14	1	15

5.3 Student Participation and Activities

5.3.1 List the range of sports and games, cultural and extracurricular activities available to students. Provide details of participation and program calendar.

Students are motivated by the Department of Physical Education to take part in sports and games activities like Volleyball Basket Ball, Ball Badminton, Badminton, Table Tennis, Athletics and Chess etc. Kabbadi, Hockey, Football, Cricket, Kho-Kho and Hand ball are offered exclusively for Men Students. Our Hockey and Basket ball teams have represented University level Competitions. During the first years, slots are provided in Time Table for Games and Sports. An inter-collegiate meet KONGU TROPHY is conducted every year by the Physical Education Department.

Students are also motivated to take part in NCC and NSS activities. The cadets are actively involved in the march past activities during the Independence Day, Republic day Celebrations. They also actively take part in escort duties, crowd control duties during the Annual day Celebrations and other functions conducted in the college. The college organizes NSS camp every year in a nearby village and offer services during the camp period. The NSS students are involved in such activities.

Co-curricular and extra- curricular activities activities have a positive impact on students' emotional, intellectual, social, and inter-personal development. Taking part in these out-of-the-classroom activities helps students to understand the importance of critical thinking skills, time management, and academic and intellectual competence. Hence, the Institution provides various platforms for the students to take part in co-curricular activities and extra-curricular activities. It also encourages the participation of its students in such activities by organizing Seminars and Conferences, Symposia, Sports and Cultural competitions.

The institution also encourages the students through various clubs and associations in order to encourage the music, dramatic and various other innate talents of the budding engineers. Realizing the enormous talents of the students, the Institution is organizing an exclusive cultural extravaganza – ENTHUSIA which brings out the bottled-up talents of the students in various fields like Music, Dance, Skit, Mimicry, Fashion show, Photography, Cinematography, Art and Craft, etc. Apart from this cultural activities are organized during the College and Hostel day Celebrations as well.

The Institution has the following cells, clubs and associations which are coordinated by student volunteers along with the faculty to encourage the students to take part in co-curricular activities and extra-curricular activities:

- National Service Scheme (NSS)
- National Cadet Corps (NCC)
- Entrepreneur Development Cell
- Kongu FM Community Radio Service (90.4 MHz)
- Women Development Cell
- Higher Education and Competitive Examinations Cell
- Ravivarma Creative Club
- Rotaract Club
- English Proficiency Club
- Cultural Club

- Chapters of various professional bodies
- CII, Yi – Young Indian

Infrastructural facilities like in-door stadium, air conditioned convention center with a capacity of 4500 and yoga and meditations halls are available to motivate the students' participation in sports, cultural, etc.

Endowments have been created to grant students awards for excellence in curricular, co-curricular, extra-curricular activities and placement activity.

- The following awards are given:
- Best Outgoing Student -Academics
- Best Outgoing Student – Co-curricular activities
- Best Project Award for final year UG students
- Best Placement Co-ordinator for each department
- Best Sports Person

Annual calendar of events is prepared for various sports and cultural activities.

5.3.2 Provide details of the previous four years regarding the achievements of students in co-curricular, extracurricular activities and cultural activities at different levels: University / State / Zonal / National / International, etc.

The following table consolidates the number of students' participation and prizes won in co-curricular, extracurricular and cultural activities at various levels:

Academic year	No. of Activities			Prizes Won		
	National	State	District	National	State	District
2013-14	---	10	21	---	9	74
2012-13	---	10	24	---	19	67
2011-12	---	15	25	---	25	72
2010-11	1	12	26	1	23	101

In the year 2010-11, 3 prizes were won in an international event held in Sri Lanka. Details in annexure 5 (will be shown to peer tem during visit)

5.3.3 How often does the College collect feedback from students for improving the support services? How is the feedback used?

Students' feedback on support services like placement, higher education, sports, hostel, etc. are collected by periodic committee meetings. Students can give feedback anytime using e-mail. Based on the feedback, corrective measures are taken to improve these support services.

5.3.4 Does the College have a mechanism to seek and use data and feedback from its graduates and employers, to improve the growth and development of the College?

Yes, the placement and training cell consolidates the feedback from the employers and sends them to the concerned department. Feedback is also received from the Alumni of our college who work in different domains. Based on the feedback remedial steps are taken for improvement. Feedbacks are also utilized to frame the Programme Educational Objectives, Programme Outcomes, Course Outcomes and the curriculum and syllabi are prepared accordingly.

5.3.5 How does the College involve and encourage students to publish materials like catalogues, wall magazines, College magazine, and other material? List the major publications/ materials brought out by the students during the previous academic session.

The college encourages the students to publish college magazines/Newsletters at regular intervals. Newsletters are published by individual departments – four numbers in a year. An editorial team of students with a faculty advisor is formed for this purpose. The articles of the students, creative writings, achievements of the students in curricular and co-curricular activities and other relevant information are published in the college magazines. The following table lists the newsletter published by the various departments.

Department	Name of the News Letter	No. of Issues per Year
Civil	Raiga	4
Chemical	Euphoria	4
CSE	Scriptus	4
FT	Spice	4
ECE	The Ninth Wave	4
EEE	Livewire	4
EIE	Tycon	4
IT	Erudite	4
MECH	Mechanica	4
MTS	Syner Vision	4
MBA	Encarta	4
MCA	Cyber Times	4

Apart from the above, the college publishes college level newsletter namely Kongu News, Tamil Mandram Magazine, English Proficiency Magazine, etc.

5.3.6 Does the College have a Student Council or any similar body? Give details on its constitution, major activities and funding.

Yes the college has a student council. The functions of the council are to address the grievances of the students, consider the suggestions of the students to plan for further improvement. The Principal is the chairman of the council, the Dean (Curriculum Development and Student Affairs) is the Member Secretary. Members include a male and a female student from each department and three male and three female students from the first year BE / BTech programmes.

The council meets once a semester. The minutes are recorded and actions are taken on the points discussed.

5.3.7 Give details of various academic and administrative bodies that have student representatives on them. Provide details of their activities.

Students take active participation in the following activities and administrative bodies.

1. Student Council
2. Editorial Boards (Department-wise)
3. Student Chapters of Professional Bodies
4. Sports Committee
5. Cultural Committee
6. Hostel Committees
7. Department Associations
8. Course Monitoring committee

9. Internal Quality Assurance Cell (IQAC)
10. Entrepreneurship and Management Development Cell (EMDC)
11. Women Development Cell (WDC)

They conduct seminars by inviting eminent personalities from the industries and career guidance programs throughout the year. Distinguished speakers from various fields are invited to deliver special lectures. They also arrange industrial visits to various industries as a part of their curricular activities with the consultation of their faculty members.

Apart from the association, various student chapters of professional bodies are functioning in the campus. They are listed below:

- IEEE (USA) student branch
- IETE students' forum (ISF) and sub-center Salem
- ISTE Chapter
- IE(India)
- Computer Society of India (CSI)
- Institution of Engineers (India)
- Society of Automotive Engineers
- ICT Academy of Tamilnadu
- Indian Institute of Chemical Engineers.

Criterion - VI: Governance, Leadership and Management



*"Management is doing things right;
Leadership is doing the right things."
-Peter Drucker*

CRITERION - VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT

EXECUTIVE SUMMARY

Effective leadership by setting values, adopting participative decision-making process and transparency in the system have always been the hallmarks of KEC to achieve the vision, mission and goals building a healthy organizational culture.

Formulation of strategic plan and guidelines with specific goals by aligning the academic and administrative activities improves the overall quality of education in the institute.

Conducive work environment is provided in the institution for the teaching and non teaching staff. Professional Development of the faculty is ensured by providing pedagogical training, encouraging Faculty to organize as well as participate in seminars, workshops and conferences. Research is given due priority and 24% of faculty are Ph.Ds and another 50% are pursuing Ph.D. There are mechanisms evolved for regular performance appraisal and rewards for the faculty members. A number of welfare schemes are available for both the teaching and non teaching staff. Measures are also taken to attract eminent faculty.

There are established procedures and processes for planning and allocation of financial resources. Participative management principle is adopted in preparing the institutional budget by first preparing department and functional budgets. The income and expenditure of the institution are subjected to regular internal and external audit.

The internal quality assurance system is a self-regulating mechanism of the institution aimed at continuous improvement of quality and achieving academic excellence. The institution has well established quality management system and procedures for academic and administrative activities. Continuous monitoring of academic process, feedback mechanism and follow up activities adopted by the institution ensures continual improvement of the quality of our educational programmes. The institution has mechanisms for conducting internal academic audit and third party audit. The institution has an IQAC to monitor and ensure quality and adopts a participatory approach in managing all quality related activities.

