NATIONAL BOARD OF ACCREDITATION

SELF ASSESSMENT REPORT (SAR)

FOR ACCREDITATON OF

UG ENGINEERING PRGRAMMES

(TIER-II)

NATONAL BOARD OFACCREDITATION
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(June, 2015)

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Self Assessment Report (SAR) UG

Part A

I. Institutional Information

1. Name and address of the institution:

ACS College of Engineering
207, Kambipura, Mysore Road
Bangalore-560074
Karnataka, India

2. Name and Address of the Affiliating University:

Visvesvaraya Technological University
"Jnana Sangama"
Belagavi – 590108
Karnataka, India

3. Year of establishment of the Institution:

2009-10

4. Type of Institution:

Institute of national Importance	☐
University	☐
Deemed university	☐
Affiliated	√
Autonomous	☐
Any other (Please specific)	☐

Note:

1. In case of Autonomous and Deemed University, mention the year of grant of status by the authority.

2. In case of university Constituent Institution please indicate the academic autonomy status of the Institution as defined in 12th Plan guidelines if UGC. Institute should apply for Tier 1 only when fully academically autonomous.

5. Ownership Status:

Central Government ☐

State Government ☐

Government Aided ☐

Self financing ☐

Trust ☑

Society ☐

Section 25 Company ☐

Any Other (Please specify) ☐

6. Other Academic Institutions of the Trust/Society/Company etc., if any:

Name of the Institution(s)	Year of Establishment	Programs of Study	Location
RajaRajeswari Medical College & Hospital	2004-05	MBBS, MD, MS	Bangalore
RajaRajeswari Dental College & Hospital	1991-92	BDS, MDS	Bangalore
RajaRajeswari College of Engineering	2006-07	BE, M.Tech, Ph.D	Bangalore
RajaRajeswari College & School of Nursing	2004-05	GNM, BSC, PCBSC, MSC	Bangalore

Note: Add rows as needed.

7. Details of all the programs being offered by the institution under consideration:

S. No.	Program Name	Year of Start	Intake	Increase in intake if any	Year of increase	AICTE Approval	Accreditation Status*
1.	B.E- Computer Science & Engineering	2009-10	60	No	No	F.No.06/06/KTK / ENGG/2008/003 dt.22/06/2009	
2.	B.E-Civil Engineering	2009-10	60	No	No		

3.	B.E-Electronics & Communication Engineering	2009-10	60	No	No		
4.	B.E-Mechanical Engineering	2009-10	60	No	No		
5.	B.E-Aeronautical Engineering	2010-11	60	No	No	F.No.South-West Region/1-328729 /2010/EOA dt.23/08/2010	
6.	B.E-Bio-Medical Engineering	2010-11	60	No	No		
7.	B.E-Electrical & Electronic Engineering	2011-12	60	No	No	F.No.South-West Region/1-402580963 /2011/EOA dt.01/09/2011	
	M.Tech/PG Courses						
1.	M.Tech – Product Design & Manufacturing	2013-14	18	No	No	F.No.South-West Region/ 1-1359990619 /2013/EOA dt.19/03/2013	
2.	M.Tech – Structural Engineering	2013-14	18	No	No		
3.	M.Tech – Software Engineering	2014-15	18	No	No	F.No.South-West Region/ 1-2017625631 /2014/EOA dt.04/06/2014	
4.	M.Tech – Digital Electronics & Communication Engineering	2014-15	18	No	No		

* *Write applicable one:*

Applying first time

8. Programs to be considered for Accreditation vide this application

S. No.	Program Name
1.	B.E- Computer Science & Engineering
2.	B.E-Civil Engineering
3.	B.E-Electronics & Communication Engineering
4.	B.E-Mechanical Engineering

9. Total number of employees: 124

A. Regular* Employees (Faculty and Staff):

Items		CAY		CAYM1		CAYM2	
		Min	Max	Min	Max	Min	Max
Faculty in Engineering	M	69		65		52	
	F	33		37		28	
Faculty in Maths, Science & Humanities	M	9		9		13	
	F	8		8		9	
Non-Teaching Staff	M	40		40		24	
	F	13		13		16	

* Means –

- Full time on roll with prescribed pay scale. An employee on contract for a period of not less than two years AND drawing consolidated salary not less than applicable gross salary shall only be counted as a regular employee.
- Prescribed pay scales means pay scales notified by the Regulatory Authority/ Central Government and implementation as prescribed by the Central/State Government as the case may be. In case State Government prescribes lesser consolidated salary for a particular cadre then same will be considered as reference while counting faculty as a regular faculty.

CAY: Current Assessment Year (July –June: completed)

CAYm1: Current Assessment Year minus 1

CAYm2: Current Assessment Year minus 2

B. Contractual Staff Employees (Faculty and Staff): (Not covered in Table A):

Items		CAY		CAYM1		CAYM2	
		Min	Max	Min	Max	Min	Max
Faculty in Engineering	M						
	F						
Faculty in Maths, Science & Humanities	M						
	F			Not Applicable			
Non-Teaching Staff	M						
	F						

10. Total number of Engineering Students:

Item	CAY	CAYM1	CAYM2
Total No. of Boys	211	170	178
Total No. of Girls	87	110	87
Total No. of Students	298	280	265

(Instruction: The data may be categorized in tabular form separately for undergraduate, postgraduate engineering, other program, if applicable)

Note:

In case the institution is running programs other than engineering programs, a separate table giving similar details is to be included.

11. Vision of the Institution:

Engineering the future of the nation by transforming the students to be technically skilled managers, innovative leaders and environmentally receptive citizens

12. Mission of the Institution:

1. To implement holistic approach in curriculum and pedagogy through Industry Integrated Interactions to meet the needs of Global Engineering Environment.
2. To develop students with knowledge, attitude and skill of employability, entrepreneurship (Be Job creators than job seekers), research potential and professionally ethical citizens.

13. Contact Information of the Head of the Institution and NBA coordinator, if designated:

Name: Dr M.S Murali

Designation: Principal

Mobile No: +91-9900028024

Email Id: principal@acsce.edu.in

NBA coordinator, if designated:

Name: Dr R.Siva Subramaniyam

Designation: Associate professor

Mobile No: +91-9945535836

Email Id: rssbaby@gmail.com

I.2. Name, designation, telephone number, and e-mail address of the contact person for the NBA:

Dr. M.S Murali
Principal
Tel: 080-28437955/56Mobile: +91-9900028024
Fax No.: 080-28437989
E-mail: principal@acsce.edu.in
Website: www.acsce.edu.in

I.3. History of the College / Institution (including dates of introduction and no. of seats of Various programmes of study along with NBA accreditation, if any), in tabular form:

Not Applicable

1.3.1 Historical background

With a view to make available enormous opportunities for the in higher and technical education, Honorable Shri A. C.Shanmugum, a Social Reformer in true sense, vowed to establish an ambitious project of an Engineering College at this interior, but a well connected place ACS College of Engineering (ACSCE), ACS College of Engineering, an institution and academic excellence, has been established in the year 2009 sponsored by Moogambigai Charitable and Educational Trust Bangalore with a cherished desire to serve the cause of humanity through the education. The institute is affiliated to Visvesvaraya Technological University, Belagavi. The college offers technical education in the range of engineering disciplines including new age ones such as like B.E- Aeronautical Engineering, B.E - Bio-Medical Engineering and so on.

The details of the programmes offered by the institute are depicted in Table below.

1.3.2. Location

Bangalore known as a green city is a centrally located and well connected to all the parts of the country by air, rail and road. It is a capital city of Karnataka State. It is a fast growing Metropolis and is the third fast growing city.

ACSCE is located in Bangalore, the silicon valley of India. Many colleges are situated in the heart of India's "Garden City or the Silicon Valley of India"-Bangalore (1257N, 7738E, 920m altitude), which ranks amongst the most dynamic, progressive and fascinating of Indian cities.

The college is located at a beautiful lush green landscape, free from polluted environment and excellent atmosphere and ambience ideally suited for growth of the sound, soul & mind.

It is on the Bangalore – Mysore Highway 15Km from the Bangalore City Railway Station and Central Bus Stand and 2Km from Kengeri Railway Station and 36Km from International Airport.

1.3.3. Regular Academic Programmes:

Academic Programmes

The Institution offers 7 Under Graduate Programs viz. B.E. in Aero, Bio-Medical, Civil, Computer Science, Electronics & Communication, Electrical & Electronics and Mechanical Engineering.

The Institution also offers four Post Graduate full time programs (2 years duration) viz. M.Tech-Structural Engineering, M.Tech-Product Designing and Manufacturing Engineering, M.Tech-Software Engineering and M.Tech-Digital Electronics and Communication Systems.

The Institution also offered Doctoral Research Ph.D (full/part time) program in all Engineering Departments viz., Aero, Bio-Medical, Civil, Computer Science, Electronics & Communication, Electrical & Electronics, Mechanical Engineering, Mathematics, Chemistry and Physics.

Sr.No.	Program Name	Year	Intake Capacity
Under Graduate Program : B.E.			
01.	Computer Science Engineering	2009-10	60
02.	Civil Engineering	2009-10	60
03.	Electronics And Communication Engineering	2009-10	60
04.	Mechanical Engineering	2009-10	60
05.	Aeronautical Engineering	2010-11	60
06.	Bio-Medical Engineering	2010-11	60
07.	Electrical And Electronics Engineering	2012-13	60
TOTAL			420
Post Graduate & Research Programs : M.Tech.			
01.	Structural Engineering	2013-14	18
02.	Product Design And Manufacturing	2013-14	18
03.	Software Engineering	2014-15	18
04.	Digital Electronics And Communication System	2014-15	18
TOTAL			72
Research Centers (R&D)			
01.	Department of Mechanical Engineering	2014-15	-
02.	Department of Physics	2014-15	-
03.	Department of Computer Science	2014-15	-
04.	Department of Civil Engineering	Awaiting Approval	
05.	Department of Electronics And Communication Engineering		
06.	Department of Aeronautical Engineering		
07.	Department of Bio-Medical Engineering		
08.	Department of Electrical And Electronics Engineering		

1.3.4 Accreditation Status:

-NA-

Campus

Satellite View of ACSCE campus

ACSCE campus spread over an area of 10-00 acres on Bangalore-Mysore Road. It presents a panorama of harmony in architecture and natural beauty. The campus has been organized in three functional sectors;

- Hostels for Students, Health Centre, Sports Complex
- Academic Buildings, Administrative Building and Library
- Residential Sector for Family & Staff

The academic buildings are located fairly in close proximate, to the hostels and the staff quarters. The campus has a full-fledged computerized branch of Kotak Mahindra bank with ATM facility, Post office, Axis bank ATM as well as courier services and other needs of students, residents and office are nearby.

The Institute has its own fully fledged Health Center with a full time residential medical Officer. The specialized medical services of a Psychological Counselor, Dietician, physiotherapist, Pathology lab, Yoga Centre and also medical consultants in Ayurveda and Homeopathy are available. Patients suffering from serious illness/enquiring intensive care are referred to the Govt. Medical College and Hospital and other Health Care Centers duly approved under the CGHS. A full time dedicated Ambulance service is available at the dispensary.

Spacious and multicuisine canteen is located close to the instruction zone and hostels. Two more cafeterias exist on the campus. The Institute has a well equipped Gymkhana apart from various playgrounds for Tennis, Badminton, Volley Ball, Foot Ball, Hockey and Cricket. NCC unit is also located on campus. They are very well used by students and campus residents of quarters.

CRITERIA 1

VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES

1 Vision, Mission and Programme Educational Objectives (75) Total Marks : 60

1.1 Vision and Mission (5) Total Marks : 5

(List and articulate the vision and mission statements of the institute and department)

The Vision of the ACS College of Engineering is:

Engineering the future of the nation by transforming the students to be technically skilled managers, innovative leaders and environmentally respective citizens.

The Mission of the ACS College of Engineering is:

1. To implement holistic approach in curriculum and pedagogy through industrial integrated interactions to meet the needs of global engineering environment.
2. To develop students with knowledge, attitude and skill of employability, entrepreneurship (we job creators than job Seekers), research potential and professionally ethical citizens.

The Vision of the department of Civil Engineering Department is:

"To achieve Excellence in Technology, Innovation and Research in ethical way to Lead and Serve the Nation"

The Mission of the Civil Engineering Department is:

Create and develop sustained environment of learning, to produce high caliber and dynamic Civil Engineers with due consideration of Economy, Ecology and Ethical issues of nation and to provide services to society and construction industry to assist in developing capabilities globally with respect to Science, Technology and Research.

1.2 Programme Educational Objectives (5) Total Marks : 5

(List and articulate the programme educational objectives of the programme under accreditation)

The Programme Educational Objectives (PEOs) of the department of Civil Engineering are given below:

PEOs explain wide objectives of the programme being offered. The mission statement of the department has to be accomplished to achieve these objectives.

PEO 1:

Graduates will able to apply fundamental principles of science, mathematics and engineering using modern tools to solve the societal and environmental problems.

PEO 2:

Graduates are able to use their practical, field survey, computer and analytic skills to build industry ready engineers to solve multi-disciplinary sustainable projects.

PEO 3:

Graduate applies innovative ideas to improve the technical competency in engineering decisions, lifelong learning, to equip leadership qualities in diverse teams, promote and practice appropriate ethical moral to become professional engineers.

1.3 Indicate where the Vision, Mission and PEOs are published and disseminated among stakeholders (10) Total marks: 10

1.3.1 Indicate how and where the Vision and Mission are published and disseminated

The Vision and Mission Statements are published

	Internal Stake Holders	External Stake Holders
Departmental Newsletter	√	
College Website (www.rrce.org)	√	√
Department website	√	√
Department Brochure	√	

The Vision and mission Statements are disseminated

	Internal Stake Holders	External Stake Holders
Faculty rooms	√	
Class rooms	√	
Departmental notice boards	√	
Laboratories	√	
Departmental corridors	√	
Orientation/ Induction Program	√	
Seminar Hall	√	√

1.3.2 State how and where the PEOs are published and disseminated

(Describe in which media (e.g. websites, curricula books) the PEOs are published and how these are disseminated to stakeholders)

The Programme Educational Objectives (PEOs) of department of Civil engineering are published and disseminated through

- College website- www.acsce.edu.in
- Department Notice Board
- Department Conference Hall

1.3.3 List the stakeholders of the programme

(List stakeholders of the programme under consideration for accreditation and articulate their relevance)

The following are the stakeholders of the programme.

Internal Stake Holders

Management- Moogambigai Charitable and Educational Trust (Regd)
Governing Council Members
Faculties
Non-Teaching Staff
Students

External Stake Holders

Parents
Employers
Industries
Alumni

1.4 State the process for defining the Vision and Mission of the Department, and PEOs of the program (25)

1.4.1 Mention the process for defining Vision and Mission of the department

The process for defining Vision and Mission of the department was discussed in the department level and it was established through a consultative process involving the stakeholders of the department, the future scope of the department and the societal requirements as shown in

Figure 1.4.1. In establishing the vision and mission of the department, the following steps were followed:

- Step 1:Vision and Mission of the Institution are taken as basis
- Step 2: Views are taken from stakeholders of the department such as students, faculty members, parents, Employers and alumni.
- Step 3: The views about the vision and mission of the department are formulated by the team of faculty members of the department.
- Step 4: The vision and mission are analyzed and reviewed to check the consistency with the vision and mission of the institute at the university level by Academic Council.
- Step 5: Finally the Board of Management approve the vision and mission of the department.

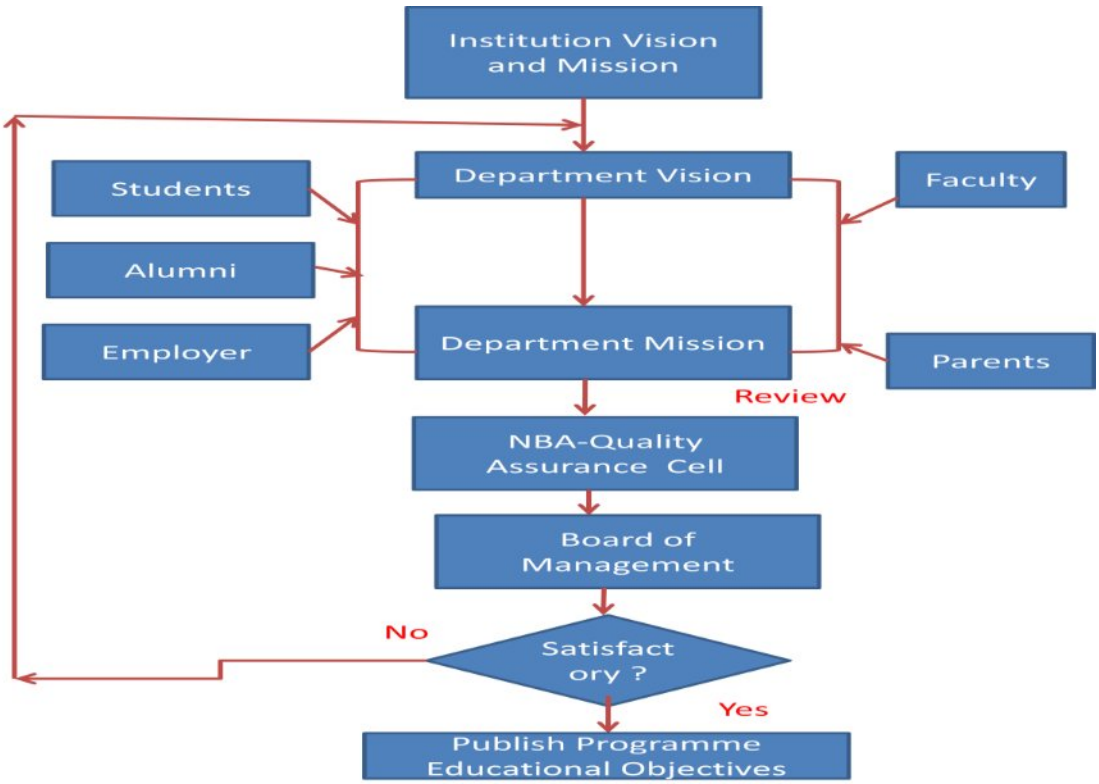


Figure 1.4.1 Process defining Department Vision & Mission

1.4.2 State the process for establishing the PEOs

(Describe the process that periodically documents and demonstrates that the PEOs are based on the needs of the programme's various stakeholders.)

Figure 1.4.2 In establishing the vision and mission of the department, the following steps were followed

The Programme Educational Objectives are established through a consultation process involving the core constituents such as: Student, Alumni, Faculty, Employers and Parents. The PEOs are established through the following process steps.

- Step 1: Vision and Mission of the college are taken as basis.
- Step 2: Vision and Mission of the department are taken as a basis to interact with various stakeholders.
- Step 3:The programme coordinator collects the views of the stakeholders.
- Step 4: On considering the views that were collected from the stakeholders, the PEOs are formulated by the team of senior faculty members identified for the programme.
- Step 5: The PEOs are represented before the school level NBA-QC committee for additional inputs to improvise the programme
- Step 6: Finally Academic Council and Board of Management approves the PEOs.

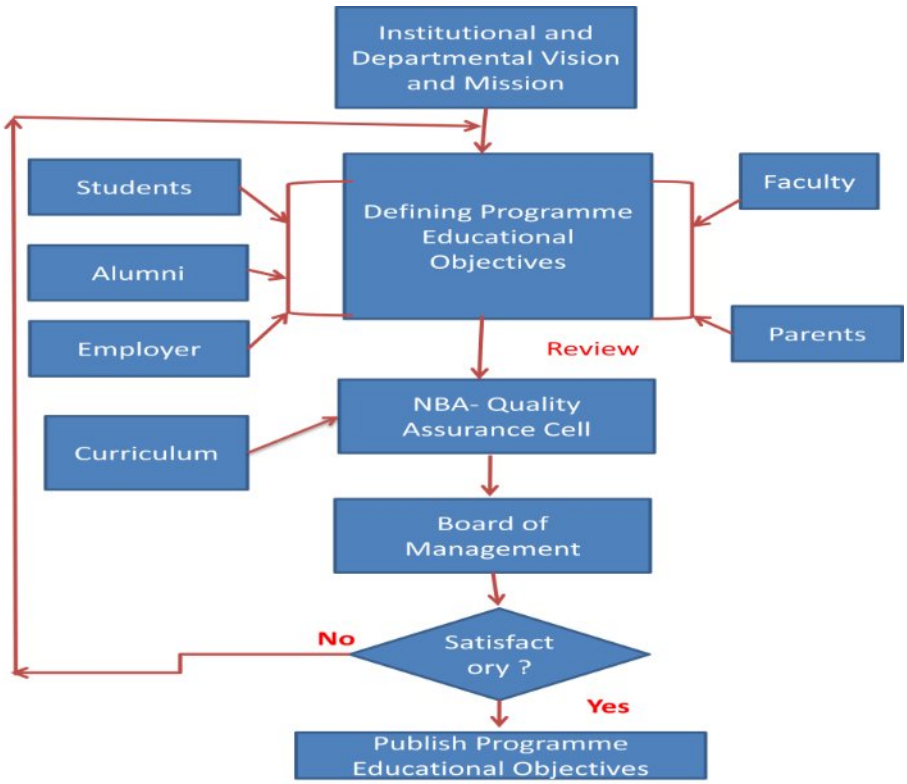


Figure 1.4.2. PEO Definition & Assessment Process

1.5. Establish consistency of PEOs with Mission of the Department (15)

(Describe how the Programme Educational Objectives are consistent with the Mission of the department.)

<u>Mapping between PEOs with the Mission of the institute & department</u>

The PEOs of department of civil engineering are closely linked and consistent with the mission of the institute and the department. The programme educational objectives provide the first step towards a career of achievement and service in the Infrastructural sector. The needed background of knowledge and skills to survive in the industry are acquired through PEO-1 & PEO-2. PEO-3 focuses on the various professional activities that are carried out by the students in order to provide innovative solutions for the existing issues in different domains.

The Mission of the CE Department is as follows (reproduced):

Create and develop sustained environment of learning, to produce high caliber and dynamic Civil Engineers with due consideration of Economy, Ecology and Ethical issues of nation and to provide services to society and construction industry to assist in developing capabilities globally with respect to Science, Technology and Research.

The mapping between the PEOs and mission of the department is shown in Table 1.1.

Table 1.1 Mapping of PEOs of the department with the Mission of the department

Mapping between PEOs with the Mission of the department

Mission of the Department	Programme Educational Objectives (PEOs)		
	PEO-1	PEO-2	PEO-3
Create and develop sustained environment of learning	3	3	3
To produce high caliber and dynamic Civil Engineers with due consideration of Economy, Ecology and Ethical issues of nation	3	2	3
to provide services to society	1	2	3
construction industry to assist in developing capabilities globally with respect to Science, Technology and Research	3	3	3

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

CRITERIA 2

PROGRAM CURRICULUM AND TEACHING – LEARNING PROCESSES

CRITERIA 2

PROGRAM CURRICULUM AND TEACHING – LEARNING PROCESSES

2. Programme Curriculum and Teaching-Learning Processes (120)

2.1 Programme curriculum:

2.1.1 State the process used to identify extent of compliance of the University Curriculum for attaining the Program Outcomes and Program Specific Outcomes as mentioned in Annexure I. Also mention the identified gaps, if any (10).

PO-Program Outcomes

Engineering Graduates will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PSO-Program Specific Outcomes

1. Gradates will be able to apply technical skills and modern engineering tools for civil engineering day to day practice.
2. Graduates will be able to participate in critical thinking and problem solving of civil engineering field that requires analytical and design requirements.
3. Graduates will be able to pursue of lifelong learning and professional development to face the challenging and emerging needs of our society.

A. Process used to identify extent of compliance of the University Curriculum for attaining the Program Outcomes and Program Specific Outcomes.

This college is affiliated under Visvesvaraya Technological University, Belgaum. Civil Engineering department curriculum affiliated to Visvesvaraya Technological University, Belagavi, and Karnataka comprises of General, Basic Sciences and Professional Subjects.

In general, Curriculum maintains the balance in the composition of Basic Science & Engineering, Humanities, Professional Courses and their distribution in Core and Electives along with Seminars & Project works. The feedback from the Alumni's and Industry experts were taken with at most importance and GAP's were identified along with the data collected from Internet (National & International websites), other universities which are located in and around Karnataka. The data collected was then presented in front of the Department Core Committee. The committee illustrates the same to the Institutional core committee at institute level and syllabus beyond content framed. If some components, to attain CO's/ PO's, are not included in the curriculum provided by the affiliated university then the Institution makes additional efforts to impart such knowledge by covering aspects through "BEYOND SYLLABUS CONTENTS".

Referring university curriculum all the Subjects are mapped with twelve Programme outcomes and gaps are identified. Few of the subjects prescribed by the university are not fully in compliance with, PO09 – Communication and PO12- Lifelong learning.

Courses are analysed for the curriculum gaps using the following processes:

- Input from the Teacher handling the Course.
- Input from Industry Experts/ Employers.
- Based on the feedback from placement cell.

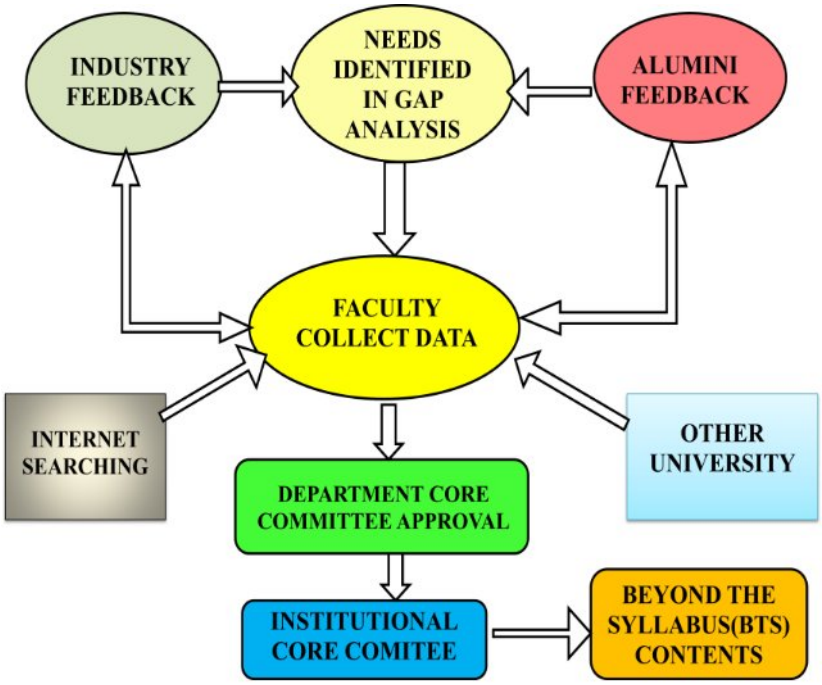
- Based on Alumni feedback.
- Based on management feedback.

B. List the curricular gaps for the attainment of defined POs and PSOs.

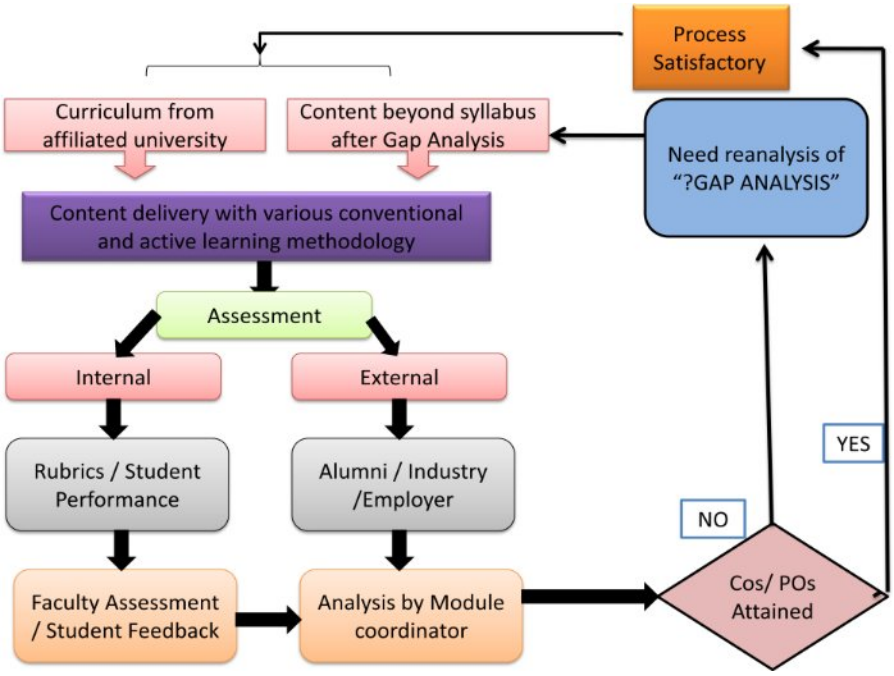
Recommended subjects to bridge academic and industry

Gap Identification

Process for "Curriculum GAP ANALYSIS"



Processes used to identify the curricular gaps to the attainment of the COs/POs



The process of assessment of gap analysis

List of gaps identified & deliberated in the department staff meeting, the final list of gaps & its appropriateness.

Sl. No.	Subject with Subject Code	Gap Identified	Relevance to PO & PSO
1	10CV32	Concrete, Stabilized mud blocks and other alternative materials are currently used in practice, these topics are not included.	**5,11** *1,3*
2	(10CV44)	The advanced instruments for surveying such as Total Station is not covered adequately in the syllabus.	**5,7** *1,3*
3	(10CV53)	Analysis by stiffness & flexibility method using system approach is not included. The system approach provides the students with a very clear concept and helps in visualizing the behavior.	**2,3,4** *1,2*
4	(10CV56) (10CV63)	The use of software's for geometric design of highways & Railways is not included in the curriculum.	**2,3,5** *1,3*
5	(10CV56) (10CV64)	The topic on soil stabilization and soil reinforcement is not included in the curriculum.	**1,2,4,12**

			1,2,3
6	(10CV757)	Use of advanced methods/Techniques like RS & GIS for identifying disposal lands and route optimization for solid waste management are not included.	**2,7** *1,3*
7	(10CV71) (10CV835)	Low cost and alternative methods for waste water treatment are not included.	**4,7,11** *1,3*

2.1.2. State the delivery details of the content beyond the syllabus for the attainment of POs and PSOs (10)

Course Delivery Methods used in our department:

- Lectures
- Presentation (Still and Video)
- Experimental & Laboratory Work
- Group tasks (Projects)

Course Delivery	**Attainment of PO's & PSO's**		**Justification**
	PO's	**PSO's**	
Lecturing	**1,2,3,4**	*1,2,3*	Faculties of the Civil Engineering Dept Effectively teach students about a concerned subject Faculties convey significant information, history, background, theories, analogies and equations to make the concepts clear. Faculties relate engineering practice
Presentations (Still and Video)	**5,6,10**	*1,3*	Presentations are given to illustrate ideas and concepts. Presentations give information with data relating to an issue. Videos effectively communicate the working of actual engineering solutions-long learning in the appropriate societal context.
Experimental and laboratory work	**4,5,9**	*1,2,3*	Laboratory work demonstrates how theory can be verified by experiments through interpretation of results. Experiments are normally done in groups thereby encouraging students to do team work.
Group Task (Extensive Survey Project and Project Work)	**1,2,3,4,5,6,7, 8,9,10, 11,12**	*1,2,3*	

List of delivery details of the content beyond the syllabus for the attainment of POs and PSOs.

Sl.No	Date	Action taken	Resource person with designation	Organised by	Presentees	Relevance To Pos and PSO s
CAY 2015-2016						
1	20.2.2016	Industrial visit to RMC plant at Kumbalagudu	Laxmi.G and Shashi kiran	ACSCE	8 th sem students	**1,2,10,12** *1,2,3*
2	22.2.2016	Technical talk on cement and its applications	Mr.M.S Punna Shetty, senior technical manager.	JK Cements	4th sem, 6 th sem, 8 th sem students and all Faculty	**1,3,4,5** *1,2*
3	4.3.2016	Technical talk on Recent Trends in GIS	Ass.Prof.Dr.Kumar, JAIN UNIVERSITY.	ACSCE	4th sem, 6 th sem, 8 th sem students and all Faculty	**2,7** *1,3*
4	9.3.2016	Conduction of environmental awareness program	ACSCE	ACSCE	4th sem, 6 th sem, 8 th sem students and all Faculty	**4,6,7,8** *1,2*
5	16.3.16	Technical talk on challenges of constructions and timely action of civil engineers-need of the hour	HOD &Prof.Dr.Barathi Ganesh ,NITTE MIT.	ACSCE	4th sem, 6 th sem, 8 th sem students and all Faculty	**1,6** *1,2*
6	12.4.16	One day workshop on “Analysis&design structures using RIVET software	Sri.Banu prakash Dixith ,B.N EDS Technologies.	ACSCE	6 th sem, 8 th sem students and all Faculty	**2,3,4,5** *1,2,3*
7	15.4.2016	Technical talk on methods of soil satabilization.	Ass.Prof.Shlok singh,ACSCE.	ACSCE	4th sem, 6 th sem, 8 th sem students and all Faculty	**1,2,4,12** *1,2,3*

8	6.5.2016	Technical talk on highway Geometric software MX ROADS	Ass.Prof.Viswanth , ACSCE	ACSCE	4th sem, 6 th sem, 8 th sem students and all Faculty	**2,3,5** *1,3*
9	As per timetable	Additional programming skills.	Conducting additional classes by subject specialization teachers	ACSCE	4th sem, 6 th sem, 8 th sem students and all Faculty	**1,10,11,12** *1,3*
10	15.9.15	Engineers Day	Principal,ACSCE	ACSCE	All faculty and students	1,2,8,9,10 *1,2,3*
11	29.9.15	Technical talk on Utilization of plant material in water treatment	Prof.Dr.Udaya simha,BMSCE.	ACSCE	5 th sem, 7 th sem students and all Faculty	1,7,8 *1,2*
12	19.10.15	One day workshop on Analysis and design of structures using building information modelling (BIM) Software	Sri.S.N.Amarnath ,FE designs.	ACSCE	5 th sem, 7 th sem students and all Faculty	2,3,4,5 *1,2,3*
13	20.10.15	Technical talk on Analysis and design of structures using RIVET Software	Sri.Banu prakash Dixith ,B.N EDS Technologies.	ACSCE	5 th sem, 7 th sem students and all Faculty	2,3,4,5 *1,2,3*

14	9.11.2015	Technical talk on Recent Alternative materials in construction	Prof.Dr.Venkatesh Babu, JSS ACE	ACSCE	5 th sem, 7 th sem students and all Faculty	3,4,5 *1,2*

CAY 2014-2015						
1	15.9.14	Engineers Day	Principal,ACSCE	ACSCE	All faculty and students	**1,2,8,9,10** *1,2,3*
2	29.9.14	Technical talk on Deflouridation of drinking water using low cost absorbants	Prof.G.Gayathri,Christ University	ACSCE	5 th sem, 7 th sem students and all Faculty	**1,4,7** *1,2*
3	17.10.14	Technical talk on Geo polymer concrete	Prof.M.Beaulah,Christ University	ACSCE	5 th sem, 7 th sem students and all Faculty	**1,2,3,5** *1,2,3*

2.2 Teaching Learning Process (100)

2.2.1 Describe processes followed to improve quality of teaching and learning (25)

A. Adherence to Academic calendar (Institute and Department calendar)**:**

From the college calendar of events a department calendar of events is derived which is specific to the department.

Lesson plan with course objectives and course outcomes are prepared by the subject handling faculty before the commencement of the semester and is dually approved by the Head of the department and made available to the students. According to the lesson plan, work done has been inculcated in the academic file to ensure coverage of syllabus dually monitored by Head of the department.

Maintenance of Course files:

For each course, a course file is prepared by the concerned faculty. The course file consists of following items.

- Teaching plan:

Teaching plans for each and every course are prepared by the faculty. Whole syllabus is divided into 8 units and 52 lectures as per the teaching scheme prescribed by the university.

- The course objectives are defined for each course in line with the POs.
- Lesson plan:

Lesson plans are prepared for each lecture in the teaching plan by the faculty before the commencement of the semester and it is duly approved after careful examination by the Head of the Department and made available to the students.

The lesson plan encompasses the learning outcomes and the assessment of outcomes.

- **Question Bank:**
  Question banks are prepared for each topic in the course based on the course objectives and considering the nature of the university question papers. The previous question papers of University are also maintained in the course files.
- **Assignment**:
  Questions and test question papers along with key solutions are included in the course files
- **LIC audit** (internal/external):
  LIC Audit Members monitors the maintenance of course files and class deliveries.

B. Use of Various instructional methods and pedagogical initiatives:

- **Lecture method and Interactive learning:**
  The faculty use chalk and board and audio visual aids in teaching. Students are also encouraged to actually interact during the lecture hour by getting the doubts clarified on the spot.

- **Project-based learning:**
  During the Survey Camp in 6th semester and project work in 8th semester, many real time projects are given to the students and they are guided by both faculty and Industry/Research personnel.