6.1 Institutional Vision and Leadership

6.1.1 State the vision and mission of the College.

Vision of the College:

To be a centre of excellence for development and dissemination of knowledge in Applied Sciences, Technology, Engineering and Management for the Nation and beyond.

Mission of the College:

We are committed to value based Education, Research and Consultancy in Engineering and Management and to bring out technically competent, ethically strong and quality professionals to keep our Nation ahead in the competitive knowledge intensive world.

6.1.2 Does the mission statement define the College's distinctive characteristics in terms of addressing the needs of the society, the students it seeks to serve, College's traditions and value orientations, vision for the future, etc.?

Yes.

- The mission statement emphasizes value based education, research and consultancy which will help the needs of the society and further it strives to bring out technically competent, ethically strong and quality students.
- The mission statement is directed towards the engineering and management education which is the focus area of the institution.

6.1.3 How is the leadership involved in

- **Ensuring the organization's management system development, implementation and continuous improvement**
- **Interaction with stakeholders**
- **Reinforcing culture of excellence**
- **Identifying needs and championing organizational development (OD)?**

Ensuring the organization's management system development, implementation and continuous improvement:

- Well structured systems and procedures have been developed, approved by the Principal and documented.
- Continuous improvement is achieved by religious implementation of ISO 9001, NBA and NAAC guidelines.
- Review meetings are conducted by the Principal and HODs for ensuring continuous improvement.
- Office automation has been introduced to make the system faster and user friendly.
- Development of the various policy directions are done through Academic Council.
- Policy directions are percolated to departments through Board of Studies, HOD's meetings and Department Meetings.
- In all activities connected with development, implementation and continuous improvement, the top management extends total support.

Interaction with stakeholders:

- The principal conducts HODs meetings regularly to discuss on various agenda items and take decisions.
- The HODs in turn conduct department level meetings. The Principal interacts with representatives of students in Student Council Meetings.
- HODs discuss with student representatives in course monitoring committee meetings regarding programme and course related issues.
- Meetings with teaching and non teaching faculty members are conducted once in a semester.
- Alumni meeting are conducted each year in which faculty and students interact with Alumni.
- Parents meetings are conducted at department level. Parents regularly meet the principal and also talk to the Principal over phone regarding the academic growth of their wards.
- IIPC acts as bridge between the academia and industry in identifying industry needs which can be used in programme designing and consultancy activities.
- IIPC Chief Coordinator takes part in the AGM of EEDISSIA and CII where industrialists and academicians interact.
- Placement cell also interacts with companies.

Reinforcing culture of excellence:

- Making micro plan for all activities such as academic, sports, cultural etc.
- Providing conducive physical and psychological environment.
- Establishing research centres and promoting the culture of research among the faculty and students.
- Motivating the students and faculty to do applied research in Technology Business Incubator (TBI) in the campus leading to the development of innovative and commercially viable products useful for the industry and society.
- Encouraging faculty members and students to take up innovative projects.
- Involving the faculty and students in consultancy and problem solving for industries through the Industry Institute Partnership Cell (IIPC).
- Creating Student Chapters of Professional Bodies to promote industry linkage.
- Conducting National Level annual Technical Symposium, workshops and FDPs.
- Awards to the students excelling in the academic activities.
- Instituting Awards for Research, Best faculty in departments, Best students in departments, Best project work, etc.
- Organizing Open House Exhibition (OHE) on Science and Technology with total funding by the institution to bring out the hidden technical talents of the students.

Identifying needs and championing organizational development (OD):

- Organizational Development needs are identified in accordance with the Vision and Mission of the College.
- The manpower, Infrastructure and financial requirements are identified at department level based on which college level requirements on these aspects are finalized.

- At department level training needs for teaching and non-teaching members are identified and required programmes are executed.
- Faculty members are encouraged and deputed to attend FDPs.
- Whenever there is an additional intake or a new programme, faculty strength and infrastructure requirements are identified and necessary action is taken to ensure the adequacy.

6.1.4 Were any of the senior leadership positions of the College vacant for more than a year? If so, indicate the reasons.

No.

6.1.5 Does the College ensure that all positions in its various statutory bodies are filled and conduct of meetings at the stipulated intervals?

Yes.

The College ensures that all positions in its various statutory bodies are filled and meetings are conducted at stipulated intervals.

6.1.6 Does the College promote a culture of participative management? If yes, indicate the levels of participative management.

Yes.

- The college promotes a culture of participative management. Students and faculty members are involved at various levels in decision making and implementation of strategies.
- Participative management is encouraged by including faculty members in the statutory bodies such as Governing Council, Academic Council, Finance Committee, Board of Studies, Disciplinary Committee, Anti Ragging Committee, etc.
- In infrastructure development and purchase decisions the views of the faculty members given due consideration.
- All academic activities are planned by faculty members at department level in line with college goals.
- Course monitoring committees are formed in the department levels to monitor the teaching learning process and also to fine tune the activities. Students representing bright, average and weak categories take part in the committees. Strategies to improve teaching learning process and the academic environment are discussed.
- Students' council is another important committee where student representatives from all departments take part. Each semester a meeting is convened by the Principal to discuss the general issues of the students relating to academics, placement, co-curricular activities, infrastructure facilities, etc. Decisions are taken and implemented.
- Students play a major role in hostel mess committee by deciding the food menu for the inmates and providing suggestions for overall improvement of the services of the hostel.
- There are a number of clubs in the college with a faculty in-charge for each club. Students are actively involved in planning the various programmes of the clubs. The following list illustrates some of the student participation clubs available in our institution.

1. Photography Club.
2. Cultural Club
3. Creative Club.
4. Citizen Consumer Club.
5. Red Ribbon-Club.
6. Yoga & Meditation Club.
7. Aero Modeling Club.
8. English Proficiency Club.
9. Robotics Club.
10. CII – Yi KEC Students Net.
11. Tamil Mandram.
12. Energy & Environment Conservation Club

- Students have department level Student Associations in which a number of co-curricular activities are planned and executed. These activities are guided by association faculty in-charges.
- Participation of alumni in Board of Studies and involving them in curriculum development also promotes participative management.

6.1.7 Give details of the academic and administrative leadership provided by the University to the College?

- In the autonomous setup, the regulations, curriculum and syllabus are designed by the college. University nominates representatives for Academic Council, Boards of Studies and Results Passing Board to provide valuable inputs.
- Representatives are also nominated by university for monitoring the conduct of examinations.

6.1.8 How does the College groom the leadership at various levels?

All the positions in the organizational hierarchy have well-defined roles and responsibilities.

- Faculty members are given responsibilities in organizing various events and coordinating various club activities and faculty advisors for each class.
- Faculty members are encouraged to attend FDPs on leadership. New faculty members are given training on their roles and responsibilities during induction training programmes.
- Students are encouraged to plan and execute a number of programmes through students associations and other clubs.
- Students also put up stalls and run as a business entity during important functions which gives them a real life experience of running a business. This type of programmes enhances the leadership and entrepreneurial skills of the students.
- Regular training programmes on personality development, leadership, entrepreneurship development are also conducted for students which enhance the leadership skills of the students.

6.1.9 Has the College evolved any strategy for knowledge management? If yes, give details.

Yes. Strategy for knowledge management is in-built in the management system of the college. The following efforts are being taken for knowledge management.

- Organizing funded and self supporting training programmes, workshops, etc. in cutting edge technology areas.
- Deputing faculty and students for seminars, symposiums, training programmes, workshops etc, to enhance their knowledge and skill in emerging technology areas.
- Organizing conferences, workshops, seminars, FDPs, etc. for knowledge dissemination.
- The faculty members prepare course material, lecture notes including PPTs and share the resources.
- Laboratory manuals are prepared for practical courses and kept in the department libraries.
- Question banks are also prepared for theory courses. Training materials are prepared for placement programmes and distributed to students.
- Project reports of students and Ph.D theses are placed in the libraries for future reference. Newsletters of the departments are preserved in the library.
- Faculty publications are made available in R&D Cell and Google Scholars.
- Efforts have yielded dividends and nine patents have been obtained so far and more are in the pipeline.
- In this context, the college has evolved an IPR Policy.

6.1.10 How are the following values reflected in various functions of the College?

- **Contributing to national development**
- **Fostering global competencies among students**
- **Inculcating a value system among students**
- **Promoting use of technology**
- **Quest for excellence**

Contributing to national development:

- The various clubs and internal bodies such as Yi students Net, NSS, NCC, EMDC, WDC, etc., conduct a number of programmes which contributes to national development.
- TBI nurtures startups in the emerging Electronics and ICT areas which has contributed new products in varied sectors like agriculture, healthcare, industry, finance, power, textiles, education, etc.
- Kongu Community FM Radio broadcasts a number of programmes for national development. Rallies for Voters Day, Consumer Right Day, etc. are conducted to create awareness among general public and students.
- Competitive examination cell trains the students to take up careers in Civil Services.

Fostering global competencies among students:

- Since the institution is autonomous, the curriculum and syllabi are updated periodically.
- New courses on emerging areas are included which will enhance global competencies of students.
- TBI provides opportunity to the students to work with entrepreneurs on emerging technology areas and also conducts training programmes for students on cutting edge technologies.
- Entrepreneurship awareness programmes are periodically conducted for students.
- Faculty development programmes on Entrepreneurship are also conducted.
- Value added courses are conducted for students to enhance global competency.
- Industry sponsored courses have been introduced in the curriculum.
- Industry sponsored laboratories are also established.
- Placement and Training Cell conducts a number of training programmes in soft skills and technical areas which will enhance global competencies of students.
- Higher education and Competitive Examination cell conducts programmes to shape the students to perform better in Civil Services Exam, IBPS, GATE, MAT, etc.
- Some of our students take up Post Graduate programmes in other countries and also place get placed in MNCs.
- Faculty and students are encouraged to present papers in International Conference and take up internships and projects in MNCs.

All these culminate in development of global competencies among students.

Inculcating a value system among students:

- Courses on professional Ethics, TQM, and Value Education are included in the curriculum, which will inculcate a value system among students.
- Discipline among students and faculty is maintained by proper dress code, timeliness, cleanliness, etc.
- Motivation to help poor and needy through contribution by students and faculty for Orphanage, Old age homes and under privileged.
- NSS camps for social upliftment and rural development are organized periodically.
- Blood donation camps, student rallies and camps for creating awareness on social issues are conducted. These activities are done through NSS, NCC, YI Student net, etc.
- Sense of ownership among the students is inculcated resulting in maintenance of clean and lush green environment.

Promoting use of technology:

- Computers and internet facility (110 Mbps) are provided for all students and faculty.
- The college is enabled with WiFi connectivity.
- Class rooms are provided with multimedia projectors.
- Webinars are arranged to interact with the experts from the industry.
- College is enabled with Digital library.

- NPTEL courseware is subscribed to supplement the classroom teaching.
- TBI is provided with latest equipments to enable student and faculty to carry out projects.
- Results of the semester examinations are published on-line.
- Student attendance, staff and faculty attendance, calculation of internal marks and various report generation are automated.
- On-line feedbacks for courses and course teachers are obtained from the students once in a semester.
- College is an approved Nodal Centre for IIT Bombay for conducting NPTEL programmes.
- Collection of fees through ATM.

Quest for excellence:

- **Core value:**
One of the core values of the college is 'excellence' in every phase of the academic process.
- **Teaching-learning process:**
Every effort is made to build the competencies of faculty and students. Necessary scaffolding for academic excellence is provided through monetary, infrastructural, intellectual and technological provisions.
- **Research:**
Realizing the vital need of research in higher education institutions, the college has given a thrust to improve research publications and undertake projects. Monetary awards instituted by the college have motivated increased research output. Incentives are given for researchers.
- **Consultancy:**
The college strongly believes that exposure to the industry for the faculty and students would enhance quality in engineering and technology education. Faculty members are motivated to identify the industry problems and to find suitable solutions by taking consultancy projects. Emphasis is also given to do industry based project and internships by the students. Such activities have brought industry closer to the institution.
- **Extension:**
Extension activities of the college strive to bring excellence through social transformation. In addition to providing monetary support, KEC has assisted the neighbourhood by providing support through Rotract, NSS, NCC, Yi, etc., Students are also involved in these activities.

The quest for excellence and committed efforts have brought us number of recognitions in the society.

- The institution has been continuously ranked high at the national and state level by surveys conducted by noted media agencies.
- Our faculty and students have brought laurels to the institution by bagging many awards at the national level and state level in various co-curricular and extracurricular activities. Details are included in Annexure (will be shown during Peer Team visit)

6.1.11 Give details of the UGC autonomous review committee's recommendations and its compliance.

The UGC autonomous review committee is yet to visit the college.

6.2 Strategy Development and Deployment

6.2.1 Does the College have a Perspective Plan for development? If so, give the aspects considered in development of policy and strategy.

- **Teaching and learning**
- **Research and development**
- **Community engagement**
- **Human resource planning and development**
- **Industry interaction**
- **Internationalisation**

Yes.

The college has a perspective plan for development. The major aspects considered in the development of policy and strategies are as follows:

Teaching and learning:

- Supporting and helping academically weaker students to improve their performance.
- Using technology in improving the teaching – learning process.
- Providing opportunities for the teachers to continuously update their knowledge.
- Improving the student evaluation processes so that active learning is encouraged and comprehension of the subject is given adequate importance and not just testing memory.
- Maximizing industrial exposure during the period of study itself so that the gap between theory and practice is narrowed

Research and Development:

- Encouraging and rewarding faculty who undertake research.
- Enhancing the availability of funds for research by getting funded projects from various agencies.
- Enhancing interaction with industries so that research is directed towards solving real-world problems.
- Creating opportunities for engaging interested students in research activities.
- Encouraging innovations and facilitating the protection of intellectual property rights.

Community Engagement:

- Establishing procedures for formal interaction with the community regularly.
- Mobilizing the students to create awareness in the local community about the issues of relevance to them.
- Interacting with local government officials to identify areas where the institution can render much – needed service to the local community.
- Disseminating information for the benefit of the neighborhood by the KONGU community radio service.
- Providing avenues for assisting poor students from government school to improve their academic performance.

Human Resource Planning and Development:

- Providing opportunities for the faculty members to keep abreast of the latest developments in their field.
- Providing opportunities for international exposure by inviting foreign professors and providing financial support for faculty presenting papers abroad.
- Ensuring a compensation package that attracts and retains the best talents.
- Taking appropriate steps for the welfare of both teaching faculty and non teaching staff.

Industry Interaction:

- Ensuring that the curricula and syllabi are in line with the development in the industry.
- Increasing the interaction with the industry so that both students and faculty are constantly exposed to industrial practices.
- Increasing the number of internships as well as student projects in industry.
- Intensifying efforts so that industrial consultancy projects become one of the major activities of the institution.
- Leveraging the membership of various industry bodies like CII, CODISSIA, EEDISSIA and All India Management Association so that the students get a significant exposure to industry even as they pursue their studies.

Internationalization:

- The extent of internationalization is modest at present. The conduct of the international conference periodically and visits by foreign professors help our students an international exposure.
- Students and faculty are encouraged to participate in international conferences and publish papers in international journals.
- Five programmes have got NBA Accreditation (Under Washington Accord). More are in pipeline. This enhances international interactions.
- The institute has also got ISO 9001: 2008 certification.