- **Computer-assisted learning:**
  The Department has required number of computers, printers, LCD projectors, application software's and system software's with wifi connections. These are effectively used for teaching. Many final year projects are completed through the use of above said resources.
- **SMART class Room**

C. Methodologies to support weak students and encourage bright students:
Guidelines to identify weak students

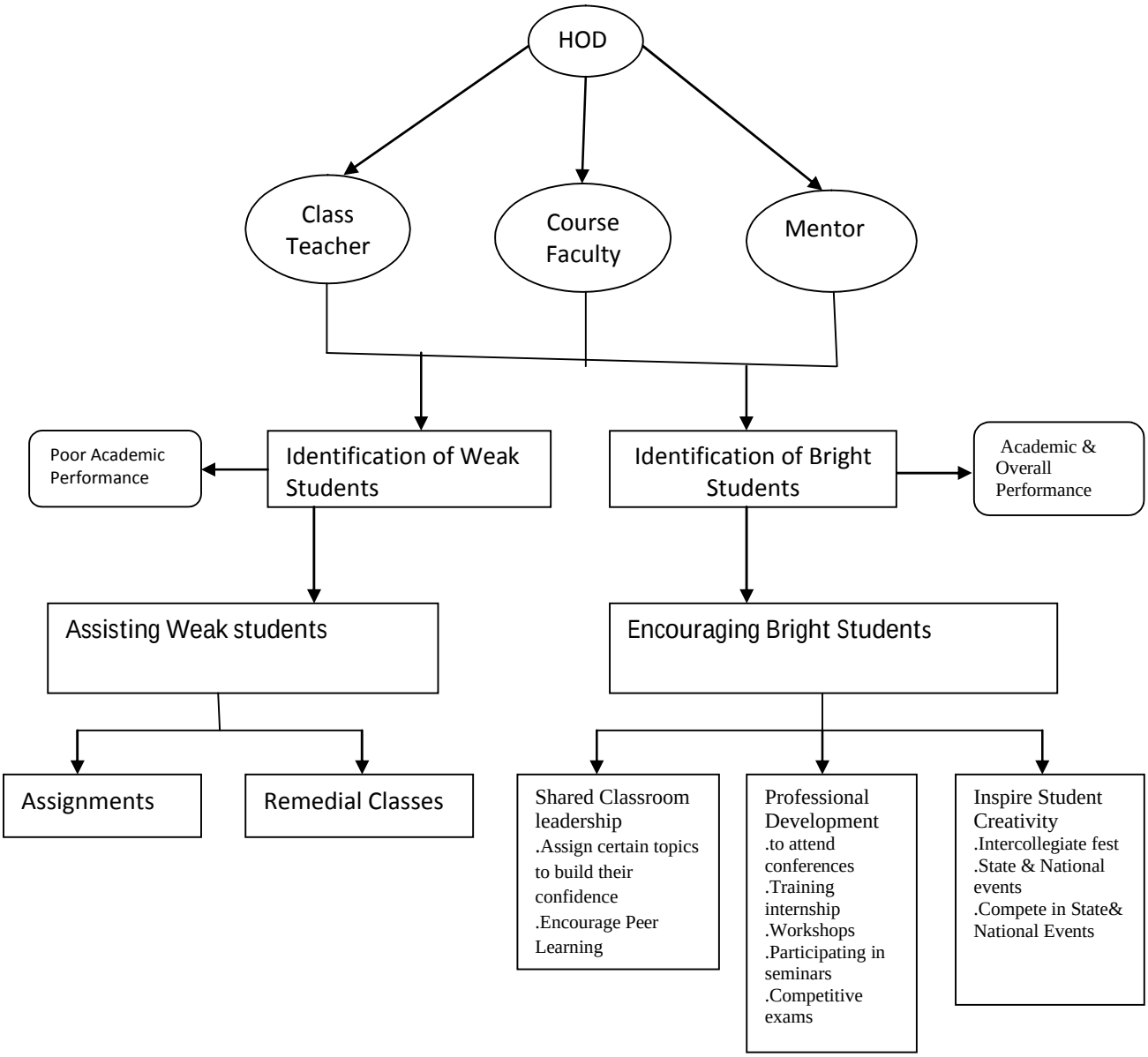
The Counsellors regularly conduct meetings regarding progress of their mentees and are responsible to identify students who scored less than 60% marks in their internals. Under the HOD direction, the students Counsellors evaluates the progress card of those students who score below 60% marks in three or more subject and below 75% attendance are considered as **academically weak students** and same is also intimated to their parents.

Identification Criteria	Actions taken
Students scoring less than 60% of marks in Internal Assessment.	1. Student counselor follows their progress regularly advising students about attending classes, making up classes missed, and getting additional help. 2. Intimating parents to counsel their wards. 3. Conduction of remedial classes
Diploma students who entered with less basics of mathematics	Conduction of remedial classes.
Students who fail in semester exams	Conduction of extra classes to those who failed in previous semester subjects.

Guidelines to identify Bright students

Identification Criteria	Actions taken
Students awarded with First Class with Distinction (FCD) in their Semester exams.	FCD functions are conducted to felicitate those students and Momentos are also distributed to motivate them to continue their Excellency in academics.
Top three students of each class.	Awarded with momentos
Students securing ranks at University level.	Distribution of Gold medals from the university

Process for Encouraging Bright Students and Assisting Weak Students



D. Quality of classroom teaching:

Civil Engineering Program follows the curriculum prescribed by the Visvesvaraya Technological University, Belgaum.

1) Program is spread over 08 semesters.

2) Minimum of 85% attendance is mandatory to get eligibility to attend practical & theory examinations along with a provision of condo nation of 10% of the attendance by the Vice-Chancellor on the specific recommendation of the principal of the college.

3) There shall be maximum of 25 Internal Assessment Marks in each theory subject or practical papers.

4) Three Internal Tests are offered to the student, after evaluating average marks of best two tests will be considered for Internal Assessment Marks for the each subject.

5) A candidate failing to secure a minimum of 50% of the IA marks in practical/project work shall not be eligible for the practical/project in the university.

6) Candidates shall carry forward maximum of 4 subjects form either 1st or 2nd semester to get admission to 3rd semester, and to get admission for 5th semester he/she can carry forward maximum of 4 subjects form either 3rd or 4th semester & should have passed in all the subjects of 1st& 2nd Semesters. Similarly maximum of 4 subjects can be carried forward form 5th&6th semester to get admission to 7th semester and should have cleared all the subjects from 1st to 4th semester.

7) For a pass in a theory subject/drawing, the candidate shall secure minimum of 35% of the maximum marks prescribed in the university examination & 40% of marks in the aggregate inclusive of the IA marks. Also for practical/project/viva-voce examination, a candidate shall secure a minimum of 40% of the maximum marks prescribed by the university.

8) A candidate shall take one elective in 6th semester from 'Group-A', two electives in 7th semester (one each from Groups 'B', 'C') & two electives in 8th semester (one each from Groups 'D' & 'E'). There shall be a minimum of 3 electives are to be listed in every group.

The following innovative teaching methods are adopted by the faculty:

- Computers are used for teaching purposes and internet facility is available to students and faculty.
- Faculty members make use of sources like journals (ASCE & Science Direct) & internet sources for effective teaching.
- projectors are used for teaching purposes.

E. Conduct of Experiments:

As per the university guidelines 10-12 experiments are to be conducted. However for the relevant courses, provision is made to conduct 1 or 2 experiments beyond the specified list, but within the scope of the course. All laboratory have excellent facilities, both hardware and software based. Laboratory manual explaining the details of the experiment is available with the course teacher and is supplied to the students during the laboratory schedule. The observations are checked and verified by faculty and record books are maintained systematically. This guides the students to understand and perform the experiment easily.

F. Continuous Assessment in laboratory:

Continuous assessment system is also implemented for assessment of laboratory work. The assessment is done on the basis of submission of laboratory records, understanding of the experiment through oral viva voce questions and participation in performing the experiment. Neatness of the laboratory record book is also given weightage in the assessment.

G. Student feedback of teaching learning process and actions taken:

At the end of the semester, all the students are required to fill a feedback-form apprising the faculty using a scale of 1 (high) through 5 (low).

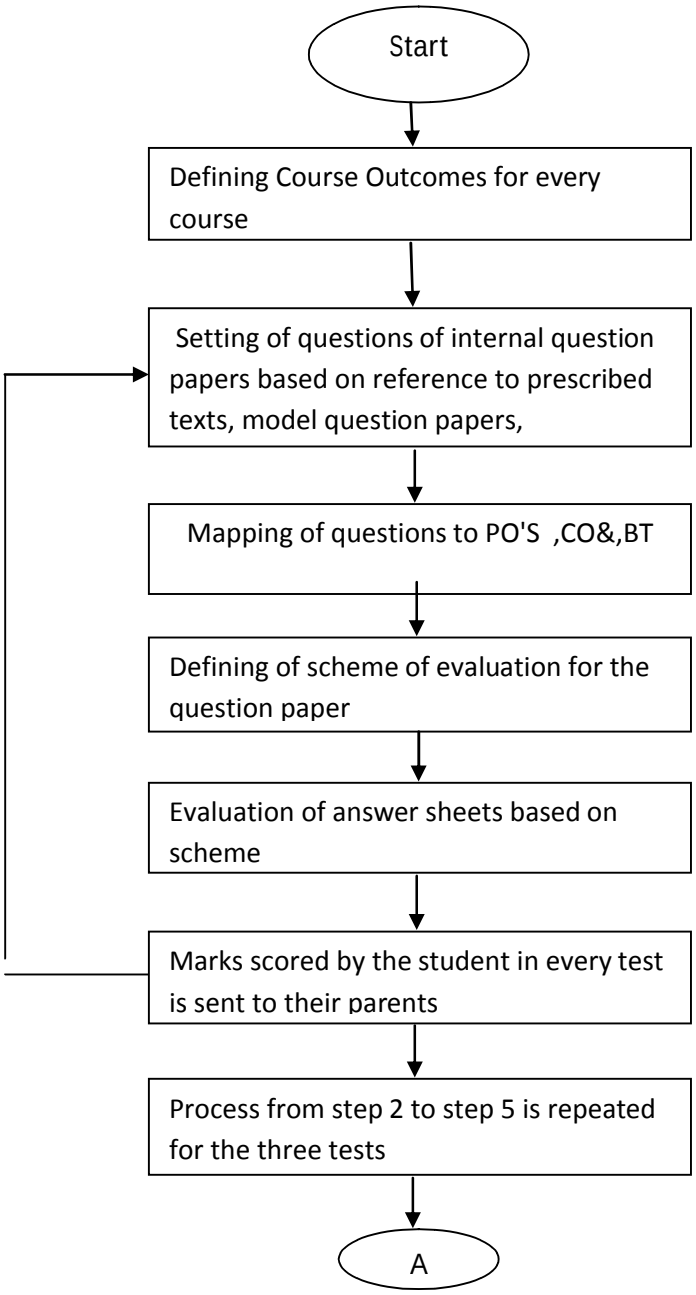
- Lecture classes are monitored by senior Professors and the Head of the Department. They give constructive comments to improve the quality of teaching and the teaching- learning process.
- Counseling and motivating by the respective HOD for those faculty members who have secured low scores and negative comments, if any, in the feedback. This motivates them to improve their skills and abilities.
- If required, training / orientation programmes are conducted by professional experts to master the skills of the faculty members in the nuances of teaching, thus improving the efficiency of teaching-learning process.

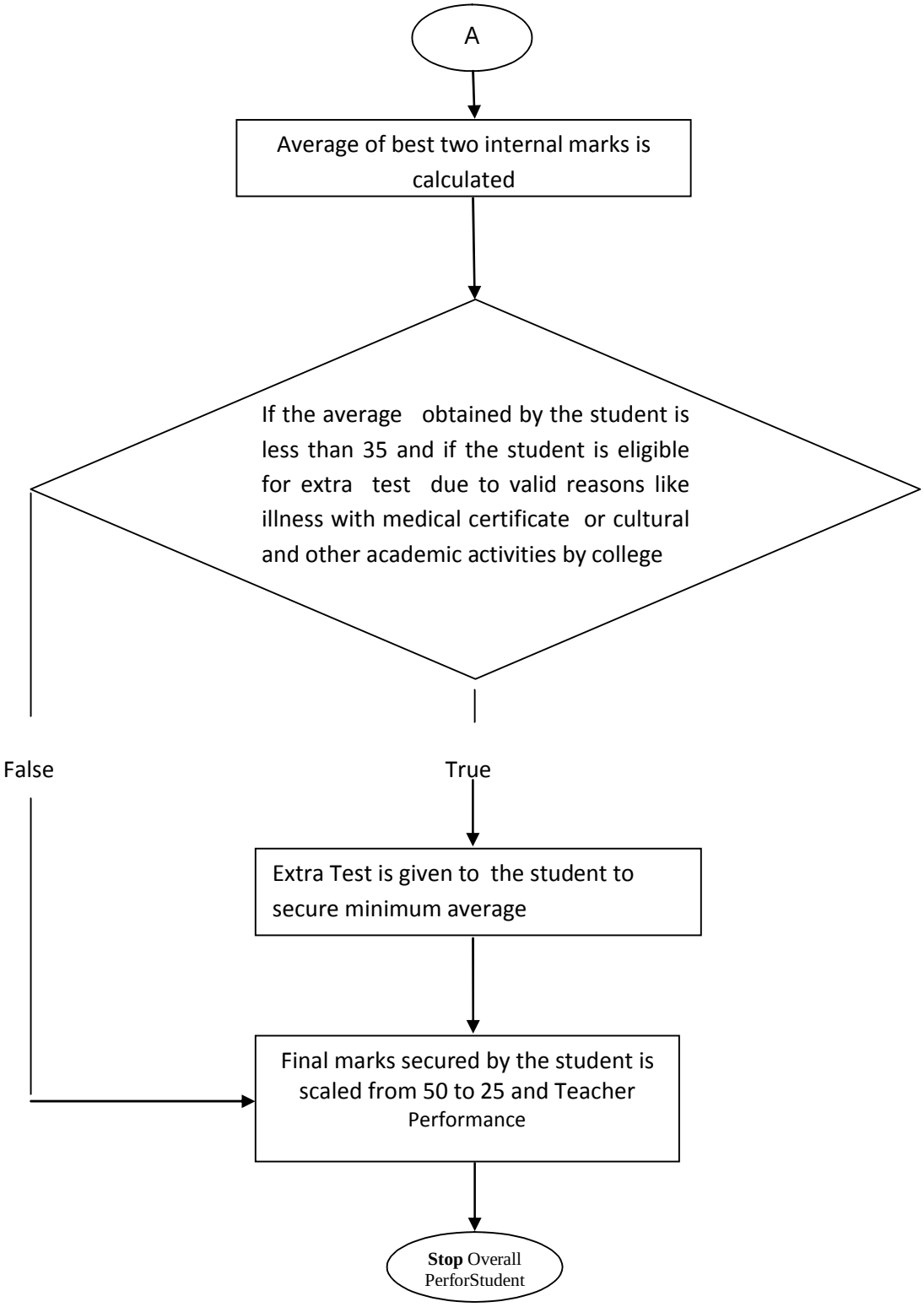
2.2.2 Quality of Internal Semester Question Papers, Assignments and Evaluation (20)

(Mention the initiatives, implementation details and Analysis of Learning levels related to quality of Semester question papers, assignments and evaluation)

A .Process for Internal Semester Question Paper setting and evaluation and effective process implementation:

In a semester, there are three tests. Each of the test consists of descriptive questions. The average of the best two tests is considered for final internal assessment.


Start
Defining Course Outcomes for every course
Setting of questions of internal question papers based on reference to prescribed texts, model question papers,
Mapping of questions to PO'S ,CO&,BT
Defining of scheme of evaluation for the question paper
Evaluation of answer sheets based on scheme
Marks scored by the student in every test is sent to their parents
Process from step 2 to step 5 is repeated for the three tests
A



Blooms Taxonomy is followed while setting the internal exam question papers where the following strategy is applied.

B. Process to ensure questions from outcomes/learning level perspectives

C. Evidence of CO's Coverage in class test.

Individual student's blue book is evaluated and question answered by student is mapped with CO's and PO's

2.2.3. Quality of Student Projects (25)

Initiatives

- The student's projects are selected in line with department Program outcomes.
- Students are provided with brief idea of various fields for selecting the project ideas(Refering journals, Ph.D Works, Future Scope of the existing projects).
- The faculties encourage the students to carry out in house projects and support will be provided with all necessary resources.
- The faculties encourage students to participate in project exhibitions. The project exhibition was aimed to provide common platform to exhibit their innovations and their work towards excellence in latest technology.
- The faculties encourage students to publish their project work in reputed journals/conferences.
- The faculties encourage students to avail the external funding schemes for their project work. (like KSCST, VTU project funding scheme)

  Evaluation scheme for final year Project.

Phase – 1

Sl.No.	Performance Indicator	Marks
1	Literature Survey/Phase 1 report	(10)
2	Presentation	(10)
3	Questions and Answer	(05)

Phase – 2

Sl.No.	Performance Indicator	Marks
1	Methodology Phase 2 report	(10)
2	Presentation	(10)
3	Questions and Answer	(05)

Phase – 3

Sl.No.	Performance Indicator	Marks
1	Final report	(25)
2	Demo with presentation	(15)
3	Questions and Answer	(10)

The following committee members are responsible for making the regulations for evaluation and for complete evaluation process

1. HOD
2. Project Co-ordinator
3. and respective Guides

Best Project Evaluation scheme

Sl.No.	Performance Indicator	Marks
1	Innovativeness & creativity of the project	(10)
2	Review of literature& related studies about the project	(10)
3	Implementation Strategies	(10)
4	Question and Answer	(10)

Best three Projects (2015-2016)

Sl.No.	Name	Topic/Title	Guided By	Relevance to POs & PSOs
1	Darshan Jadhav Y M Deepak H M Niranjan Kumar H V Ningaraju C S	Evaluation of strength behavior of coconut fiber reinforced concrete by partial replacement of cement with GGBS	Kavitha S	1,2,3,4,5,6,7,8,9,10,11,12 *1,2,3*
2	Nikith Gowda Shashikiran G Thirumalesh K C Vinay Kumar B C	Deflouridation of drinking water using locally available absorbents	Gayathri G	1,2,3,4,5,6,7,8,9,10,11,12 *1,2,3*
3	Manjunath S Chethan T G Namratha G	Evaluation of effects of pollutants in the Cauvery river of the selected study area	Shashi Kiran C R	1,2,3,4,5,6,7,8,9,10,11,12 *1,2,3*

Best three Projects (2014-2015)

SL No.	Name	Project Title	Guide Name	Relevance to POs & PSOs
1	Mahesh G B Divyashree U Kiran R Ranjith K S	Disposal of Organic Waste at Source	Prof. Shashi Kiran C R	1,2,3,4,5,6,7,8,9,10,11,12 *1,2,3*
2	Dinesh Borad Mahadevaprasad C Prajwal S patil Sandeep P	Self curing concrete	Prof. Manjula V	1,2,3,4,5,6,7,8,9,10,11,12 *1,2,3*
3	Manjunath Y S Rakshitha gowda B C Ranjitha N Shalakapriyadarshini C A	Eco friendly Concrete Using Bi-products of Steel Industry	Prof. Reena K	1,2,3,4,5,6,7,8,9,10,11,12 *1,2,3*

Best three Projects (2013-2014)

Sl. No.	Project Batch	Project Title	Project Guide	Relevance to POs & PSOs
1	SHARANYA.K.B VIKRAM.S ANILSINGH SYED BILAL	Characterization of Ground water and Delineation of Land use using RS & GIS.	Prof. Shashi Kiran C R	1,2,3,4,5,6,7, 8,9,10,11,12 *1,2,3*
2	BHARATH.K.R VISHWANATH K K HARISHA.H.M PAVITHRA.M.N	Experimental study on Concrete using Recycled plastic as Coarse aggregate.	Prof. Umadevi R	1,2,3,4,5,6,7, 8,9,10,11,12 *1,2,3*
3	GIREESHA.M.R NAMRATHA.R SHARATH.B SHIVARAJ GUNDAGI	Co-relation of CBR with Index properties & Engineering properties for Fine grained soil.	Prof. Venkatesh R	1,2,3,4,5,6,7, 8,9,10,11,12 *1,2,3*

Best three Projects (2012-2013)

Sl. No.	Project Batch	Project Title	Project Guide	Relevance to POs & PSOs
1	SHruthi S Kannur Varsha R Shiva Prasad SH N Yogesh S	Analysis & Design of Housing Chamber	Prof. G M Shankariah	1,2,3,4,5,6,7, 8,9,10,11,12 *1,2,3*
2	Kiran Kumar D P Mahesh N C	Volume reduction and Stabilization of Sewage	Prof. K Nagasahadeva Reddy	1,2,3,4,5,6,7,

	Ramesh S	Sludge in Fixed Bed Reactor Using FAB Media	Mr. R S Arun Kumar M S	8,9,10,11,12
	Sriharsha V			*1,2,3*
3	Binu N F	Application of GIS and Remote Sensing in Predicting and Managing Anthropogenic Disasters in Bangalore City	Prof. Shiju Easo John	1,2,3,4,5,6,7,
	S Monica			8,9,10,11,12
	Kokila K		Mr. Mohan Kumar S M	*1,2,3*
	Shreyas S			

Our Semester students have done their final year projects in industries in Bangalore and have obtained practical exposure.

Implementation

- *A project coordinator is appointed by the Head of the department who is responsible for planning, scheduling and execution of all the activities related to the student project work.*

Timeline	**Task**	**Particulars**
SEMESTER SEVEN		
2nd week	Call for project batch and guide allotment	Students are invited to prepare their batch and get it registered with the project coordinator of the department. They will receive project batch identification number which is used as reference throughout the academic year. With respect to the areas of interest of each guide the batches will receive a guide to them.
5th week	Call for Project Titles	Students are instructed to submit the title of the project in consultation with their respective guide in a given proforma to the project coordinator.
12th week	Synopsis submission	The student submitting project titles are pre-evaluated by a team of faculty.
14th week	Project title finalization and Abstract submission	The submitted project titles are reviewed by a committee consisting of Project coordinator, Head of the department and some senior faculties.
SEMESTER EIGHT		
4th week	First Review	Students are instructed to submit resource requirement specification and give a PowerPoint presentation for the project. (Evaluation phase I by a

		team of faculty)
8th week	Second Review	Students are instructed to submit Design document of the project and give a PowerPoint presentation for the project. (Evaluation phase II by a team of faculty)
12th week	Final Demonstration	Students are instructed to submit complete project report with university compliances and give a PowerPoint presentation for the project. (Evaluation phase III by a team of faculty)
14th week	Project internal marks announcement	The marks for the project work is announced and processed according to the university regulations.

2.2.3.1.2. Impact analysis

- New innovative ideas are born for project work
- Skills or abilities of students improved.
- Knowledge on various aspects of project management were developed
- Confidence level of the students was boosted
- Improved teamwork spirit
- Implementation and deployment of the project for social benefits.
- Document preparation and presentation.
- More tendencies to showcase their project work in project exhibition were observed.

A. Identification of projects and allocation methodology to Faculty Members. (3)

- Projects are identified to relevant context. The need for the project and the end users of the project are verified for the current context.
- The problem definition with their requirements and constraints are verified.
- The knowledge, methodology, skill set and interest of the students to implement the project are considered to undertake the projects.
- Faculties of higher cadre are allocated as guides to guide the student's project.
- Each project team varies from two to four students.
- Faculty profile should match with the domain of the student's project.
- Students are also given choice to choose their guide that matches their project domain.

B. Types and relevance of the projects and their contribution towards attainment of PO's. (5)

- Current academic projects are mapped to POs and PSOs.
- Each project is evaluated with internal marks and are graded according to their project quality and with their contribution towards attainment of PO's.

C. Process for monitoring and evaluation. (5)

- Project students should meet their respective guide weekly once and asked to explain their progress they have done in their project in that week.
- They should submit project progress report weekly once and to get approved by the respective guide.
- The project guides will evaluate the report submitted by the students and help them to go with project work.
- Project guide will each assess each student in team and make them work in right way.

D. Process to assess individual and team performance (5)

- Project progress seminars are conducted once in every month by the team of their respective guide, a professor cadre faculty, an Associatie professor and an Assistant professor.
- The project seminar should be given by all the project team members according to the division of project.
- Each student in the project team is assessed to their skill set to deliver the seminar, explain the concept and way to make project assess team to understand their work.
- Each individual and team performance is purely based on this project seminar presentation and the viva voice and progress work they show to their guide.

E. Quality of completed projects/working prototypes (5)

- Final project demo for the working prototype and the report are evaluated by a team of their respective guide, a professor cadre faculty, an Associate professor and an Assistant professor.
- The projects are evaluated and are awarded internal assessment marks for maximum 100 and are graded according to the project contribution towards attainment of PO's and PSO's.

2.2.4. Initiatives related to industry interaction (15)

(Give the details of Industry involvement in the programme such as industry-attached laboratories and partial delivery of courses by industry experts etc. Mention the initiatives, implementation details and impact analysis etc.)

2.2.4.1. Initiatives for industry interaction

The faculties of the department constantly try to interact with industries for industrial visit.

MOU's was done with industries such as **CADD Centre, FE Designs** to emphasize on

(a) Internship
(b) Project Workshop for Students
(c) Students specific Training

2.2.4.2. Implementation

Many invited talks and workshop from industry resource persons are arranged and department invites the participant from various department and also participants from other colleges.

2.2.4.3. Impact analysis

Sl.No	Date	Action taken	Resource person	Organise	presente	Relevance

			with designation	d by	es	To Pos and PSO s
CAY 2015-2016						
1	20.2.2016	Industrial visit to RMC plant at Kumbalagudu	Laxmi.G and Shashi kiran	ACSCE	8 th sem students	**1,2,10,12** *1,2,3*
2	22.2.2016	Technical talk on cement and its applications	Mr.M.S Punna Shetty, senior technical manager.	JK Cements	4th sem, 6 th sem, 8 th sem students and all Faculty	**1,3,4,5** *1,2*
3	9.3.2016	Conduction of environmental awareness program	ACSCE	ACSCE	4th sem, 6 th sem, 8 th sem students and all Faculty	**4,6,7,8** *1,2*
4	12.4.16	One day workshop on "Analysis&design structures using RIVET software	Sri.Banu prakash Dixith ,B.N EDS Technologies.	ACSCE	6 th sem, 8 th sem students and all Faculty	**2,3,4,5** *1,2,3*
5	As per timetable	Additional programming skills.	Conducting additional classes by subject specialization teachers	ACSCE	4th sem, 6 th sem, 8 th sem students and all Faculty	**1,10,11,12** *1,3*

CAY 2015-2014

1	19.10.15	One day workshop on Analysis and design of structures using building information modelling (BIM) Software	Sri.S.N.Amarnath ,FE designs.	ACSCE	5 th sem, 7 th sem students and all Faculty	**2,3,4,5** *1,2,3*
2	20.10.15	Technical talk on Analysis and design of structures using RIVET	Sri.Banu prakash Dixith ,B.N EDS Technologies.	ACSCE	5 th sem, 7 th sem students and all Faculty	**2,3,4,5** *1,2,3*

		Software				

2.2.5. Industry Internship/ summer training (15)

- The students are encouraged to take internship program during their semester break. Faculty members give their guidelines, suggestions and scope and contact details of an internship. They also help the students by interacting with the industrial experts, provide the students recommendation letters and other necessary supports. The alumni coordinator constantly interacts with alumni those who are working in the industries and request them to provide necessary guidelines and supports for their junior's internship.
- Conducting the placement training programmes in vacation slot for 7th sem student for all department.

CRITERIA 3

COURSE OUTCOMES AND PROGRAM OUTCOMES

3. COURSE OUTCOMES AND PROGRAM OUTCOMES (120)

3.1. Establish the correlation between the courses and the Program Outcomes (POs) and Program Specific Outcomes (PSOs) (20)

(Program Outcomes as mentioned in Annexure I and Program Specific Outcomes as defined by the Program)

Program Outcomes((POs):

PO1: Engineering Knowledge : Apply the Knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching, substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental consideration.

PO4: Conduct investigations of complex problems: Use research based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclutions

PO5: Modern tool usage: Create, select and apply appropriate technices, resources and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to access societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts and demonstrate the knowledge of and need for sustainable development.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and team work: Function effectively as an individual and as member or leader in diverse teams and in multidisciplinary settings

PO10: Communication: Communicate effectively on complex engineering activities with the engireering community and with society at large such as being able to comprehend and write effective reports and design documentation, make effective presentations and give and receive clear instructions.

PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to once own work as a member and leader in a team to manage projects and multidisciplinary environments

PO12: Life –long lerning: Recognize the need for and have the preparation and ability to angage in independent and life-long lerning in the broadest context of technological change

Program Specific Outcomes (PSOs):

PSO 1: Gradates will be able to apply technical skills and modern engineering tools for civil engineering day to day practice.

PSO 2: Graduates will be able to participate in critical thinking and problem solving of civil engineering field that requires analytical and design requirements.

PSO 3: Graduates will be able to pursue of lifelong learning and professional development to face the challenging and emerging needs of our society.

<u>Correlation between POs PSO's</u>

Programme Objectives (POs)	**I**	**II**	**III**
PO-1	✓	✓	
PO-2	✓	✓	✓
PO-3		✓	
PO-4	✓	✓	
PO-5	✓		✓
PO-6	✓	✓	
PO-7	✓		✓
PO-8		✓	
PO-9		✓	✓
PO-10	✓		✓
PO-11	✓		✓
PO-12		✓	✓

3.1.1. Course Outcomes (COs) (SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses and made available as evidence, if asked) (05)

FIRST/SECOND SEMESTER

ACADIMIC Year: 2015-16

Course Title : Building Materials & Construction Technology
Course Code : 10CV32/C202
Semester : THIRD

CO	Description (Student able to)
C202.1	Recognize the importance of site investigation and ground exploration.
C202.2	Identify the types of foundation and understand the features of masonry.
C202.3	Describe the elements and functions of arches, lintel, Chejja, Canopy & Balcony.
C202.4	Illustrate different types of roofs, flooring, doors and windows and their usages.
C202.5	Define the technical terms and design of different types of stairs.
C202.6	Summarize the importance of plastering, paintings, use of smart materials, formwork and damp Proofing.

Course Title : Concrete Technology
Course Code : 10CV42/C210
Semester : FOURTH

CO	**Description** (Students able to)
C210.1	*describe* the materials used to make concrete; including their sources, and its characteristics.
C210.2	*explain* the tests relevant to the application of concrete at laboratory and site.
C210.3	*discuss* the usage of admixtures and strength properties of concrete.
C210.4	*explain* the materialistic properties of concrete.
C210.5	*identify* the durability properties of concrete.
C210.6	*design* the concrete mix as per IS code specifications.

Course Title : **Hydrology and Irrigation Engineering**
Course Code : **10CV55/C305**
Semester : **FIFTH**

Course Outcome	Description (Student able to)
305.1	*apply* the knowledge of hydrology to estimate the availability of rainfall on the surface.
305.2	*analyze* the various types of water losses to forecast runoff .
305.3	*plan* and design flood estimation and routing aspects.
305.4	*understand* the fundamental principles of irrigation engineering.
305.5	*estimate* the crop water requirement and timely supply of water for the growth of crop.
305.6	*use* guide line for the design the efficient canal system on alluvial soils.

Course Title : **Design & Drawing of RC Structures**

Course Code : **10CV62/C310**

Semester : SIXTH

Course Outcome	Description (Student able to)
C310.1	*exhibit* the knowledge of drawing and detailing of RC building components like, beam, slab, column, staircase and footings.
C310.2	*design* and provide the structural details of footing.
C310.3	*design* and detailing of retaining walls
C310.4	*analyze* and design circular and rectangular water tanks as per IS specifications.
C310.5	*design* and detailing of Simple Portal Frames subjected to gravity loads.

Course Title : Design of Prestressed Concrete Structures
Course Code : 10CV74/C404
Semester : SEVENTH

Course Outcome	Description (Students able to)
C404.1	*explain* basic principles of prestressing along with materials used
C404.2	*analyze* the stresses in PSC elements during transfer and working conditions
C404.3	*illustrate* the various losses in PSC elements
C404.4	*analyze* the precast elements for their efficiency.
C404.5	*design* PSC beam for different requirements.
C404.6	*interpret* the advantages of PSC over conventional methods

Course Title : Design and Drawing of Steel Structures
Course Code : 10CV82/C410
Semester : EIGHTH

Course Outcome	Description (Students able to)
C410.1	*draw* various types of beam-column connections
C410.2	*demonstrate* and draw stiffening of columns by the usage of splicing, lacing, battens.
C410.3	*illustrate* and draw column bases
C410.4	*analyse* and design bolted and welded plate girders
C410.5	*design* various components involved in roof truss.
C410.6	*design* and draw gantry girder.

3.1.2 CO-PO matrices of courses selected in 3.1.1 (six matrices to be mentioned; one per semester from 3rd to 8th semester) (05)

CO-PO Mapping Matrix:

Course Title : Building Materials & Construction Technology
Course Code : 10CV32/C202
Semester : THIRD

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C202.1	2	2	2									
C202.2	2	2	2									2
C202.3												
C202.4			1									
C202.5	1	3	3									
C202.6	1											2
C202	**1.00**	**1.16**	**1.33**									**0.66**

Course Title : Concrete Technology
Course Code : 10CV42/C210
Semester : FOURTH

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C210.1	2	2										
C210.2	3	3	2									
C210.3	2	2										
C210.4	2	2										
C210.5	1											
C210.6	3	3	3							1		2
AVG	**2.16**	**2.00**	**0.83**							**0.16**		**0.33**

Course Title : **Hydrology and Irrigation Engineering**
Course Code : **10CV55/C305**
Semester : **FIFTH**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
305.1	3	2										
305.2	3	3										
305.3	3	3	2									
305.4		1	1									
305.5	3	2	1									
305.6	2	2	3									
AVG	**2.33**	**2.16**	**1.16**									

Course Title : **Design & Drawing of RC Structures**
Course Code : **10CV62/C310**
Semester : SIXTH

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C310.1	3	3	2									
C310.2	3	3	3									
C310.3	3	3	3									
C310.4	3	3	3									
C310.5	3	3	3									
C310	**3.00**	**3.00**	**2.80**									

Course Title : Design of Prestressed Concrete Structures

Course Code : 10CV74/C404

Semester : SEVENTH

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C404.1	1											
C404.2	3	3										
C404.3	3	3	3									
C404.4	3	3	3									
C404.5	3	3	3									
C404.6	1											
C404	**2.33**	**2.00**	**1.5**									

Course Title : Design and Drawing of Steel Structures
Course Code : 10CV82/C410
Semester : EIGHTH

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C410.1	3											
C410.2	3											
C410.3	3											
C410.4	3	2	3									
C410.5	3	2	3									
C410.6	3	2	3									
C410	**3.00**	**1.00**	**1.50**									

Note:Enter correlation levels 1, 2 or 3 as defined below:
1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

3.1.2 CO-PSO matrices of courses selected in 3.1.1 (six matrices to be mentioned; one per semester from 3rd to 8th semester) (05)

Course Title : Building Materials & Construction Technology
Course Code : 10CV32/C202
Semester : THIRD

	PSO1	PSO2	PSO3
C202.1	2	2	2
C202.2	2	2	1
C202.3	2	3	
C202.4	3	2	
C202.5	3	2	
C202.6	2	2	
AVE	2.33	2.17	1.5

Course Title : Concrete Technology
Course Code : 10CV42/C210
Semester : FOURTH

	PSO1	PSO2	PSO3
C210.1	1	1	
C210.2	3	2	1
C210.3	1		
C210.4	2		
C210.5	1		
C210.6	3	2	1
C210	**1.83**	**0.83**	**0.33**

Course Title : Hydrology and Irrigation Engineering
Course Code : 10CV55/C305
Semester : FIFTH

	PSO1	PSO2	PSO3
C305.1	2	2	
C305.2	2		
C305.3	3		
C305.4		2	
C305.5	2	2	
C305.6	3		
C305	**2.40**	**2.00**	

Course Title : **Design & Drawing of RC Structures**
Course Code : **10CV62/C310**
Semester : SIXTH

	PSO1	PSO2	PSO3
C310.1	3	1	
C310.2	3	2	
C310.3	3	2	
C310.4	3	2	
C310.5	3	2	
C310	**3.00**	**1.80**	

Course Title : Design of Prestressed Concrete Structures
Course Code : 10CV74/C404
Semester : SEVENTH

Course Outcome

	PSO1	PSO2	PSO3
C404.1	2		
C404.2			
C404.3	2	2	
C404.4	3		
C404.5	3	2	
C404.6			
C404	**1.66**	**0.66**	

Course Title : Design and Drawing of Steel Structures
Course Code : 10CV82/C410
Semester : EIGHTH

	PSO1	PSO2	PSO3
C410.1	3		
C410.2	3		
C410.3	3		
C410.4	3	2	3
C410.5	3	2	3
C410.6	3	2	3
C410	**3.00**	**2.00**	**3.00**

3.1.3. Program level Course-PO matrix of all courses INCLUDING first year courses (10)

Course with PO mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C201	**3.00**	**2.00**		**1.00**								
C202	**1.50**	**2.33**	**2.00**									**2.00**
C203	**2.66**	**3.00**	**2.50**									**2.00**
C204	**2.83**	**2.8**										
C205	3.00	2.20	2.66	1.00								
C206	**3.00**	**1.60**		**2.40**	**1.00**	**2.00**						
C207	2.25	1.5	1.33									
C208	2.80	1.25							1.50			
C209	**3.00**	**2.00**		**1.00**								
C210	**2.16**	**2.40**	**2.50**							**1.00**		**2.00**
C211	**2.83**	**2.50**	**2.50**									
C212	**3.00**	**2.80**	**2.00**		**2.00**							
C213	3.00	3.00	1.80									
C214	**2.20**	**1.75**	**2.25**				**2.00**					**2.00**
C215	**2.75**	**2.00**	**2.00**						**2.25**			
C216	**2.25**	**2.00**	**2.00**									
C301								**1.00**	**2.75**	**2.00**	**3.00**	
C302	**2.60**	**2.60**	**2.80**									
C303	**2.50**	**2.50**	**2.50**									
C304	**2.00**	**2.16**	**2.20**									
C305	**2.80**	**2.16**	**1.75**									