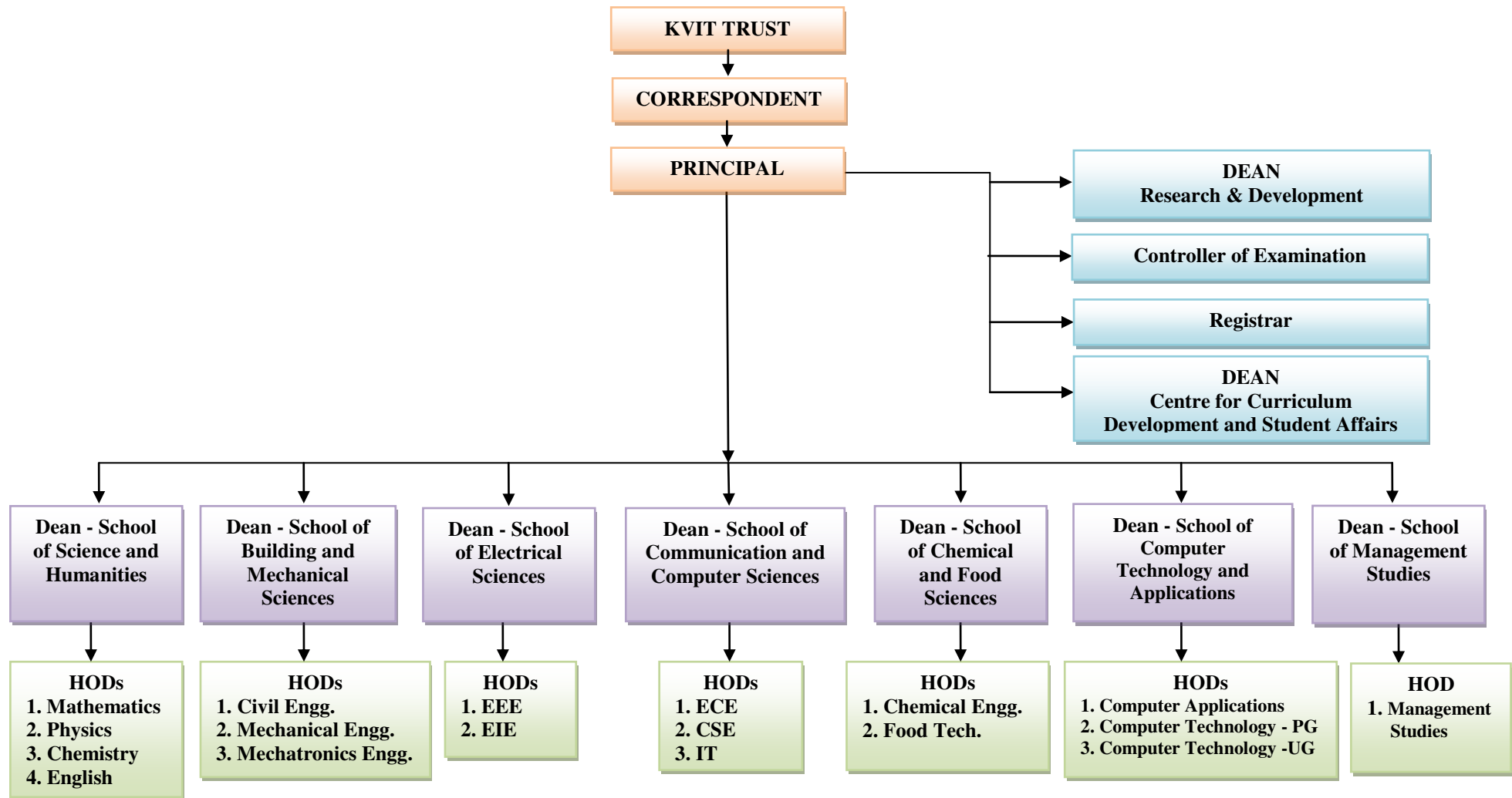
Some of the important goals set in Strategic plan are listed below.

- Online learning supplementing classroom teaching learning process.
- 10% of UG and PG projects to be of interdisciplinary nature.
- One project to be developed into product by each department every year. 5 patents to be filed at institute level every year.
- 10% of final year student projects at R&D labs and leading institutions.

- 20% of final year students to take up under internship scheme.
- 25% of the faculty to be identified and groomed for excellence.
- Entry-to-Exit online process to handle student progress.
- 5 new programmes based on industry needs.
- At least 5 research laboratories in collaboration with lead industry and R&D labs.
- About 20% of the total number of faculty with Ph.D qualification in 2014 gradually increasing to about 60% by 2020.
- 1 Research Journal
- 1 paper per PhD holder per year in reputed journals with high impact factor.
- Revenue through IIPC activities to be enhanced to Rs. 100 Lakh per year
- Projects done for/in industry by students 350 projects covering 1000 students
- 5 patents to be filed at institute level per year.
- 5 collaborative / joint research projects with lead institutions / R&D laboratories / industries.

Details of the Strategic plan (2014–2020) are included in Annexure (to be shown during visit)

6.2.2 Enunciate the internal organizational structure of the College for decision making processes and their effectiveness.



6.2.3 Specify how many planned proposals were initiated/implemented, during the last four years. Give details.

The following planned proposals were implemented during last four years.

1. Two new M.E programmes in 2011-2012
2. Increase in Intake in 3 B.E programmes from 120 to 180 in 2011-2012.
3. Two New M.E programmes in 2012-2013
4. Increase in Intake in 3 B.E programmes from 180 to 240 in 2012-2013.
5. Two New M.Tech programmes in 2013-2014.
6. Increase in Intake in one B.E programme (from 120 to 240) and one B.Tech programme (from 60 to 120) in 2013-2014.
7. Getting NBA accreditation for engineering programmes.
8. Setting up research centres for all departments.
9. Upgrading classrooms into smart classrooms.
10. Choice based credit system.
11. Enhanced usage of technology in Examination System.
12. Setting up new laboratories and modernization of laboratories.
13. Setting up NPTEL nodal centre.
14. Extending Wi-Fi connectivity throughout the campus.
15. Creation of new clubs like Yi, Citizen Consumer club, Legal Literacy Club etc.
16. Creating new buildings and expanding the existing buildings to meet the requirements due to introduction of new programmes and increase in intake vide Sl. No. 1 to 6.

6.2.4 Does the College have a formally stated quality policy? How is it designed, driven, deployed and reviewed?

Yes.

The college has a formally stated quality policy. The policy was designed by having discussion with all the stake holders namely teachers, students, parents, academicians, office bearers of industrial associations.

The quality policy of the institution is as follows.

“We are committed to

- Provide value based quality education for developing the student as a competent and responsible citizen
 - Contribute to the nation and beyond through research and development
 - Continuously improve our services”
- Quality Policy of the College is communicated to all stakeholders by using printed displays, by displaying in college website and through college calendar.
 - It is reviewed during the Management Review meetings conducted on yearly basis.

6.2.5 How does the College ensure that grievances / complaints are promptly attended to and resolved effectively? Is there a mechanism to analyze the nature of grievances for promoting better stakeholder-relationship?

Grievances / Complaints are received from the students through various ways,

1. Online Feedback about courses and Teachers.
2. Course Monitoring Committee Meeting.
3. Students Council Meeting.
4. Suggestion boxes.
5. Personally meeting the HODs, Deans and Principal.
6. E-mails
7. Hostel Meetings.

- These are recorded in complaints register. Suggestions / complaints, if any, that are received from parents and industries are also recorded.
- Suitable measures to redress complaint / grievances are taken and informed to stake holders. This mechanism promotes better stake holder relationship.

6.2.6 Does the College have a mechanism for analyzing student feedback on institutional performance? If yes, what was the institutional response?

Yes.

- Student feedback is received for individual courses and teachers. Feedback on the performance of the department and institution is also received in course monitoring committee and student council meeting. Moreover feedback is received whenever any value added course is conducted. These feedbacks are used for system improvement and also for curriculum development.

6.2.7 In what way the affiliating University helped the College to identify the developmental needs of the College?

- University nominees are appointed in various statutory bodies such as Governing council, academic council, finance committee and boards of studies to ensure proper management of academic, financial and general administrative affairs.
- University representatives are also invited for monitoring the effective conductance of semester examinations.
- University ensures the adequacy of faculty, infrastructure and other facilities for conducting various programmes by sending inspection committees periodically.

6.2.8 Does the affiliating university have a functional College Development Council (CDC) or Board of College and University Development (BCUD)? If yes, In what way College is benefitted.

Yes.

The Centre for Affiliation of Institutions (CAI) of Anna University facilitates granting of affiliation to the institution. The centre helps the college to achieve academic excellence by guiding the college to equip with qualified faculty and state of the art infrastructure so as to produce competent engineers to meet the local and global requirements.

6.2.9 How does the College get feedback from non-teaching, teaching, parents and alumni on its functioning and how it is utilized?

- Teaching faculty and nonteaching staff are encouraged to give their feedback at any point of time to the HODs and Principal on improving the functioning of the college.
- Each semester a meeting is arranged with teaching faculty and non teaching faculty separately with Principal in which feedback is received which will be used for effective functioning.
- Parents' feedback is received during each semester. Feedback is received from alumni, wherever they visit the institution and in the alumni meets conducted periodically.

6.2.10 Does the College encourage autonomy to its academic departments and how does it ensure accountability?

Yes.

- Autonomy is given to departments in design of curriculum and syllabi, conductance of classes, continuous assessment, faculty development, research and consultancy activities. Faculty members can also design and offer value added courses which are not covered in the curriculum.
- The curriculum and syllabi are vetted by experts in board of studies and approved by Academic council. Academic audit is conducted to ensure that academic activities are carried out to meet the standards.
- Financial freedom of expenses upto Rs.5000 is given to HoDs.
- Any expense incurred by the department is subject to financial audit.
- Periodically all these are reviewed by the Principal in the HODs meeting and at department level the HODs monitor and review the activities within the broad guidelines of the institution.
- Faculty members are accountable for the result they produce. Similarly everyone involved in the various processes of the college is accountable for the outcome they produce which is ensured in review meetings.

6.2.11 Does the College conduct performance auditing of its various departments?

- Each year the departments are evaluated based on parameters such as academic performance, placement, consultancy, organizing training programmes, conferences, funded projects, etc. and the best department is selected.
- The performance of faculty members is appraised on yearly basis.
- Non teaching staff are also evaluated on a set of criteria on yearly basis.
- Yearly Academic Audits are also conducted by IQAC to ensure systems and procedures are followed properly.