C306	**2.50**	**2.00**	**3.00**	**2.00**								
C307	**3.00**	**2.50**										
C308	**3.00**	**2.33**	**2.00**		**3.00**							
C309	**2.25**	**2.00**				**2.50**	**2.00**					
C310	**3.00**	**3.00**	**2.80**									
C311	**2.00**	**2.20**	**2.00**									
C312	**3.00**	**2.33**	**3.00**									
C313	**2.83**	**2.60**	**2.80**									
C315	**3.00**	**2.8**	**2.00**	**2.80**								
C316	**3.00**	**2.80**			**3.00**				**2.80**	**3.00**		
C3666	**1.00**	**1.50**	**3.00**		**3.00**							
C401	**3.00**	**2.00**	**2.00**									
C402	**2.50**	**2.75**	**3.00**									
C403	**2.20**	**2.20**					**1.67**			**2.00**		
C404	**2.33**	**3.00**	**3.00**									
C407	**3.00**	**2.00**										
C408	**2.33**	**1.67**										
C4757	1.66	2	2.5	2	2	2	2				1	
C4065	**2.00**	**2.00**				**2.00**	**2.00**					
C409	**2.25**	**2.50**	**3.00**									
C410	**3.00**	**2.00**	**3.00**									
C4115												
C4127						**2.25**	**2.50**					
C413	**3.00**	**3.00**	**3.00**	**3.00**	**3.00**	**3.00**	**3.00**	**2.00**	**3.00**	**3.00**	**3.00**	**2.00**
C414		**3.00**		**3.00**			**3.00**		**3.00**	**3.00**	**3.00**	

Note: Enter correlation levels 1, 2 or 3 as defined below:

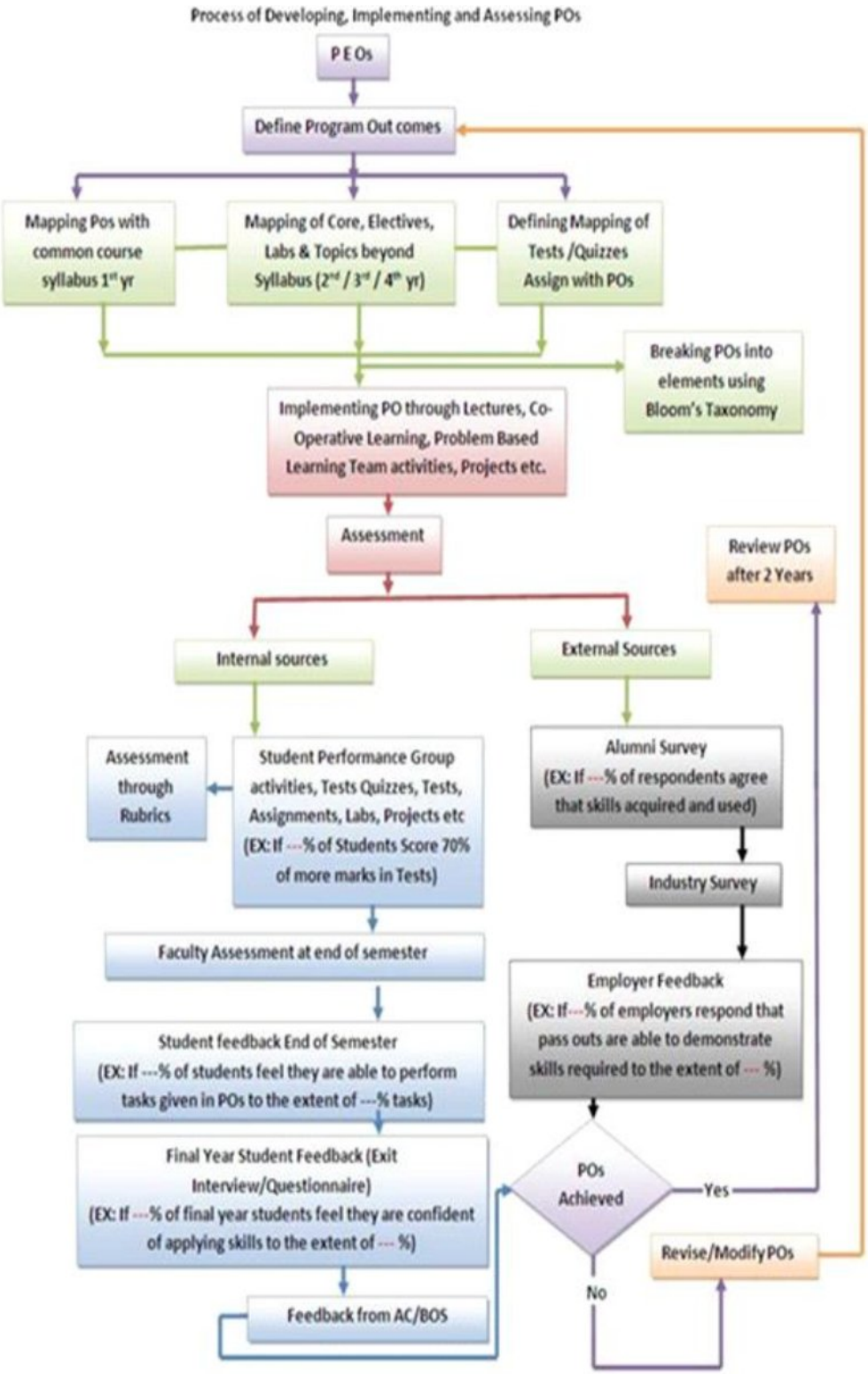
1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

2. Similar table is to be prepared for PSOs

	PSO1	PSO2	PSO3
C202	2.33	2.17	1.5
C203	**3.00**	**2.33**	
C204	3	2.66	2
C205	**2.33**	**1.00**	
C206	**1.75**	**1.50**	**1.00**
C207	2.5	1.67	2
C208	2.2	1.5	1.5
C210	**1.83**	**1.67**	**1.00**
C211	**3.00**	**2.33**	
C212	**3.00**	**1.75**	
C213	2.00	1.60	
C214	3.00	2.00	
C215	**3.00**	**1.75**	
C216	**2.00**	**1.00**	
C301		**1.40**	**1.67**
C302	**2.8**	**1.8**	
C303	**2.66**	**1.83**	
C304	**1.80**	**2.00**	
C305	**2.40**	**2.00**	
C306	**1.83**	**1.75**	
C308	3.00	1.67	
C309	**3.00**	**2.00**	**2.00**
C310	**3.00**	**1.80**	
C311	**2.00**	**2.00**	

C312	**3.00**	**2.33**	
C313	**2.83**	**2.60**	
C3666	1	3	
C315	**3.00**	**2.80**	**2.00**
C316	**3**	**2**	**3**
C307	**3.00**	**1.75**	
C401	**2.00**	**1.00**	**1.50**
C402	**3.00**	**3.00**	
C403	**2.60**	**2.40**	
C404	**2.50**	**2.00**	
C4055	**2.25**	**2.00**	
C4065	**2.00**	**1.00**	**1.16**
C407	**3.00**	**1.00**	**2.00**
C408	**2.00**	**2.00**	
C4757	**2**	**2**	
C4065	**2.00**	**1.00**	**1.16**
C409	**2.00**	**2.25**	
C410	**3.00**	**2.00**	**3.00**
C4115	**3.00**	**2.00**	**1.33**
C4127	**2.00**	**2.00**	**2.50**
C413	1.80	1.80	2.00
C414	1.33	2.00	2.50

3.1.3. Program level course – PO matrix of all courses including first year courses (10)



Analysis of Pos

PO1: Engineering Knowledge: Apply the Knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

The performance indicator for PO1

Courses considered	Performance Indicator	Method of Assessment	Source for Data collection (Course Outcomes)	Target for Performance	Achievement
10CV32	Applies knowledge of mathematics, science & fundamentals	Internal/External Evaluation	CO1 TO CO4	85%	90.7%
10CV33			CO1,CO2,CO3		
10CV34			CO1 TO CO6		
10CV35			CO1 to CO5		
10CV36			CO3		
10CVL37			CO1 to CO4		
10CVL38			CO1 to CO5		
10CV42			CO1 to CO6		
10CV43			CO1 to CO6		
10CV44			CO1 to CO5		
10CV45			CO1 to CO5		
10CV46			CO1 to CO5		
10CVL47			CO1 to CO4		
10CVL48			CO1 to CO4		
10CV52			CO1 to CO5		
10CV53			CO1 to CO6		
10CV54			CO1, CO3 to CO5		
10CV55			CO1,CO2,CO3,CO4,CO5		
10CV56			CO1 to CO6		
			CO1 to CO4		

10CVL57 10CVL58 10CV61 10CV62 10CV64 10CV63 10CV65 10CVL67 10CVL68 10CV71 10CV72 10CV73 10CV74 10CVL77 10CVL78 10CV765 10CV81 10CV82 10CV85	Engineering specialization to the solution of complex engineering problems.	Internal/External Evaluation Home assignments/group Tasks	CO1 to CO3 CO1,CO2,CO4,CO5 CO1 to CO5 CO1 to CO6 CO1 to CO6 CO1 to CO6 CO1,CO2,CO4,CO5 CO1 to CO5 CO1,CO2,CO4,CO5 CO1 to CO6 CO1 to CO5 CO1 to CO6 CO1 to CO4 CO1 to CO3 CO2 CO1 toCO3 CO1 to CO6 CO2	85%	90.7%

PO2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching, substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

Courses considered	**Performance Criteria**	**Method of Assessment**	**Source for Data collection (Course Outcomes)**	**Target for Performance**	**Achievement**
10CV32	Engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.	Internal/External evaluation	CO1,2,5	80%	85%
10CV33			CO1-CO6		
10CV34			C01-C04,6		
10CV35			CO1-5		
10CV36			CO1-CO5		
10CVL37			CO1,3		
10CVL38			CO1-CO4		
10CV42			CO1-4,6		
10CV43			CO1-CO6		
10CV44			CO1-CO5		
10CV45			CO1-CO5		
10CV46			CO1,3,4,5		
10CVL47			CO1-CO4		
10CVL48			CO1-CO4		85%
10CV52			CO1-CO5		
10CV53			C01-CO6		

10CV54			CO1-C06		
10CV55			C01-C06		
10CV56			CO1,2,4,5,6		
10CVL57			CO1-C04		
10CVL58			CO1-CO3		
10CV61			C01,4		
10CV62			CO1-CO5		
10CV63			CO1-CO5		
10CV64			CO1-CO6		
10CV65			CO1-C04,6		
10CVL67			CO1-CO5		
10CVL68			CO1-CO5		
10CV71			CO1,2,4,5,6		
10CV72			CO2,4,5,6		
10CV73			CO1-C05		
10CV74			CO2-CO5		
10CVL77			CO1-CO4		
10CVL78			CO1-CO3		
10CV765			CO2,4		
10CV81			CO3,4		
10CV82			CO4,5,6		

10CV85 10CV86	Identify, formulate, review research literature and analyze complex.	Group Tasks	CO1 CO1	95%	100%

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental consideration.

Courses considered	**Performance Criteria**	**Method of Assessment**	**Source for Data collection (Course Outcomes)**	**Target for Performance**	**Achievement**
10CV32 10CV33 10CV35 10CVL37 10CV42 10CV43 10CV44 10CV45 10CV46 10CVL47 10CVL48	Design solutions for complex engineering problems and design system components.	Internal/External Evaluation Home assignments/Group task	CO1,2,4,5 CO2,3,4,5 CO3,4,5 CO1,2,3 CO2,CO6 CO1-6 CO2,3,4 CO1-5 CO1,3,4,5 CO3 CO4	90%	95%

10CV52			CO1-5		
10CV53			CO1-6		
10CV54			CO1,2,4,5,6		
10CV55			CO3,4,5,6		
10CV56			CO2,4		
10CVL58	processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental consideration		CO2	85%	90%
10CV62			CO1-5		
10CV63			CO2		
10CV64			CO6		
10CVL67		Internal/External Evaluation	CO1-5		
10CV71			CO1,2,4,5,6		
10CV72			CO4,5,6		
10CV74			CO4,5,6		
10CV81			CO3		
10CV82			CO4,5,6		
10CV85			CO3		

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PO4. Conduct investigations of complex problems: Use research based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions

Courses considered	**Performance Criteria**	**Method of Assessment**	**Source for Data collection (Course Outcomes)**	**Target for Performance**	**Achievement**
10MAT31 **10CV35** **10CV36** **10CVL67** **10CV56** **10CV41** **10CV44** **10CV85** **10CV86**	Use research based knowledge and research methods including design of experiments Analysis and interpretation of data, and synthesis of the information to provide valid conclusions	Internal/External Evaluation and **Assignment/Group task**	**CO2,4** **CO5** **C01,2,3,4,5** **CO1,2,3,4,5** **CO6** **CO3** **CO4** **CO2** **CO2**	**75%** **80%**	**86%** **85%**

PO5. Modern tool usage: Create, select and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations

courses considered	Performance Criteria	Method of Assessment	Source for Data collection (Course Outcomes)	Target for Performance	Achievement
10CV36 10CV44 10CVL58 10CVL68 10CV85	Create, select and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations	Internal/External Evaluation and Seminar Group task	CO5 CO4 CO1,2,3 CO2,5 CO2	**75%** **95%**	**80%** **100%**

PO6. The engineer and society: Apply reasoning informed by the contextual knowledge to access societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

courses considered	Performance Criteria	Method of Assessment	Source for Data collection (Course Outcomes)	Target for Performance	Achievement
10CV36 10CV61 10CV73 10CV765 10CV85 10CV847	Apply reasoning informed by the contextual knowledge to access societal, health, safety, legal and cultural issues The Consequent responsibilities relevant to the professional engineering practice.	Quiz Internal/External Evaluation and	CO5 CO1,CO3 CO2,3,5 CO1,CO5,CO6 CO5 CO2,C03,CO4,CO6	75%	85%

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts and demonstrate the knowledge of and need for sustainable development.

courses considered	Performance Criteria	Method of Assessment	Source for Data collection (Course Outcomes)	Target for Performance	Achievement
10CV46 10CV61 10CV765	Understand the impact of the professional engineering solutions in societal and environmental contexts	quiz Internal/External Evaluation and	CO1 CO2,CO4,CO5,CO6 CO1,CO3,CO6	85%	90%
10CV85 10CV86 10CV847	Demonstrate the knowledge of and need for sustainable development.	seminar	CO1,CO3 CO1 CO1,2,3,4,5	90%	95%

PO8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

courses considered	Performance Criteria	Method of Assessment	Source for Data collection (Course Outcomes)	Target for Performance	Achievement
10AL51 10CV85	Apply ethical principles and commit to professional ethics and	Internal/External Evaluation and	CO5 CO5	85% 90%	90% 95%

	responsibilities and norms of the engineering practice.				

PO9. : Individual and team work: Function effectively as an individual and as member or leader in diverse teams and in multidisciplinary settings

courses considered	**Performance Criteria**	**Method of Assessment**	**Source for Data collection (Course Outcomes)**	**Target for Performance**	**Achievement**
10CVL38 10CVL47 10AL51 10CVL68 10CV85 10CV86	Function effectively as an individual Member or leader in diverse teams and in multidisciplinary settings	seminar Group task	CO1,2,3,4 CO1,2,3,4 CO2,3,4,5 CO1,2,3,4,5 CO2 CO2,3	85%	90%

PO10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large such as being able to comprehend and write effective reports and design documentation, make effective presentations and give and receive clear instructions.

courses considered	Performance Criteria	Method of Assessment	Source for Data collection (Course Outcomes)	Target for Performance	Achivement
10CV42	Communicate effectively on complex engineering activities with the engineering	Group task	**CO6**	**75%**	**80%**
10AL51			**CO3,4,5**		
10CVL68	community and with society at large such as being able to comprehend and write effective reports	Internal/External Evaluation	**CO2,3,4,5**		
10CV73			**CO5**	**90%**	**95%**
10CV85			**CO4**		
10CV86			**CO4**		

PO11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to once own work as a member and leader in a team to manage projects and multidisciplinary environments

courses considered	Performance Criteria	Method of Assessment	Source for Data collection (Course Outcomes)	Target for Performance	Achievement
10AL51 **10CV85** **10CV86** **10AL51** **10CV85** **10CV86**	Demonstrate knowledge and understanding of the engineering and management principles apply these to once own work as a member and leader in a team to manage projects and multidisciplinary environments	Internal/External Evaluation Internal/External Evaluation Group task	**CO1-CO5** **CO5** **CO1**	**90%**	**95%**

PO12. Life –long learning: Recognize the need for and have the preparation and ability to angage in independent and life-long learning in the broadest context of technological change.

courses considered	Performance Criteria	Method of Assessment	Source for Data collection (Course Outcomes)	Target for Performance	Achievement
10CV32	Recognize the need for and have the preparation	Internal/External	CO2,CO6	75%	80%

10CV33 10CV42 10CV46 10CV85	and ability to angage in independent and life-long lerning in the broadest context of technological change.	Evaluation and seminar	CO3,4 CO6 CO1,2,5 CO5		

3.2. Attainment of Course Outcomes (50)

3.2.1. Describe the assessment processes used to gather the data upon which the Evaluation of Course Outcome is based (10)

3.2.2 Record the attainment of course outcomes of all courses with respect to set attainment levels (40)

The program outcomes are assessed with the help of course outcomes of the relevant courses through direct and indirect methods.

Direct measures are provided through direct examinations or observations of student knowledge or skills against measureable course outcomes.

The knowledge and skills described by the course outcomes are mapped to specific problems on internal exams/home assignment/group task. Throughout the semester the faculty records the performance of each student on each course outcome.

Finally, program outcomes are assessed with above mentioned data and Program Assessment Committee concludes the PO attainment level.

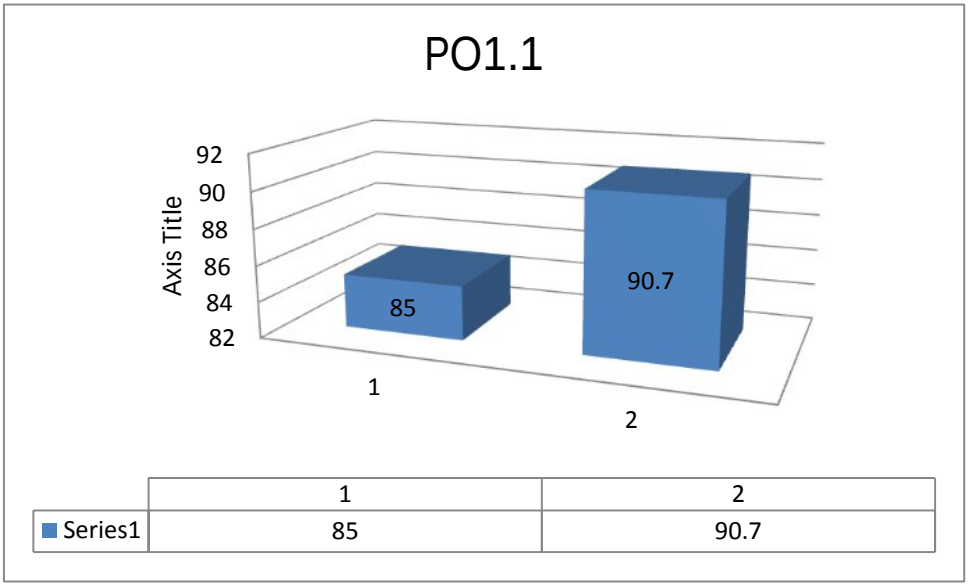
Program Outcomes Assessment and Attainment

PO1: Engineering Knowledge: Apply the Knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

Results of Assessment (Direct Measures)

For the Summative assessment conducted at the end of the semester/year internals, the decision was taken to focus on direct assessment by faculty for all indicators. The examination results conducted by the affiliating university were also evaluated by the faculty on each indicator. The Summative data information for performance indicator no 1 was gathered from Math courses where in students was given a project requiring them to choose the mathematical model which was appropriate for a specific problem.

For performance indicator no 2, faculty created an internal test which required students to apply civil engineering principles to derive equations to achieve solutions. The student performance in the test was recorded by the faculty. The faculty also evaluated university questions at the end of the semester dealing with performance indicator no 1 and 2 and document specific areas of strength and weakness related to the indicators.



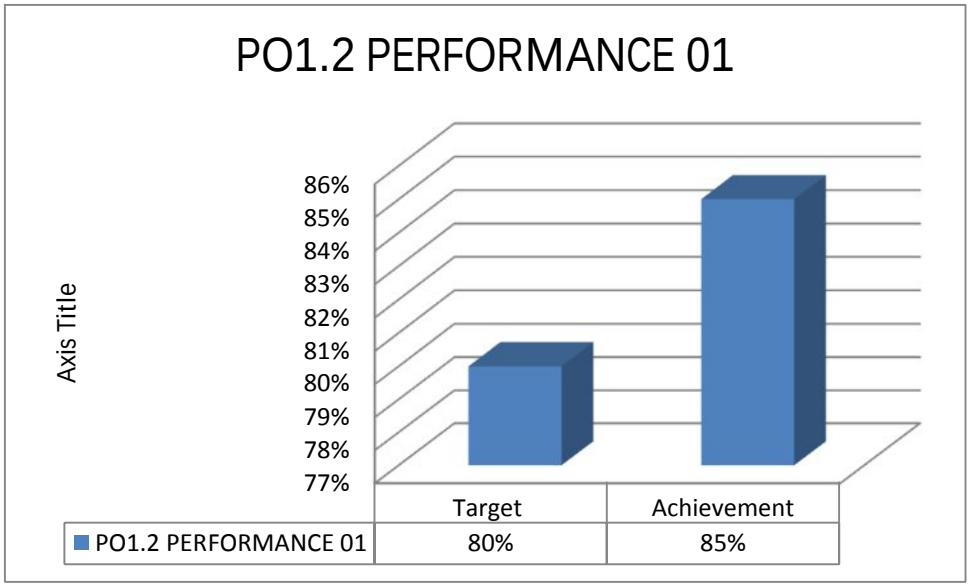
PO2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching, substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

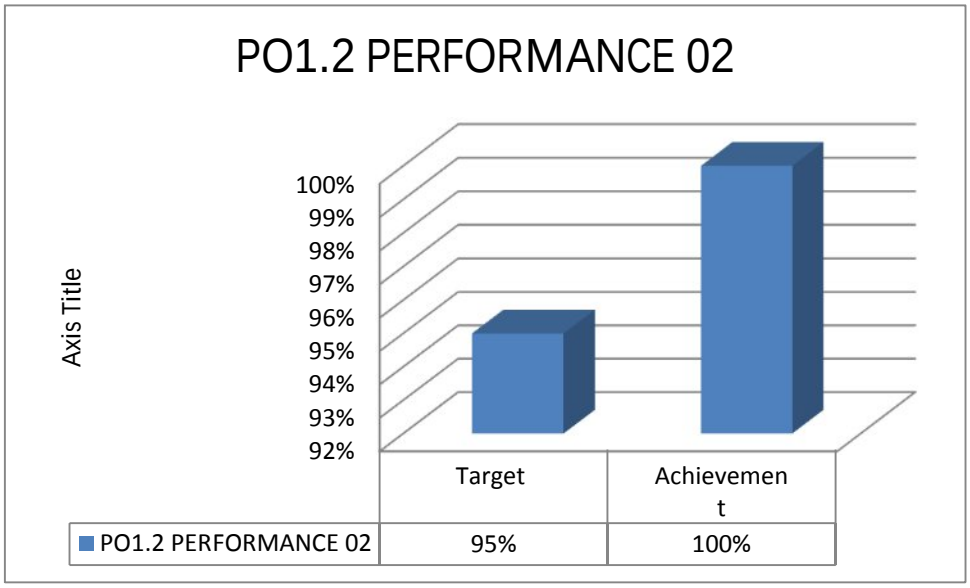
Results of Assessment (Direct Measures)

For the Summative assessment conducted at the end of the semester/year internals, the decision was taken to focus on direct assessment by faculty for all indicators. The examination results conducted by the affiliating university were also evaluated by the faculty on each indicator. The Summative data information for performance indicator no 1 and no 2, faculty created an internal test for Math courses like 10MAT11, 10MAT21, 10MAT31, 10MAT41, 10CV32, 10CV42 which required students to apply mathematical principles to model equations to achieve solutions, and for civil engineering fundamental courses like 10CIV13/23, 10CV33, 10CV43, 10CV53 which required students to apply Civil Engineering theory in the modeling and design of civil engineering structures. The student performance in the test were recorded by the faculty also evaluated university questions at the end of the semester dealing with performance indicator no 1 and 2 and document specific areas of strength and weakness related to the indicators.

For performance indicator no 2.Summative data for indicators were collected in the lab courses like 10CVL37, 10CVL38, 10CVL47, 10CVL57 where the students are required to perform a set of experiments prescribed by the university. In addition to those experiments the faculty members asked student to give solution for similar kind of problems and problems involving fundamentals of civil engineering and assessed the ability of students by awarding marks

The results of the assessment were extensively discussed by faculty and it was recommended to the IACC that additional formative assessment may be included in the semester through short quizzes for 10CV33, 10CV54, 10CV64 and to provide the students specific feedback on indicators No 1 & 2. . The current year, strategy will include more such activities.





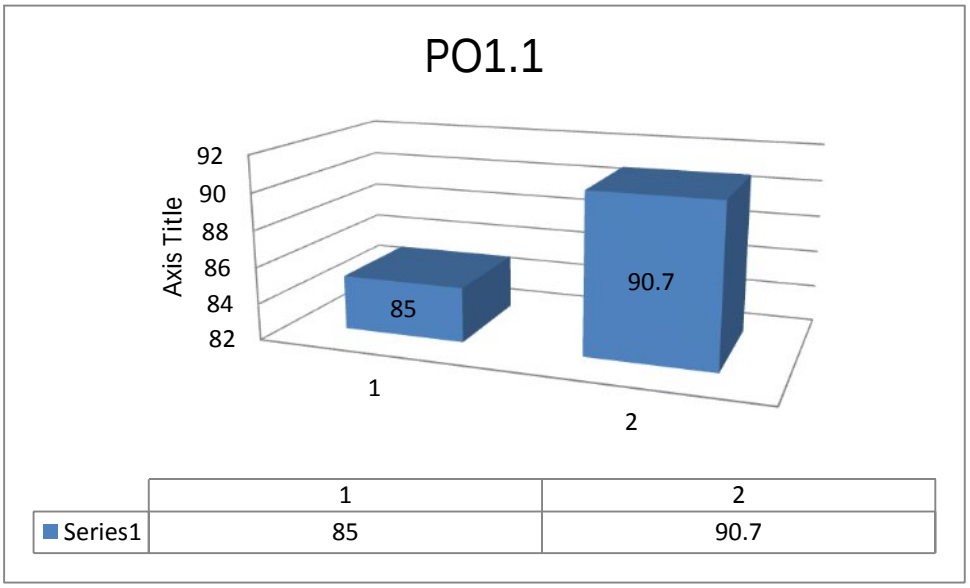
PO3: Design/development of solutions: Design solutions for complex engineering problems and

design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental consideration.

Results of Assessment (Direct Measures)

For the summative assessment at the end of the program, the decision was made to focus on the faculty's direct assessment for all indicators. In this course students completed lab experiments where they required to develop laboratory reports. The scoring rubric for indicator No 1 was completed by the laboratory teaching assistants to assess student performance through observations; rubrics for indicators No2 were completed by the faculty.

The assessment results were evaluated by the faculty during the year end focus group discussions. Based on the analysis the faculty recommended additional formative assessment to provide the students the rubrics for indicators No 2 and give them formal feedback making their scores as part of the grade where appropriate. For indicator No 1, Laboratory Teaching Assistants were asked to attend a seminar on how to observe students in the laboratory and complete the rubric for lab practices and the use of instruments. Based on results, faculty members were asked to provide the scoring rubrics with the appropriate lab assignments so students could see how they would be evaluated.

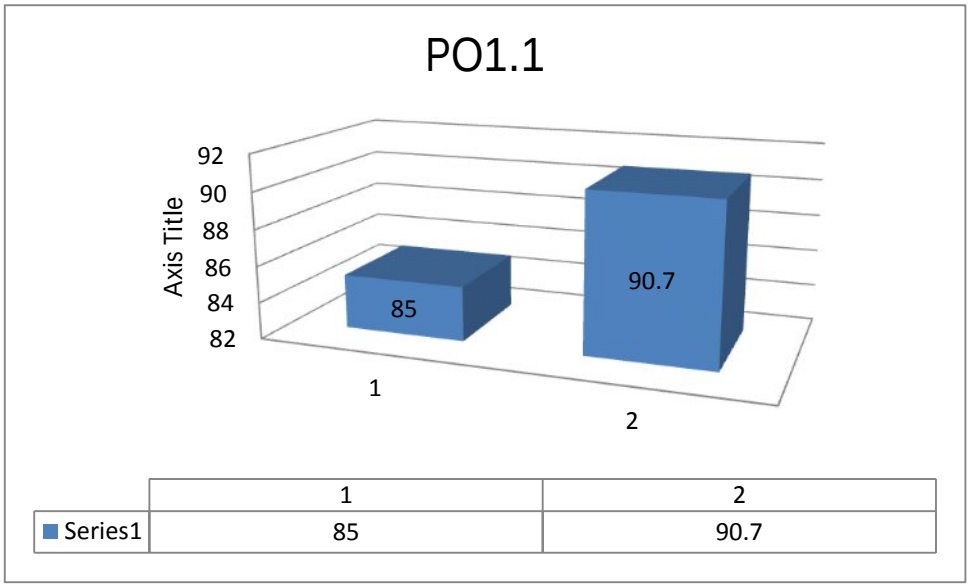


PO4. Conduct investigations of complex problems: Use research based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions

Results of Assessment (Direct Measures)

For the summative assessment at the end of the program, the decision was made to focus on the faculty's direct assessment for all indicators. Summative data for indicators No1 ,2 and 3were collected in the 10CVL68 course. In this course students completed survey where they required to develop survey reports. The scoring rubric for indicator No 1 was completed by the laboratory teaching assistants to assess student performance through observations; rubrics for indicators No 2and 3 were completed by the faculty.

The assessment results were evaluated by the faculty during the year end focus group discussions. Based on the analysis the faculty recommended additional formative assessment. For indicator No 1, Laboratory Teaching Assistants were asked to attend a seminar on how to observe students in the laboratory and complete the rubric for lab practices and the use of instruments. Based on results, faculty members were asked to provide the scoring rubrics with the appropriate lab assignments so students could see how they would be evaluated.



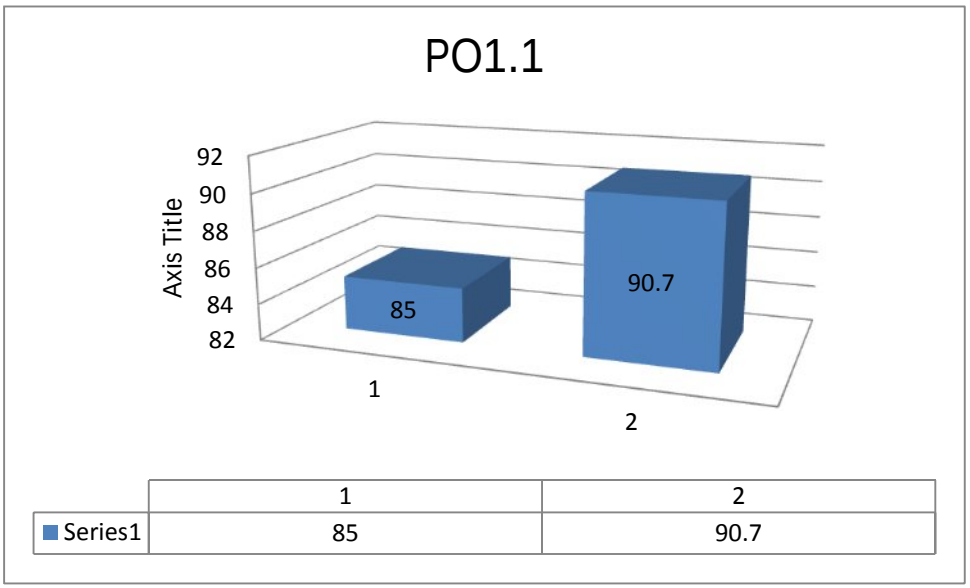
PO5. Modern tool usage: Create, select and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations

Results of Assessment (Direct Measures)

For the summative assessment at the end of the program, the decision was made to focus on the faculty's direct assessment for all indicators. Summative data for indicators No1 and 2 were collected in the 10CVL37 10CVL47 course. In this course students completed experiments where they required to develop laboratory reports. The scoring rubric for indicator No 1 was completed by the laboratory

teaching assistants to assess student performance through observations; rubrics for indicators No 2 were completed by the faculty.

The assessment results were evaluated by the faculty during the year end focus group discussions. Based on the analysis the faculty recommended additional formative assessment asking faculty members teaching 10CV33 theory and Lab 10CVL37, 10CVL47 to provide the students the rubrics for indicators No 2 and give them formal feedback making their scores as part of the grade where appropriate.

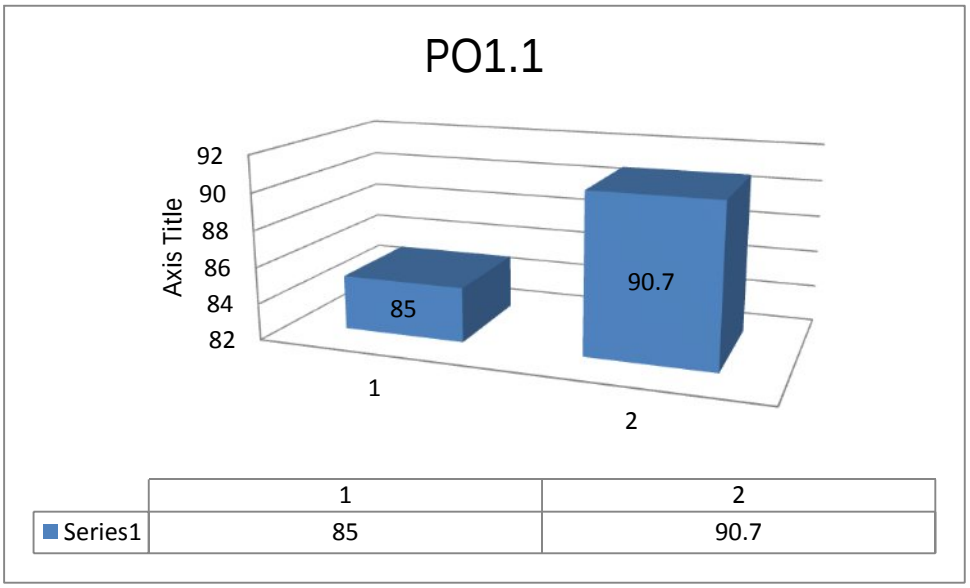


PO6. The engineer and society: Apply reasoning informed by the contextual knowledge to access societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

Results of Assessment (Direct Measures)

For the summative assessment end of the decision was made to focus on faculty's Direct assessment for all indicators and analysis of university results. Summative data for Indicators No 1was collected in the course 10CV35 and 10CV62 course. The scoring rubric for indicator No 1 was completed by the laboratory teaching assistants to assess student performance through observations; rubrics for indicators

No 2 were completed by the faculty. A rubric was used to score their responses related to indicator No 1.



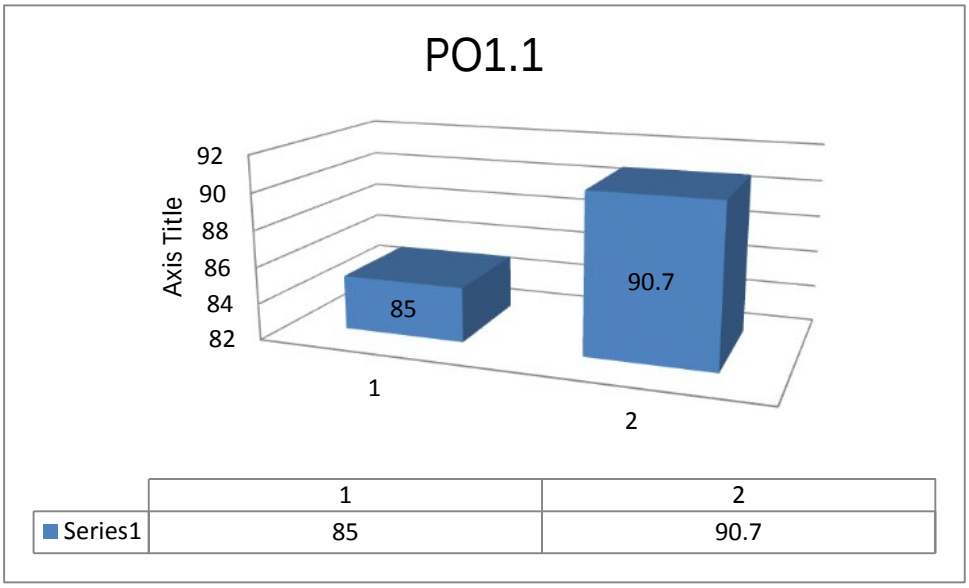
PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts and demonstrate the knowledge of and need for sustainable development.