6.3 Faculty Empowerment Strategies

6.3.1 What efforts are made by the College to enhance the professional development of teaching and non teaching staff?

- Conducting pedagogical training to enhance the professional development.
- Encouraging faculty participation in national and international conferences, seminars, workshops and training programmes.

- A well equipped library with numerous books, journal, magazines and website helps faculty access any and all information.
- Teaching faculties are sponsored to attend faculty development programmes and non teaching staff are sponsored for skill development programmes.
- Teaching faculty are encouraged and sponsored to do PhD programmes. They are also permitted for post doctoral fellowships within and outside the country.

6.3.2 What is the outcome of the review of the Performance Appraisal Reports? List the major decisions.

- Based on Performance Appraisal Reports of faculty, Best faculty in each department is identified and awarded during annual day.
- Best researcher award is also given to the faculty member excelling in academic research.
- During elevation to higher cadre, performance appraisal details are used.
- Training needs are identified based on performance appraisal.
- On the basis of performance appraisal of faculty and staff, suitable decisions are taken.
- Gaps in infrastructure and policies also come out through the appraisal process on the basis of which decisions like addition of infrastructure and policy changes are made.

6.3.3 What are the welfare schemes available for teaching and non teaching staff? What percentage of staff have availed the benefit of such schemes in the last four years?

- A number of welfare schemes are available in the college for teaching and non teaching staff.
- The welfare scheme for the faculty and staff include contributory PF, Accident insurance, gratuity, CL encashment, Medical leave, Maternity leave with pay, Earned Leave, Free transport, etc.
- Quarters facility with 24 x 7 water and power supply.
- Fee Waiver for wards for doing degree programmes.
- School admission to wards of the employees.
- Festival advance for non teaching staff.
- Loan assistance scheme from Karur Vysya Bank at reduced interest rate.
- Canteen and Amenity centre.
- Health centre.
- Safety and security personnel.

Almost all staff avail one facility or other.

6.3.4 What are the measures taken by the College for attracting and retaining eminent faculty?

- Suitable environment for eminent faculty is created with greater degree of freedom and assigning responsibilities to suit their talents. Lot of flexibility in pay fixation exists to attract best talents.
- Revision of pay scales, performance based promotion,
- Incentive for PhD holders,
- Motivation by providing best faculty awards, research awards, etc.
- Sponsoring for national/international conferences

- Transport Facilities to visit industries to seek consultancy assignments
 - Incentives for Funded Projects
 - Consultancy revenue sharing
 - Faculty internship
 - 100% filing charges for IPR
 - Faculty members pursuing Ph.D. are given on duty permission for carrying out research related work outside the campus.
 - Motivation to organize value added programmes which enhances skills and knowledge of the faculty in addition to providing additional income to faculty.
- These are some measures taken by the college to attract and retain eminent faculty.

6.3.5 Has the College conducted a gender audit during the last four years? If yes, mention a few salient findings.

A gender audit has been conducted during the academic year 2013-14 by Women Development Cell (WDC) of the college and its salient features are:

- The study shows that most of the respondent (97%) feel comfortable and secure working here. They feel that the gender of the HoD's does not matter.
- 79% of the respondents do not find any difficulty in working in college level or department level committee but the remaining find it difficult because of the timing and frequency of the meetings held.
- 98.54 % stated that the gender of the teacher does not have much effect on the teacher –student relationship
- The number of women among teachers has been steadily increasing over the years.
- In the current academic year, 43% of the faculty members are female.
- In student associations and other student leadership roles, girl students have taken active part.

6.3.6 Does the College conduct any gender sensitization programs for its staff?

- Gender sensitization programmes are conducted by WDC of the college.
- Eminent women personalities from various walks of life are invited for interaction with the girl students and lady faculty on topics of particular interest to women.

6.3.7 What is the impact of the University's UGC-Academic Staff College Programmes in enhancing competencies of the College faculty?

- Though Anna University does not have UGC-Academic Staff College, faculty members are actively taking part in programmes organized by Anna University, IITs and other premier institutions for enhancing competencies.
- The University provides funds to all the affiliated Colleges including Autonomous Colleges to conduct FDP through Centre for Faculty Development (CFD).
- College has conducted Faculty Development Programmes sponsored by affiliating University, AICTE and other funding bodies. Such programmes have helped to enhance the competencies of the faculty members.

6.4 Financial Management and Resource Mobilization

6.4.1 What is the institutional mechanism to monitor effective and efficient use of financial resources?

- At the beginning of any academic year, the requirements of financial resources for the departments and cells, library, sports, examinations, training, placement, administration are estimated to meet the projected recurring and nonrecurring expenses for one year. Meeting is arranged by the Head of the Institution with the HODs to finalize department level budget. Then the budget is approved by the Finance Committee.
- The effective and efficient use of financial resource is monitored by internal and external financial audits.

6.4.2 Does the College have a mechanism for internal and external audit? Give details.

Yes.

- The College has a mechanism for internal and external audit.
- Internal audits are conducted once in a month and external audit is conducted once in a year.
- External audits are conducted by the registered Chartered Accountancy Firm.

6.4.3 Provide audited income and expenditure statement of academic and administrative activities of the previous four years.

Audited income and expenditure statements are given below.

PARTICULARS	2010-11	2011-12	2012-13	2013-14
<u>Income</u>				
Tuition Fee	330493658.00	337587241.00	396431475.00	461802829.00
Application Sales	352250.00	285750.00	632200.00	831450.00
Training Courses	12960290.00	23530000.00	26625000.00	0.00
Autonomous Fees	25009210.00	43009690.00	30872325.00	30817220.00
Books & Stationery Fees	18104780.00	19448857.00	24053840.00	47116800.00
Bus Fees	15748816.00	21907593.00	30704130.00	42000470.00
Miscellaneous Receipt	9804307.35	9609160.00	14899818.00	13947444.78
Total Income	412473311.35	455378291.00	524218788.00	596516213.78
<u>Expenditure</u>				
Administrative & General Charges	38608344.35	45142652.82	54553442.81	63325557.94
Salary to Staff	164236838.00	188229923.00	226156173.00	260296320.00
Contribution to Provident Fund	6618039.00	7493644.00	7918764.00	8605410.00
Electricity Charges	17192600.00	18578285.00	20450479.00	25052075.00

PARTICULARS	2010-11	2011-12	2012-13	2013-14
Purchase of Lab Consumables	3072105.00	165529.00	6377808.72	5957920.55
Building Maintenance	4467301.00	0.00	0.00	0.00
Maintenance and Operative Exp.	17357999.00	23699165.00	33694254.53	33205005.62
Autonomous Expenses	7314507.00	19771052.00	10242463.00	11969818.00
Salary to Drivers	5252689.00	6278523.00	7782537.00	8966524.00
Bus Maintenance Expenses	4608768.00	5662110.18	6541264.00	11642384.00
Cost of Fuel Purchase	7323993.00	8415123.00	9525284.00	13850394.00
Purchase of Books	16239164.00	16809836.00	17119628.00	19947229.00
Depreciation	64967816.01	86997046.39	101801037.35	99997556.53
Excess of Income Over Expenditure	55213147.99	28135401.61	22055652.59	33700019.14
Total Expenditure	412473311.35	455378291.00	524218788.00	596516213.78

6.4.4 Have the accounts been audited regularly? What are the major audit objections and how are they complied with?

Yes.

- The accounts have been audited regularly. There are no major audit objections.
- However, Audit notes emanate from the audit. Clarifications on the points raised by the auditors are given by the department/agency concerned.

6.4.5 Narrate the efforts taken by the College for resource mobilization.

Contributions are received in the form of

- Tuition fees
- Funds from Trust
- Funds from Government Funding Agency (UGC, DST, AICTE, etc.)
- Funds from Private agencies for projects & consultancy services
- Interest Receipts
- Value Added Training fees

6.4.6 Is there any provision for the College to maintain the 'corpus fund'? If yes, give details.

Yes.

- The KVIT Trust has provided a corpus fund of Rs. 3 crore.

6.5 Internal Quality Assurance System

6.5.1 Does the College conduct an academic audit of its departments? If yes, give details.

Yes. The college conducts academic audit periodically.

- Academic audit is conducted by IQAC to assess whether the activities, functioning and documentation of the departments are as per the standard procedures and also to check whether proper actions are taken to ensure quality at all parameters.
- The auditors carry out the audits by following internally designed audit guidelines.
- Audit findings are discussed by the Principal with the HODs.
- Suitable corrective actions are taken by the departments to rectify the Nonconformities.