Results of Assessment (Direct Measures)

For the summative assessment end of the program (internal as well as assessment of student performance in university examinations, the decision was made to focus on faculty's direct assessment for all indicators and analysis of university results. Summative data for Indicators No 1 and 2 were collected in 10CV53 and 10CV847 course respectively. In this course students were asked to develop a concept paper that included a search of the literature and demonstrate knowledge of current civil engineering and environmental issues. This course was chosen because students complete the project independently and the program could get a clearer picture of students' to demonstrate knowledge of current civil engineering and environmental issues

To identify the importance of understand ing and discuss the societal and contemporary issues as part of Program level ,statistics and survey reports are considered.

At the end of every academic year annual report is developed where the statistics of students who have participated in professional bodies/ student chapters/workshops/seminars/conferences/paper presentations/internships/industry visit etc.. is prepared



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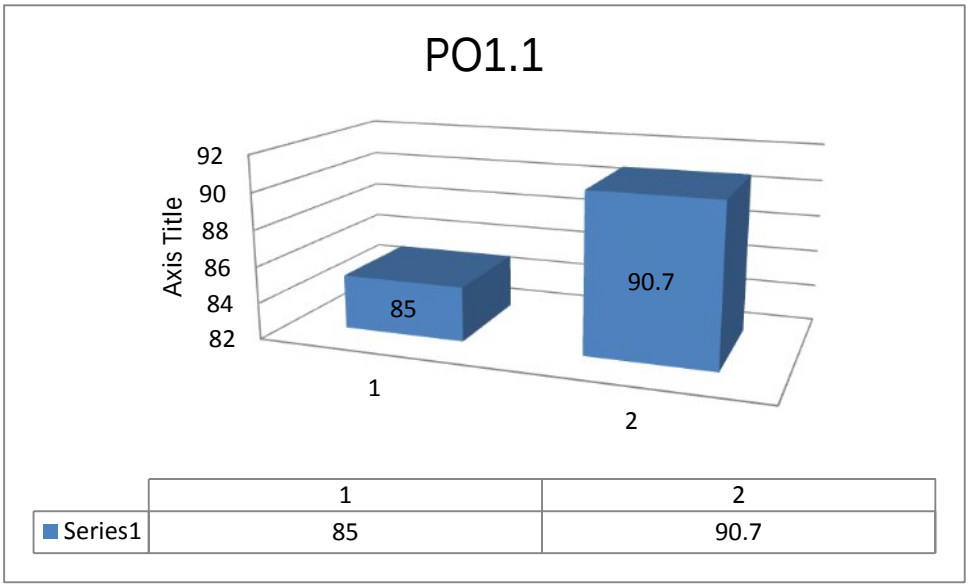
PO8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

Results of Assessment (Direct Measures)

For the summative assessment end of the decision was made to focus on faculty's Direct assessment for all indicators and analysis of university results. Summative data for Indicators No 1was collected in the course 10AL51 course. In this course students completed experiments where they required to develop laboratory reports. The scoring rubric for indicator No 1 was completed by the laboratory teaching assistants to assess student performance through observations.

Graduates are intended to understand ethics and professional conduct related to civil engineering and should be able to identify the legal issues related to patents, plagiarism etc..To achieve this as a part of curriculum, extra curriculum aspects are considered.



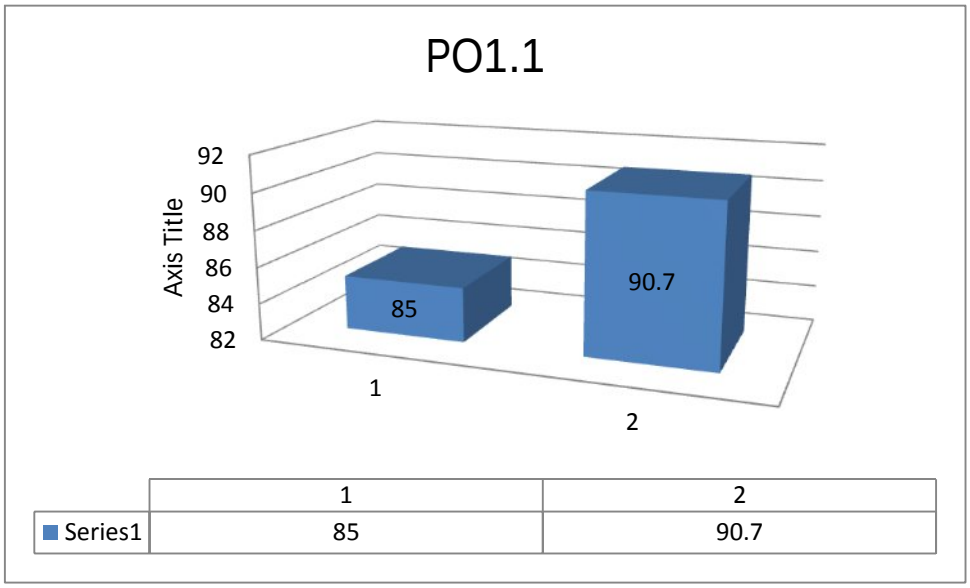
PO9. : Individual and team work: Function effectively as an individual and as member or leader in diverse teams and in multidisciplinary settings

Results of Assessment (Direct Measures)

Team work has always been common element in engineering learning. This Indicator 1 are evaluated by developing the professional skills which includes responsible teamwork, creativity and communication skills with professional and to prepare them for the complex actual work environment and for life-long learning.

The indicator 1 is assessd through the tabulated courses that are part of the curriculum using direct and indirect assessment tools Laboratory experiments, Major Project and home assignments are conducted for the courses 10CVL67 and 10CV85.These are complex and are generally entailed coordinated planning and execution. Teams of approximately Two, Three and Four students are formed to accomplish the assigned project task. The predefined rubric is used to assess these courses. From the result, it is observed there is good team work among all the team members .

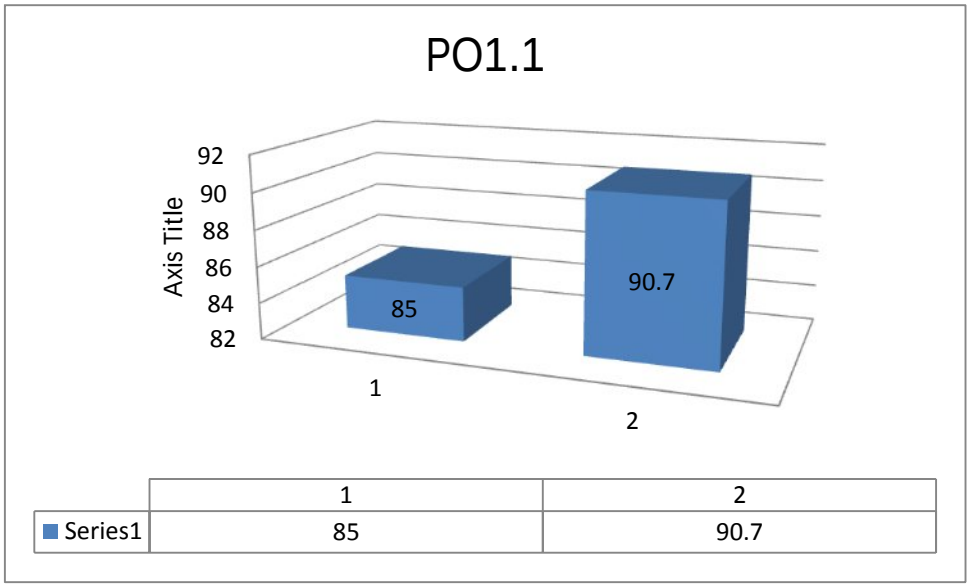
The rubric considers planning, sharing, listening, and other aspects of team work. As appropriate, findings from course end survey, graduate survey and alumni surveys and discussions were compiled to determine how well graduates are performing relative to this outcome. The assessments for all students in the program were collected and analyzed with a focus on individual work and on teams to accomplish common goals.



PO10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large such as being able to comprehend and write effective reports and design documentation, make effective presentations and give and receive clear instructions.

Results of Assessment (Direct Measures)

Team work has always been common element in engineering learning. The indicator 1and 2 is evaluated by developing the professional skills which includes responsible leadership role, teamwork, creativity and communication skills with professional and to prepare them for the complex actual work environment and for life-long learning. The attainment of these can be accessed through the tabulated courses that are part of the curriculum using direct assessment tools. The indicator 2 will give Laboratory experiments. These laboratory exercises are complex and are generally entailed coordinated planning and execution. Teams one, two, three, and four students are formed to accomplish the assigned laboratory task. The predefined rubric is used to assess these courses. From the result, it is observed there is good team work among all the team members. The rubric considers planning, sharing, listening, and other aspects of team work. As appropriate, findings from course end survey, graduate survey and alumni surveys and discussions were compiled to determine how well graduates are performing relative to this outcome. The assessments for all students in the program were collected and analyzed with a focus on individual work and on teams to accomplish common goals.



	1	2
Series1	85	90.7

PO11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to once own work as a member and leader in a team to manage projects and multidisciplinary environments

Results of Assessment (Direct Measures)

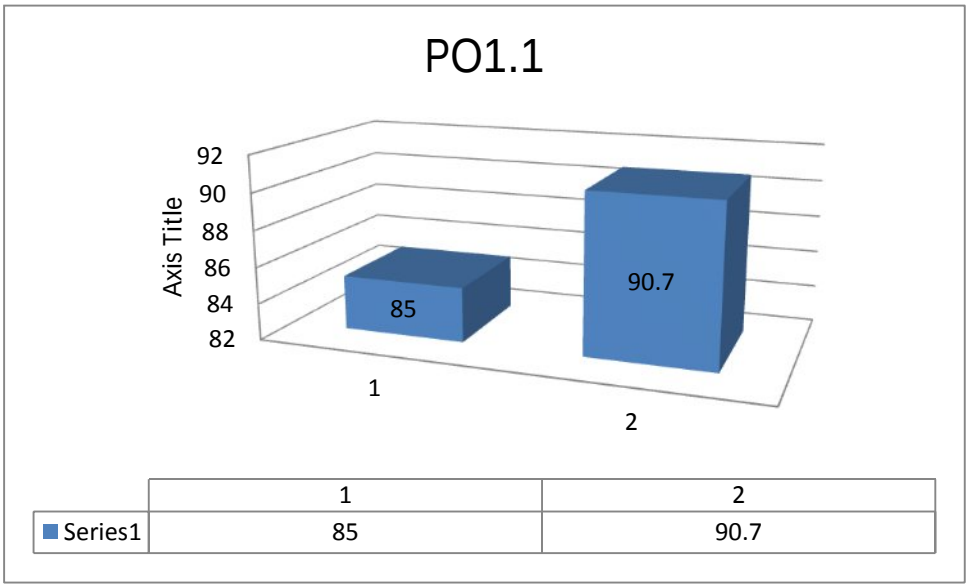
The indicator 1 gives the ability of the students to communicate effectively is assessed regularly during the program through various courses. The communication abilities are broadly categorized into oral and

written communication skills. Precisely, these abilities are assessed over the tabulated courses during the program using appropriate assessment tools for each course. In addition to these courses, these abilities are also assessed by the faculty in other courses when students present the seminars and write the home assignments. Measurements considered under this section to assess the PO are:

- Number of students participated in various extracurricular activities like Workshops, Seminars, Paper Presentations, and Technical Quiz etc.
- Number of students participated in entrance examinations like GATE,TOFEL, IELTS etc.,
- Conducting pre-placement training to the students.

At the end of every academic year annual report is developed where the statistics of students who have participated in pre-placement training/professionalbodies/studentchapters/workshops/seminars/conferences/paper presentations/internships/industry visit/TOFEL/GATE/IELTS etc. is prepared.

In addition, the number of students participated in various extracurricular activities like workshops, paper presentations conducted at various institutions and our institute is collected at end of the each academic year. This data is used for communication abilities assessment. Also, the number of students appeared and qualified for GATE/TOEFL/IELTS entrance exams were used for the assessment of the outcome.



PO12. Life –long learning: Recognize the need for and have the preparation and ability to angage in independent and life-long learning in the broadest context of technological change.

Results of Assessment (Direct Measures)

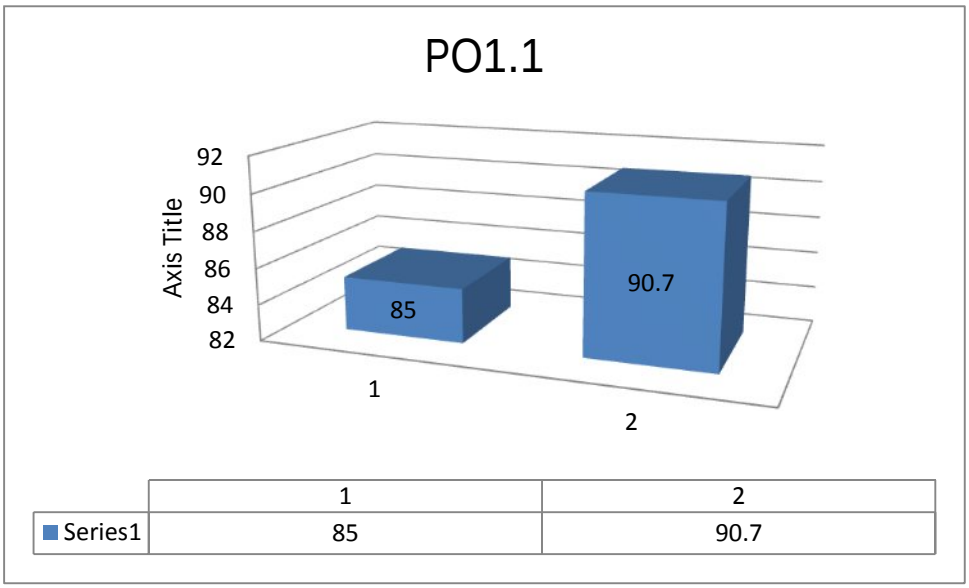
The ability of the students to identify and use information sources by her/himself to prepare term papers and develop mini and major projects in general for curriculum based courses are considered for assessing

lifelong learning capabilities. Precisely, these abilities are assessed over the tabulated courses during the program using appropriate assessment tools for each course.

Importance to Lifelong learning skills is observed using tools during and after the program completion.

Independent identification of information resources and best utilization of it as a part of engaging in professional development is observed from courses CV53, CV63 and CV82.This aspect is measured in two dimensions and the rubric for assessing CV53, CV63 and CV82are also provided. The student's participation in the following activities as part of Program level statistics and survey reports are considered.

- Membership and participation in Professional body activities
- Unsupervised projects done on the interest of students
- Participation in Paper presentations, workshops and seminars
- Internships/ Visits to industry
- Appearance and Qualification in GATE and PGCET



3.2.2 Record the attainment of Course Outcomes of all courses with respect to set attainment levels (40)

Measuring CO attainment through Internal Assessments: (The examples indicated are for reference only. Program may appropriately define levels)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C201												
C202												
C203												
C204												
C205												
C206												
C207												
C208												
C209												
C210												
C211												
C212												
C213												
C214												
C215												
C216												
C301												
C302												
C303												
C304												
C305												
C306												
C307												
C308												

Attainment Level 1: **60%** students scoring more than 50% marks out of the relevant

Maximum marks.
Attainment Level 2: 6**0%** students scoring more than 60% marks out of the relevant maximum marks.
Attainment Level 3: **70%** students scoring more than 60% marks out of the relevant maximum marks.

3.3 Attainment of program outcomes and program specific outcomes (50)

3.3.1 Describe assessment tools and processes used for measuring the attainment of each of the program outcomes and program specific outcomes (10)

In Outcome based Education, assessment done through one or more than one processes, carried out by the institution, that identify, collect, and prepare data to evaluate the achievement of programme educational objectives, program outcomes and course objectives and outcomes.

PO Assessment Tools

Assessment tools are categorized into direct and indirect methods to assess the programme educational objectives, program outcomes and course outcomes.

- Direct methods display the student's knowledge and skills from their performance in the continuous assessment tests, end–semester examinations, presentations, and classroom assignments etc.
- These methods provide a sampling of what students know and/or can do and provide strong evidence of student learning.
- Indirect methods such as surveys and interviews ask the stakeholders to reflect on student's learning. They assess opinions or thoughts about the graduate's knowledge or skills and their valued by different stakeholders.
- The below table 2.13 shows the Direct assessment & Indirect assessment.

Use of Rubrics for Evaluation and Assessment of Pos

Table 2.13: Gives the Direct assessment & indirect assessment.