6.5.2 Based on the recommendations of academic audit what specific measures have been taken by the College to improve teaching, learning and evaluation?

Some of the key decisions taken based on academic audit include

- Usage of more case studies and application related problems in teaching.
- Setting up more smart classes.
- Making the students to do application oriented assignments
- Standardizing the measures to be undertaken for slow learners
- Permitting students to take up more industrial projects.
- Providing interdisciplinary electives.
- Online feedback system
- Scrutiny of question papers
- Periodical revision of procedures and formats

6.5.3 Is there a central body within the College to continuously review the teaching learning process? Give details of its structure, methodologies of operations and outcome?

Yes.

The IQAC is the central body to monitor the review of teaching learning process within the College and conducts annual review of strategic issues of the college.

Structure:

The composition of IQAC is as per the guidelines laid by NAAC. The IQAC headed by the Principal includes the correspondent, eight teachers, seven senior administrators, and two nominees from local society, one representative each from alumni, students and employers. There is a faculty member to coordinate the IQAC activities.

Methodologies of operation:

- As per the standard academic procedures of the college designed by IQAC, reviews of academic activities are done by HODs regularly.
- Board of Studies meetings are conducted once in a year to review and redesign the curriculum and syllabi.
- The Principal conducts HODs meeting on regular basis in which teaching learning process is reviewed.

- In the annual management review meeting conducted by IQAC, overall review of quality policy, modification of quality parameters, changes in academic and other procedures, customer feedback analysis, continual improvement, infrastructure development, new programmes, additional intake, etc. are discussed.
- IQAC also conducts academic audit to ensure whether the teaching learning process maintains the quality in all quality parameters.

Outcome:

The activities of IQAC have helped the college to continuously improve its performance. This is possible since IQAC has developed standard procedures for academic, examination and other activities of the institution. IQAC has also coordinated NBA audits and ISO 9001 third party audit to ensure quality. Conducting academic audit and reviews also ensure the improvement of quality.

6.5.4 How has IQAC contributed to institutionalizing quality assurance strategies and processes?

IQAC plays a key role in institutionalizing quality assurance strategies and processes of the college. Some of the contributions of IQAC are listed below.

- Maintaining the quality system manual and procedure manuals of the institution.
- Revision of formats and procedures whenever required.
- Circulating quality policy and quality parameters throughout the college.
- Conducting academic audits.
- Coordinating review meetings of the departments.
- Conducting annual management review meeting.
- Preparing Annual Quality Assurance Report (AQAR).
- Preparing perspective plan / strategic plan for the college.
- Guiding departments in getting feedback response from students, parents and employers.
- Coordinating external audits by NBA and TUV SUD.
- Conducting workshop on CBCS.
- Assisting COE in Streamlining Examination procedure.

6.5.5 Does the IQAC have external members on its committees? If so, mention any significant contribution made by such members.

Yes. There are two external members.

They are

1. Dr. N. Raman , Principal , Kongu Arts & Science College
 2. Mr.R.Mylsami, Past President, Erode District Small Industries Association (EEDISSIA)
- Dr.N.Raman has suggested that research centres be set up in all departments and research to develop products / solutions to address societal needs. A research journal may also be published by the college which will strengthen the academic research.
 - Mr.R.Mylsami expressed his willingness to permit students for industrial visits and project works for students in the member industries of EEDISSIA.

6.5.6 Has the IQAC conducted any study on the incremental academic growth of students from disadvantaged sections of society?

Yes.

- Academic departments have conducted result analysis of tests and semester examination of students including students from disadvantaged sections. Follow-up actions such as counseling, remedial classes are taken.
- IQAC has compiled the analysis of all departments on the incremental academic growth of students from disadvantaged sections of society.

6.5.7 What policies are in place for the periodic review of administrative and academic departments, subject areas, research centers, etc.?

- On fortnightly basis, meetings are conducted at department level to review the academic, administrative, research and consultancy activities of the departments.
- At department level, course monitoring committee meetings are conducted thrice in a semester to review the conductance of courses.
- Once in two weeks, Principal conducts HODs meeting at college level to review the performance of departments, research activities, placements, consultancy, etc.
- Annual review meetings are conducted by the Principal to assess the performance of the departments on various parameters.
- In Board of Studies meetings conducted annually, review and redesign of the curriculum and syllabi, as per the requirement of the industry and society is carried out.
- IIPC chief coordinator also conducts meeting with department coordinators regularly to review department level consultancy and training activities.
- In addition, reviews are also conducted by the Statutory Committees, ISO external audit team and NBA audit team.

Criterion - VII: Innovations and Best Practices



"An inventor is a man who looks upon the world and is not contented with things as they are. He wants to improve whatever he sees, he wants to benefit the world. "

-Alexander Graham Bell

CRITERIA - VII: INNOVATION AND BEST PRACTICES

EXECUTIVE SUMMARY

College promotes creative and entrepreneurial skills of students and faculty through training and projects in TBI@KEC, Science and Technology Exhibition and financing IPR applications. 119 faculty members with PhD degree with many funded projects from Government departments enhance the research base of the institution. Delegation of authority for heads of the department results in faster decision making and develops the managerial skills. Merit based fee waiver and reimbursement of students / faculty expenses for paper presentation in national and international seminars promote innovation. Internship, involvement of students in consultancy assignments and 24 hour access to e-journals enhance the employability skills of the students. Residential quarters, sabbatical leave and scholarship for siblings motivate the faculty to higher levels of performance.

Remedial classes for slow learners and special coaching for lateral entry students improve the overall performance of students. Coaching for GATE, competitive examinations and foreign languages open up career opportunities. English Proficiency, Tamil Mandram, Creative, Energy, Yoga & Meditation, Photography, Cultural, Citizen Consumer, Red Ribbon, Robotics, Energy & Environment Conservation, Android Application Development and Aero modeling clubs develop a well-rounded personality in students. Women Development cell promotes women empowerment and gender equality. Participation of students in Young Indian (CII-Yuva) and Rotract clubs enhance student contribution to the society.

Provision of clean drinking water, water harvesting and waste water treatment facilities facilitate conservation and recycling of water. Aesthetic landscaping and measures for carbon neutrality makes the campus green. Energy conservation and harvesting of solar energy help reduce the green house gas emissions.

7.1 Environment Consciousness

7.1.1 Does the College conduct a Green Audit of its campus?

Yes, the college conducts Green Audit of its campus by a team of senior faculty members with good industrial experience.

The team comprises Bureau of Energy Efficiency certified Energy Auditor and faculty members from Civil, Mechanical, Electrical and Chemical Engineering Departments. College lays emphasis on conservation, recycle and reuse of fuels, electrical energy and water. Planting of trees and landscaping are other measures taken by the college.

The audit comprises inspection of

- Mineral water plant
- Waste water treatment plant
- Solid waste management
- Landscaping

7.1.2. What are the initiatives taken by the college to make the campus eco-friendly?

The College lays great emphasis to maintain a lush green, eco-friendly campus. A full-fledged Landscape Management Department is functioning for this purpose. The initiatives taken in critical areas concerning environment are as follows:

Energy Conservation

"Energy and Environment Conservation Club" is functioning in the Institute as a unit under Energy Conservation Society, Kerala (Regd. No. 684/92). The main objective of the club is to create awareness and conduct events pertaining to Energy conservation, research in renewable energy sources, Energy audit and power quality improvement. The society has the following specific programmes:

- a) Energy Efficiency and Conservation
- b) Energy education
- c) Environmental protection and conservation
- d) New and renewable sources of energy
- e) Sustainable development
- f) Power quality issues and its improvement
- g) Reuse/recycling technologies

A few actions taken in respect of the above are listed below:

- Replacement of halogen lamps in the roads of the campus with LED lamps powered by solar energy is being done in a phased manner
- The institute regularly monitors the electrical energy consumption of all buildings on a daily basis. The existing fluorescent lamps are being replaced with energy efficient CFL lamps.
- Posters depicting the importance of energy conservation have been displayed in all departments.
- All the buildings have been designed to maximize the natural lighting and minimize artificial lighting
- UPS system for computers have been installed in every Department
- The college motivates the faculty to become Certified Energy Auditors by reimbursing 50% of examination fees for this programme. Currently there are five certified energy auditors in the college.

- Energy and Environment Conservation Club regularly conducts seminars, guest lectures and competition for students to create awareness.
- In the NSS camps conducted by the college, awareness about energy, water and environment is created.
- Biomass power plant 100 kWe is installed in the campus.
- Use of LED lamps for street lighting.

Use of Renewable Energy

- Solar water heaters are installed in Hostels, Guest houses and residential quarters.
- The department of Electrical and Electronics Engineering uses a 3 kW Solar panel sponsored by the DST (Department of Science and Technology).
- Purchase order has already been placed to install 100 kW solar photovoltaic power plant in the campus.
- Solar Radiation Monitoring Station with wind and rain gauges is installed in the campus with the help of Ministry of New and Renewable Energy.
- Biogas plants are installed in the hostels

Water Conservation and Harvesting

- The college has a sizeable rain water harvesting facility in the campus.
- Mineral water plant using advanced Reverse Osmosis technique has been installed to cater to the drinking water needs of the campus and the sister institutions
- The water conservation cell monitors the consumption in all the buildings and takes appropriate action to conserve water.
- The waste water from bath rooms and wash basins are treated in the wastewater treatment plant and the recovered water is used for gardening and landscaping applications.

Check dam

- Open channels with provision for drain pipes have been installed to harvest the rain water.

Efforts for Carbon Neutrality

- Campus is smoke free and use of tobacco products is completely banned.
- A large number of trees are planted in the campus and a nursery has been established for this purpose.
- Campus is plastic-polythene free zone, which makes the campus eco-friendly.
- Teaching and Non-Teaching staffs are provided with residential quarters to minimize use of greenhouse gas emitting automobiles.
- The college has taken up steps to prevent the emission of carbon dioxide.
 - The dead leaves and the waste papers are not allowed to be put on fire. The leaves are buried in the soil itself and the papers are disposed off.
 - In addition, the following practices have been adopted in the campus for carbon neutrality
 - Pooling of vehicles for students and staff
 - Regular emission testing of vehicles
 - Optimum utilization and recovery of waste heat from air conditioners

Plantation

- Planting trees and developing lawns and gardens are regular features in the campus. Recently 70 saplings donated by alumni were planted. Greeneries in the campus are developed and nurtured on a continuous basis.

Hazardous waste management

- Chemical wastes are handled with care and offloaded with precautions. Guidelines issued in this connection are strictly followed.
- Gas-storage and handling are done as per the established norms.

E-waste management

- Older configuration of Computers are collected and donated to the nearby schools.
- UPS batteries are exchanged for new ones.

7.2 Innovations

7.2.1 Give details of innovations introduced during the last four years which have created a positive impact on the functioning of the College.

- Internship in major CSIR labs, IIT's and Multinational Companies are arranged for final year students.

IIPC consultancy assignments

- Students are drafted to assist the senior faculty in industrial consultancy assignments.
- Students have twenty four hour access to all the journals published in sciencedirect.com (IEEE)
- Faculty members are given a fair share of consultancy fees to motivate them.

Scholarship

- Financial assistance for 25 bright students of XII std from government schools is given to pursue studies in KEC
- Scholarship is given to meritorious differently abled student every year.

Students

- KEC Management bears the full cost of models prepared by the students for displaying in Science and Technology exhibition conducted annually.
- Top 5 % of UG students are given cash award each year amounting to Rs.65 lakh.
- 15 students who excel in sports are awarded full fee concession and hostel fees waiver each year on admission.
- Meeting of the Student Council comprising student representatives from all the departments is convened every semester for interaction with the Principal and Dean (Curriculum Development and Student Affairs)
- Students are covered under group insurance scheme for accidents hospitalization and payment of hostel and tuition fees due to demise of parents in accidents.
- Students are provided with cash assistance for presentation of papers in seminars and National/ International conferences.

- Students are given cash award for securing prizes for Paper/ Project presentation in leading Technical Institute like IIT, IISc, NIT, etc.,
- Opportunity is given to school students to exhibit their models in Science and Technology Exhibitions conducted by KEC.
- Student Entrepreneurs Scheme launched by TBI@KEC for motivating students to convert their innovative ideas into useful products.

Faculty

- Faculty members are reimbursed fifty percent of their travel expenses incurred for presenting papers in leading institutes
- The wards of staff are given preference in admission and scholarships for study in KEC and allied institutions.
- Residential Quarters have been provided for Teaching and Non-Teaching staff within the campus.
- Faculty members are given Sabbatical leave for pursuing research and higher education in renowned institutes of learning.

Convention Centre

- The Air-conditioned Convention Centre with a capacity of 4500 offers a congenial atmosphere to conduct several events – curricular, co-curricular and extra-curricular.

Automatic Weather Station

- Automatic Weather Station funded by ISRO to measure parameters like temperature, rainfall, wind speed etc.,

Power Supply

- The college has installed hundred percent backup power supply with a total capacity of 3250 kVA DG sets.

Patent

- Best models fabricated by students in Science and Technology Exhibitions are identified and KEC helps them to secure IPR. College bears the full expenses.

Technology Business Incubator

- Students and Faculty are given opportunity to work with entrepreneurs in developing real time projects useful for Industry and Society
- Funding assistance in the form of grant is provided for innovative projects of students in addition to mentoring
- The recently introduced Student and Faculty Entrepreneur Scheme aims at nurturing entrepreneurial talents of the student and faculty by providing all assistance including mentoring and financial grant

EMDC

- EMDC camp is conducted to sow the seeds of entrepreneurship among students.
- Students visit tiny, small and medium industries as a part of this programme.
- Leading Entrepreneurs deliver lectures in these programmes

Value Added Courses

- Value Added Courses on latest Technological subjects and trends beyond the syllabus are conducted for students.
- Yoga and meditation training are given to students free of cost
- German and Hindi language courses are offered to improve the employability skills of the students
- Android application development club is functioning to develop new technological applications for smart systems.

Kongu FM

- Kongu Community Radio Service (90.4 MHz) has been established to serve the cause of the people in the nearby area
- The students are encouraged to deliver lectures on topics like education, health, environment and agriculture to promote awareness and encourage inclusivity.

Kongu Trophy

- An inter colligate sports competition sponsored by KEC is held annually in the campus

7.3 BEST PRACTICES

STUDENTS

- Science and Technology Exhibition encourages the students to fabricate models .It is funded by management, open to the public, promotes scientific and technological awareness among school students and public.
- Coaching for GATE examinations are arranged for interested students to improve their performance
- Special Coaching Classes for lateral entry students are arranged.
- Remedial classes for slow learners are arranged.
- Answer Key for all semester examination question paper are posted in intranet.
- Students dissatisfied with revaluation are given opportunity for challenging the results.
- Quarterly Newsletter edited by students is published in every department.
- IGNOU study center in the college encourages the students to take up certificate courses such as energy audit.
- Fund is provided to publish creative writing of students.

Project Work

- Project Work consists of two parts
 - Part A – Design / problem solving project in the industries
 - Part B – Experimental project inside the college labs

Internet Access

- Entire campus is Wi-Fi connected to enable the students to learn the latest technological developments

Student Feedback

- Feedback is collected to fine tune the teaching learning process through the Course Monitoring Committee which meets thrice in a semester
- Course end survey feedback is obtained from students for every subject
- Online feedbacks on both course and teacher are obtained

Excellence Awards for Students

- Endowments have been created to grant students awards for excellence in academics, sports, creative writing in English, Tamil and placement activity.
- Prize winners of the various events conducted by premier institutions like IIT, NIT, etc., are awarded cash prize.

The following awards are given for each department and college level:

Department Level

- Best Outgoing Student -Academics
- Best Outgoing Student – Co-curricular activities
- Best Project Award for final year UG students
- Best Placement coordinators

College Level

- Overall best outgoing student of the college (Men & Women)
- Best Sports student (Men & Women)
- Best student in paper and project presentation
- Best student in extra curricular activities

Alumni

- Every semester at least one alumni in each department is invited to give a guest lecture.
- Alumni with adequate experience in industry are included as members in the Board of Studies
- Books are donated by alumni.
- Scholarships provided by alumni.

Decade Meet

- Decade Meet is organized every year for the alumni who graduated Ten years back
- Silver Jubilee meet of alumni is organized
- A separate Alumni Guest House is maintained to make the alumni visit comfortable

Models

- Some of the best models of students are displayed in the technical exhibitions conducted by the District Industrial Associations in the area.
- Students are encouraged to participate in Technical Competitions organized by Multinationals and National level technical symposia of other leading Universities.

NSS

- As a part of NSS activities students visit nearby villages for cleaning the environment, painting schools and create awareness on health, environment and safety.
- Blood donation camps are also organized every year.
- Helps to maintain the campus clean.

Higher Education/ Competitive Examination Cell

- The students are given guidance for facing various competitive examinations and for pursuing higher studies in abroad.

English Proficiency Club

- Has been established to improve the English Communication Skills of the students

Creative Club

- Has been functioning in the College to nurture creativity and innovation of the students

Red Ribbon Club

- Organizes meeting to create awareness about AIDS.

Aero Modeling and Robotics Club

- Established to motivate the students to prepare models.
- Intercollegiate competition is held annually.

Women Development Cell

- Has been established for empowerment of women staff and student
- Women occupying key positions in Government, Industry and Trade and Commerce are invited to interact with the female faculty and students.
- Workshops on Arts including Jewellery making and Terracota are organized.
- Medical check-ups are regularly conducted for female staffs and students.

Student Counseling Cell

- Provides a forum to interact with successful persons in the society
- Has been functioning to address the Psychological/emotional needs of the students

Young Indians (CII – Yuva)

- Provides a forum to interact with successful persons in the society.
- Students are encouraged to participate in rallies to create awareness on road safety, health and environment issues.

Rotoract Club

- Students are encouraged to become members of Rotoract Club which raises funds to help the needy and differently abled children of Government Schools and Orphanages.

Thoorigai

- Students are sensitised to help differently abled children. Events are periodically conducted to bring out the hidden talents of such children.

Enthusia

- Annual cultural event is organized to provide a platform to show case the hidden talents of the students.

FACULTY

- Faculty are deputed for quality improvement programs conducted by leading institutions like IIT,NIT and Anna University
- Faculties who have Ph.D. are given incentives.
- Faculty members are covered under group insurance policy scheme.
- Endowments have been created to award faculty in each department for excellence in performance

GENERAL INFRASTRUCTURAL FACILITIES

Mineral Water Plant

- A drinking water plant with a capacity to produce 12,000 liters per hour is function to cater to the needs of the students, campus residents and sister institutions

Effluent Treatment Plant

- ETP is designed, installed and monitored by the college to recycle the used water for gardening thereby reducing the consumption of normal water.

Environment and Landscaping

- Trees are planted to give green cover and improve the landscaping
- Solar Panels in hostels and quarters provide hot water to the residents.
- Street lights replaced with LED lamps powered by solar energy
- Rain water harvesting facilities
- Solid waste management practices include segregation of biodegradable and non-biodegradable wastes.

Health Concerns

- A Dispensary with full time doctor and nurse is functioning in the campus to attend to the health needs of student and staff round the clock.
- 24 hour Ambulance facilities are available.
- Usage of tobacco products is strictly prohibited inside the campus.
- It is also a plastic free campus.

Safety Practices

- First aid boxes with the required medicine/items are available in each laboratory. Fire extinguishers are available in each lab.
- Students and staff are trained on laboratory safety.
- Posters on safety are displayed in each lab.
- College buses are fitted with speed governors and first aid boxes; experienced drivers are employed.
- Speed breakers at appropriate places and strict adherence to traffic rules ensure road safety in the college premises.
- Anti-ragging committee consisting of senior professors has been formed in the interest of freshers.

Sports Facilities

- Volley Ball, Basket Ball, Cricket, Tennis, Kabadi and Football / Hockey grounds and Athletic tracks are available for conducting various sports events.
- Indoor Stadium for Ball Badminton, Table Tennis and Gymnasium.
- A stadium with 3000 capacity.
- Flood light facility for conducting day-night matches.

7.3.1 Best Practices

I. Title of the practice: Effective Academic and Research Process through Innovation and Collaboration

Objective

- To expose the students to the real life problems of the industries.
- To motivate the students to take up research in new and emerging fields of science and technology for the advancement of science and cater to the needs of the society.
- Develop professionals, who are endowed with the requisite intellectual capability, Analytical and problem solving abilities distinct vision and perspectives to cope with the emerging challenges of rapidly changing world.
- Nurture the promising scholars for career in research by endowing them with an insatiable desire to learn, encouraging them to incessantly imbibe advances in technology and invest them with experimental skills.

The Context

In our globally competitive economic environment, never before there has been a greater need for a talented, enterprising workforce, for constant innovation in product and service development, for a thriving culture of entrepreneurship, for dynamic leading-edge scientific and technological development and for world-class research that attracts investment as it exists today.

The main challenges are:

- Producing new original work with individuality, Avoiding Plagiarism in publications
- Testing and implementing the inventions in a real time working systems
- Financial assistance by the funding agencies
- Enough learning and research tools including access to IT equipment, library and electronic publications

The Practice

- Open House Exhibition on Science and Engineering to bring out the innovative thinking of students is conducted every year. The best models are selected for applying for patents.
- Industry projects by students, In plant training and Industrial visit
- Opportunity for students and faculty to work with entrepreneurs in TBI @ KEC (Technology Business Incubator) for developing innovative products useful for industry and society, thus giving an opportunity to the students and faculty to do applied research
- Inclusion of academic, industrial experts and alumni in framing curriculum
- Exposure of students to current trends through non- formal and value added courses
- Intra and interdepartmental paper and project presentation by students
- Participation of students in Ph.D. (oral) Viva - Voce Examinations
- Special incentives for students for paper presentation in the country and abroad
- Involvement of students in industrial consultancy work.

- Sponsoring for registration of patents.
- Special coaching for lateral entry and weak students is arranged.
- Question bank with answers for each subject is given to the students.
- Internship for students is arranged in major industries and CSIR laboratories
- GATE Coaching classes are arranged for students to enhance their performance.
- Final B.Tech. Project work as two parts :
 - Part A Industrial Project
 - Part B Experimental Project in KEC

Evidence of success

- Nine student's projects have been patented. More are in pipeline.
- There are 119 faculty members with Ph.D. degree. This helps in improving the quality of the teaching-learning process and act as a motivation for others to pursue research.
- Consultancy project works carried out for various industries have generated revenue of Rs.158.28 lakh in the last four years in addition to helping the industry and enhancing the effectiveness of faculty involved in consultancy.
- Sponsored courses are conducted for the benefit of students and faculty of our and other Institutions.
- Good research ambience created.
- R&D Projects already obtained through support from the R&D cell.
- A few students who have gained hands-on experience by working with the entrepreneurs in TBI@KEC have become entrepreneurs.
- The TBI@KEC has bagged the best TBI award at national level and received a trophy, cash award of Rs. 3 lakh and certificate from the President of India on 11 May 2013.

Problems encountered and resources required:

- Being a self-financing college it is difficult to get funds for project proposals.
- Government Departments like DST sanction only 50% of expenses towards research projects.
- Sophisticated instruments for pursuing research in basic R&D filed are required.

II. Title of the practice: Delegation of Authority

Objective

- To lessen the excessive burden on the superiors
- To provide opportunities for the growth and self-development to Subordinate faculty members.
- To develop a team of experienced and matured faculty.
- To develop the soft skills and enhance the human capital.
- To enhance the managerial and administrative talent of the faculty.

The Context

- Delegation makes it possible for the head of the institution to distribute the workload to others and help him/her concentrate on higher level functions of management like development, planning, organizing, controlling, etc.
- Delegation enhances the morale and motivates the subordinates to higher levels of performance.

- Decision making is made simpler and faster. This improves the overall efficiency of the institution
- Communication between the head of institution and subordinate is improved resulting in cordial relationships.
- Delegation develops the managerial skills of subordinates and builds a reservoir of persons who can be groomed to take up leadership positions in future.

The Practice

Total autonomy is given for functioning of Departments within the broad framework of the Institution

- Involvement of Head of the Departments and subject specialist from premier educational institutions to interview and recruit new faculty members.
- Promotion of faculty and staff is done in consultation with Heads of the department.
- The Department head in consultation with other faculty members prepare annual budget.
- Procurement action is initiated by the indenting department whose views are given maximum consideration in procurement of any material/facility
- The decision to introduce new programmes or increase the intake of students in each department is made after due consultation with head of the department.
- The members of the Board of Studies representing different interest are selected based on the recommendation of Head of the department.
- The list of examiners for different university laboratory examinations is prepared by HOD and sent to COE/Principal for approval.
- The faculty members organize and conduct the funded seminars / conferences.
- International conferences / seminars are organized and managed entirely by a team consisting of Deans and Professors.
- For taking up consultancy assignments quotes are prepared and sent to the concerned industry by IIP Cell Coordinator in consultation with faculty members.
- Senior faculty directly interacts with industries to secure consultancy work, placement and MoU.

Evidence of success

- Organization of national level technical symposium by students
- Organization of cultural program like Enthusia and Swaram by students
- More than 80% of the enrolled students are placed in Core Engineering and Software Companies.
- IIP Cell generates about Rs.50 lakhs annually.
- The IIP Cell of KEC has secured the AICTE Award for the excellent performance in 2014.
- More than 70 % of the student projects are industry - based in departments like Chemical Engineering.
- State-of-the-art laboratories in different departments.
- 40 funded programmes are conducted each year in the college.
- New PG programmes started.