Direct Assessment methods are formative as well as summative	
For some of the POs that are abstract, rubrics has been designed using performance indicators and shared with the students in advance. This helps students understand against which parameter their work will be judged with the "scoring rules". These rubrics can be used by students in, revising, and judging their own work and progress.	
Assignments	The assignment, Quiz and class test are a qualitative performance assessment tool designed to assess students'
Quiz	

Class test	knowledge of engineering practices, framework, and problem solving. An analytic rubric was developed to assess students' knowledge with respect to the learning outcomes associated with the scenario tool.
Group discussion/ Brainstorming	This is designed to assess student's analytical capacity along with the capability to communicate with others.
End semester exam (theory + practical)	End examination are metric for assessing whether all the POs are attained or not. Examination is more focused on attainment of course outcomes and program outcomes using a descriptive exam.
Lab practical	This is mainly to assess student's practical knowledge with their designing capabilities.
Course Evaluation	At the end of every semester, students give feedback for the course taught to them. In this feedback survey students tell how effective course was in order to achieve POs.
Indirect Assessment methods	
Programme outcomes assessment report	At the end of every academic year annual report is developed where the statistics of students who have participated in professional bodies/ student chapters /workshops/seminars/conferences/paper presentations / internships /industry visit etc.. is prepared. This statement is considered to indirectly assess the POs
Alumni Survey	Collect variety of information about program satisfaction, from graduate's end. –after every 2 years
Employer Survey	Provide information about our graduate's skills and capability. – after every 2 years
Student exit survey	To evaluate the success of programme in providing students with opportunities to achieve the programme outcome- every year

3.3.2. Provide results of evaluation of each PO & PSO (40):

PO Attainment:

course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Direct Attainment												
Indirect Attainment												

CRITERIA 4

STUDENTS PERFORMANCE

CRITERION	Students' Performance	150

3. STUDENTS PERFORMANCE(150)

Item **(Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)**	**CAY**	**CAY*m*1**	**CAY*m*2**	**CAY*m*3**	**CAY*m*4**	**CAY*m*5**	**CAY*m*6**
Sanctioned intake of the program(*N*)	60	60	60	60	60	60	60
Total number of students admitted in first year *minus* number of students migrated to other programs/institutions plus no. of students migrated to this program(*N*1)	47	45*1	47	24*1	4	27*1**3	28
Number of students admitted in 2nd year in the same batch via lateral entry(*N*2)	-	20	15	23	5	8	34
sSeparate division students, if applicable(N3)	3	3	3	1	3	-	-
Total number of students admitted in the Program (*N*1 + *N*2 +N3)	50	69	65	49	12	39	62

*Change of branch

**Change of College

Year of entry	*N*1 + *N*2 +N3 (As defined above)	Number of students who have successfully graduated **without backlogs** in any semester/year ofstudy (Without Backlog means no compartment or failures in any semester/year ofstudy)			
		IYear	IIYear	IIIYear	IVYear
CAY (2015-16)	47+3 = 50	-	-	-	-
CAY*m*1(2014-15)	46+20+3 = 69	4	-	-	-
CAY*m*2 (2013-14)	47+15+3 = 65	16	11	-	-
CAY*m*3(LYG) (2012-13)	25+23+1 = 49	14	10	10	7
CAY*m*4(LYG*m*1) (2011-12)	4+5+3 = 12	4	4	1	1
CAY*m*5 (LYG*m*2) (2010-11)	31+8 = 39	7	8	5	3
CAY*m*6(LYG*m*3) (2009-10)	28+34 = 62	10	1	1	1

Year of entry	*N*1 + *N*2 +N3 (As defined above)	Number of students who have successfully graduated			
		IYear	IIYear	IIIYear	IVYear
CAY (2015-16)	47+3 = 50	-	-	-	-
CAY*m*1(2014-15)	46+20+3 = 69	44	-	-	-
CAY*m*2 (2013-14)	47+15+3 = 65	51	44	-	-
CAY*m*3(LYG) (2012-13)	25+23+1 = 49	25	46	32	23
CAY*m*4(LYG*m*1) (2011-12)	4+5+3 = 12	5	10	7	7
CAY*m*5 (LYG*m*2) (2010-11)	31+8 = 39	27	34	31	30
CAY*m*6 (LYG*m*3) (2009-10)	28+34 = 62	28	59	47	43

4.1Enrolment Ratio(20)

Year of entry	Ratio	Marks
CAY (2015-16)	47/60=78%	0
CAY*m*1(2014-15)	45/60=75%	16
CAY*m*2(2013-2014)	43/60=71%	16
CAY*m*3 (LYG) (2012-13)	24/60=40%	0
CAY*m*4 (LYG*m*1)(2011-12)	4/60=7%	0
CAY*m*5(LYG*m*2) (2010-11)	27/60=45%	0
CAYm6(LYG*m*3)(2009-10)	28/60=46%	0

Enrolment Ratio (20)

Enrolment Ratio= N1/N

Item (Students enrolled at the First Year Level on average basis during the period of assessment)	**Marks**
>=90% students enrolled	20
>=80% students enrolled	18
>=70% students enrolled	16
>=60% students enrolled	14
Otherwise	0

4.2. Success Rate in the stipulated period of the program(40)

4.2.1. Success rate without backlogs in any semester/year of study(25)

SI= (Number of students who have graduated from the program without backlog)/ (Number of students admitted in the first year of that batch and admitted in 2nd year via lateral entry and separate division, if applicable)

Average SI = Mean of Success Index (SI) for past three batches.

Item	Latest Year of Graduation, LYG (CAY*m*3)	Latest Year of Graduation minus 1, LYG*m*1(CAY*m*4)	Latest Year of Graduation minus 2, LYG*m*2(CAY*m*5)
Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry and separate division, if applicable	49	12	39
Number of students who have graduated without backlogs in the stipulated period	7	1	3
Success Index(SI)	0.143	0.083	0.077
Average SI	0.101		

*Success rate without backlogs in any year of study = 25 * 0.101 =2.525*

4.2.2. Success rate in stipulated period(15)

SI= (Number of students who graduated from the program in the stipulated period of course duration)/ (Number of students admitted in the first year of that batch and admitted in 2nd year via lateral entry and separate division, if applicable)

Average SI = mean of Success Index (SI) for past three batches

Item	LYG(CAY*m*3)	LYG*m*1(CAY*m*4)	LYG*m*2(CAY*m*5)
Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry and separate division, if applicable	49	12	39
Number of students who have graduated in the stipulated period	23	7	30
Success Index(SI)	0.469	0.583	0.769
Average Success Index	0.607		

$$Success\ rate = 15 \times 0.607 = 9.105$$

4.3. Academic Performance in Third Year(15)

*Academic Performance = 1.5 * Average API (Academic Performance Index)*

API = ((Mean of 3rd Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks of all successful students in Third Year/10)) x (number of successful students/number of students appeared in the examination)

Successful students are those who are permitted to proceed to the final year.

Academic Performance	2012 - 16	2011 - 15	2010 - 14
Mean of CGPA or Mean Percentage of all successful students (X)	62.13	62.17	61.703
Total no. of successful students(Y)	34	7	28
Total no. of students appeared in the examination(Z)	34	7	28
API = x*(Y/Z)	6.213	6.217	6.170
Average API = (AP1 + AP2 +AP3)/3	6.2		

*Academic Performance = 1.5*6.2=9.345*

4.4. Academic Performance in Second Year(15)

Academic Performance Level = 1.5 * Average API (Academic Performance Index)

API = ((Mean of 2nd Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks of all successful students in Second Year/10)) x (number of successful students/number of students appeared in the examination) Successful students are those who are permitted to proceed to the Third year.

Academic Performance	2012-16	2011-15	2010-14
Mean of CGPA or Mean Percentage of all successful students (X)	55.24	62.24	58.19
Total no. of successful students(Y)	41	8	31
Total no. of students appeared in the examination(Z)	41	8	31

API = X*(Y/Z)	5.524	6.224	5.819
Average API = (AP1 + AP2 +AP3)/3			

*Academic Performance Level = 1.5 * 5.856=8.7835*

4.5. Placement, Higher Studies and Entrepreneurship(40)

Assessment Points = 40 × average placement

Item	2012-16	2011-14	2010-14
Total No. of Final Year Students(N)	34	12	43
No. of students placed in companies or Government Sector(x)	4	9	24
No. of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level Tests, GRE, GMAT	0	3	6
No. of students turned entrepreneur in engineering/technology(z)	0	0	0
x + y + z=	4	12	30
Placement Index : (x + y + z)/N	0.117	1	0.7
Average placement= (P1 + P2 +P3)/3	0.605		

Assessment Points = 40 × .605=24.2

4.6. Professional Activities (20)

4.6.1. Professional societies/chapters and organizing engineering events

- The department has a Organisation Life member with Indian Concrete Institute (ICI) with effect from November 2015. Life Membership No.11420-OLM.
- Special Guest Lecture on the topic 3R Construction Services by Engineer Sunil R K,CEO,3RSERVICES,Bangalore on 16th Aug 2016.

- The ICI-ACSCE student Chapter has been inaugurated on 17th August 2016 by Dr. M U Ashwath, Chairman, ICI-KBC, Bangalore, and also addressed the students on the topic "Placement Oppurtunities for Civil Engineers".

4.6.2. Publication of technical magazines, newsletters, etc.(5)

Name of the newsletter	Volume No	Month and year of publishing	Editor	Publisher
	1	July 2015	Prof Gayathri G Prof Laxmi G Gandage	Department of Civil Engineering
	2	July 2016	Dr.Venketesh L Babu Prof LaxmiG Gandage Prof Shlok Singh	Department of Civil Engineering

4.6.3 Participation in inter-institute events by students of the program of study.

- Two VIII sem students have attended one day national conference on "Emerging Trends in Engineering" held on 26th February 2016 at Rajarajeswari College Of Engineering, Bangalore

- Five students of VII sem have participated in the Inter Collegiate "**Climate Change Quiz"** held on 23rd September 2015 at "**Indian Institute Of Science"**, Bangalore.

CRITERIA-5

Faculty Information and Contribution

CRITERIA-5 Faculty Information and Contribution

List of Faculty Members: (Instruction: The institution may complete this table for the calculation of the student-teacher ratio (STR). Teaching loads of the faculty member contributing to the undergraduate programme only (2nd, 3rd, and 4th year) are considered to calculate the STR.)

CAY 2016-2017 -UG

Name of the faculty member	Qualification			Designation & Date of Joining in the institution	Distribution of teaching load (%)			Academic Research			Sponsored Research (Funded Research)	Consultancy and Product Development	Specialization
	Degree Starting from highest	University	Year of Graduation		Ist year	UG	PG	Faculty receiving Ph.D During the assessment year	Ph.D Guidance	Research Publications			
Dr. D.L.VenkateshBabu	Ph.D	Bharathiar University, Coimbatore, India	2006	Professor 1/8/2016	-----	100%	-----	-----	11	20	-----	-----	Structural Engineering
	M.E	Bangalore University, India	1990										Water Resource Engineering
	B.E	Bangalore University, India	1984										Civil Engineering
Mr.I.Subramanian				Associate Professor	-----	100%	-----						
	M.Sc												
	B.E												Civil Engineering
Mr. Kalaignan				Associate	-----	100%	-----						
	M.E												

	B.E			professor									Civil Engineering
Mrs.Sugandha.N	M.Tech	VTU,Belgaum	2014	Assistant Professor 27/07/2014	-----	100%	------	*None*	*None*	12	None	None	Structural Engineering
	BE	VTU,Belgaum	2012										Civil Engineering
Mrs.Laxmi G	Ph.D	VTU,Belgaum	Pursing (Registered 2015)	Assistant Professor 01/02/2014	-----	100%	------	*None*	*None*	3	None	None	Structural Engineering
	M.Tech	VTU,Belgaum	2009										
	B.E	VTU,Belgaum	2007										Civil Engineering
Mr. Shashikiran C R	Ph.D	VTU,Belgaum	Pursing (Registered 2014)	Assistant Professor 01/08/2013	-----	100%	------	*None*	*None*	05	*None*	*None*	Environmental Engineering
	M.Tech	VTU,Belgaum	2013										
	B.E	VTU,Belgaum	2011										Civil Engineering
Mrs.Umadevi	Ph.D	VTU,Belgaum	Pursing (Registered 2015)	Assistant Professor 01/08/2013	-----	100%	------	*None*	*None*	12	None	None	Structural Engineering
	M.Tech	VTU,Belgaum	2013										
	B.E	VTU,Belgaum	2011										Civil Engineering
Dr.Kumar Raju B C	Ph.D	NITK, Surathkal	2016	Associate Professor	-----	100%	------	*2016*	*None*	4	None	None	Civil Engineering
	M.Tech	NITK, Surathkal	2010										Remote Sensing & GIS
	B.E	VTU,Belgaum	2008										Civil Engineering
Mrs.Reena K	M.Tech	VTU,Belgaum	2014	Assistant	----	100%	----	*None*	*None*	None	None	None	Cadd Structures

	B.E	Kuvempu University	2010	Professor 1/8/2013									Civil Engineering
Mr.Vishwanath G	M.Tech	VTU,Belgaum	2013	Assistant Professor 22/07/2015	----	100%	----	None	None	2	None	None	Highway Technology
	B.E	VTU,Belgaum	2011										Civil Engineering
Mrs. Gayathri G	Ph.D	JNTU,Hydrabad	Pursing(Registered 2016)	Assistant Professor 23/07/2015	----	100%	----	None	None	3	None	None	Environmental Engineering
	M.Tech	VTU,Belgaum	2009										
	B.E	Bangalore University	2000										Chemical Engineering
Mr.Shlok Singh	M.Tech	MNNIT	2010	Assistant Professor 22/07/2015	----	100%	----	None	None	2	None	None	Geo Technical Engineering
	B.E	GBTU	2013										Civil Engineering
Mrs. Tanuja M R	M.Tech	Davanager University	2011	Assistant Professor 01/02/2016	100%	----	----	None	None	1	None	None	
	B.E	Kuvempu University	2006										
Mrs.Vindya Shree M P	M.Tech	VTU,Belgaum	2013	Assistant Professor 1/8/2013	-----	100%	------	None	None		None	None	Highway Technology
	B.E	VTU,Belgaum	2011										Civil Engineering

CAY 2016-2017 –PG

Name of the faculty member	Qualification			Designation & Date of Joining in the institution	Distribution of teaching load (%)			Academic Research			Sponsored Research (Funded Research)	Consultancy and Product Development	Specialization
	Degree Starting from highest	University	Year of Graduation		Ist year	UG	PG	Faculty receiving Ph.D During the assessment year	Ph.D Guidance	Research Publications			
Dr.W. P. Premakumar	Ph.D	IIT, Madaras	1998	Professor 22/7/2015	-----	------	100%	*None*	3	35	None	None	Applied Mechanics
	M.Tech	Bangalore University	1974										Structural Engineering
	B.E	Bangalore University	1972										Civil Engineering
Mrs. Kavitha S	Ph.D	Dr.MGR University	Pursing	Associate professor 23/08/2011	-----	------	100%	*None*	*None*	17	None	None	Structural Engineering
	M.Tech	Dr.MGR University	2009										Structural Engineering
	B.E	Dr.MGR University	2007										Civil Engineering
Mr.Gokul G H				Assistant Professor	-----	------	100%	*None*	*None*		None	None	
	M.Tech	VTU	2015										Structural Engineering
	B.E	VTU	2013										Civil Engineering

CAY 2015-2016 -UG

Name of the faculty member	Qualification			Designation & Date of Joining in the institution	Distribution of teaching load (%)			Academic Research		
	Degree Starting from highest	University	Year of Graduation		Ist year	UG	PG	Faculty receiving Ph.D During the assessment year	Ph.D Guidance	Research Publication
Dr.M Murali Krishna	Ph.D			Professor	-----	100%	-----			
	M.Tech									
	B.E									
Mr.I.Subramanian				Associate Professor	----	100%	-----			
	M.Sc									
	B.E									
Mr. Kalaignan				Associate professor	------	100%	-----			
	M.E									
	B.E									
Mrs. Manjula V	Ph.D			Associate professor	------	100%	-----			
	M.E									
	B.E									
Mrs. Kavitha S	Ph.D	Dr.MGR University	Pursing	Assistant Professor 23/08/2011	-----	100%	-----	None	None	17
	M.Tech	Dr.MGR University	2009							
	B.E	Dr.MGR University	2007							
Mrs.Sugandha.N	M.Tech	VTU,Belgaum	2014	Assistant Professor 27/07/2014	-----	100%	-----	None	None	12
	BE	VTU,Belgaum	2012							
Mrs.Laxmi G	Ph.D	VTU,Belgaum	Pursing	Assistant Professor	-----	100%	-----	None	None	3

			(Registered 2015)	01/02/2014						
	M.Tech	VTU,Belgaum	2009							
	B.E	VTU,Belgaum	2007							
Mr. Shashi kiran C R	Ph.D	VTU,Belgaum	Pursing (Registered 2014)	Assistant Professor 01/08/2013	-----	100%	------	*None*	*None*	05
	M.Tech	VTU,Belgaum	2013							
	B.E	VTU,Belgaum	2011							
Mrs.Umadevi	Ph.D	VTU,Belgaum	Pursing (Registered 2015)	Assistant Professor 01/08/2013	-----	100%	------	*None*	*None*	12
	M.Tech	VTU,Belgaum	2013							
	B.E	VTU,Belgaum	2011							
Mrs.Vindya Shree M P	M.Tech	VTU,Belgaum	2013	Assistant Professor 1/8/2013	-----	100%	------	*None*	*None*	
	B.E	VTU,Belgaum	2011							
Mrs.Reena K	M.Tech	VTU,Belgaum	2014	Assistant Professor 1/8/2013	----	100%	----	*None*	*None*	Nor
	B.E	Kuvempu University	2010							
Mr. Venkatesh R	M.Tech	VTU,Belgaum		Assistant Professor 1/8/2013	----	100%	----	*None*	*None*	Nor
	B.E	VTU,Belgaum								
Mr. Gangadhar N	M.Tech	Kuvempu University	2010	Assistant Professor 1/2/2014	100%	----	----	*None*	*None*	3
	B.E	VTU,Belgaum	2007							

CAY 2015-2016 –PG

Name of the faculty member	Qualification			Designation & Date of Joining in the institution	Distribution of teaching load (%)			Academic Research			Sponsored Research (Funded Research)	Consultancy and Product Development	Specialization
	Degree Starting from highest	University	Year of Graduation		Ist year	UG	PG	Faculty receiving Ph.D During the assessment year	Ph.D Guidance	Research Publications			
Dr.S Kumar	Ph.D			Professor	-----	------	100 %						
	M.Tech												
	B.E												
Dr Jayaram T N	Ph.D			Associate professor			100 %						
	M.Tech												
	B.E												
Mr. B Alagar Raja	M.Tech			Assistant Professor			100 %						
	B.E												

ACADEMIC YEAR 2014-2015-UG

Name of the faculty member	Qualification	Designation & Date of Joining in	Distribution of teaching load (%)	Academic Research

	Degree Starting from highest	University	Year of Graduation		Ist year	UG	PG	Faculty receiving Ph.D During the assessment year	Ph.D Guidance	Rese Pub o
Dr.Hanume Gowda	Ph.D			Professor 08/01/2012	-----	100%	-----			
	M.Tech									
	B.E									
Mr. Shiju Easo john				Associate professor 08/06/2012	----	100%	-----			
	M.Tech									
	B.E									
Mrs. Paneendra Pallavi				Assistant Professor 26/08/2009	----	100%	-----			
	M.Tech									
	B.E									
Mrs. Kavitha S	Ph.D	Dr.MGR University	Pursing	Assistant Professor 23/08/2011	-----	100%	-----	*None*	*None*	0
	M.Tech	Dr.MGR University	2009							
	B.E	Dr.MGR University	2007							
Mrs. Vathasla. S	M.Tech			Assistant Professor 08/01/2012						
	B.E									
Mr. Rajakumar	M.Tech			Assistant Professor 1/02/2013	-----	100%	-----			
	B.E									
Mr. Shashi kiran C R	Ph.D	VTU,Belgaum	Pursing (Registered 2014)	Assistant Professor 01/08/2013	-----	100%	------	*None*	*None*	05
	M.Tech	VTU,Belgaum	2013							
	B.E	VTU,Belgaum	2011							

Mrs.Umadevi R	Ph.D	VTU,Belgaum	Pursing (Registered 2015)	Assistant Professor 01/08/2013	-----	100%	------	*None*	*None*	1
	M.Tech	VTU,Belgaum	2013							
	B.E	VTU,Belgaum	2011							
Mrs.Reena K	M.Tech	VTU,Belgaum	2014	Assistant Professor 1/8/2013	----	100%	----	*None*	*None*	No
	B.E	Kuvempu University	2010							
Mrs.Vindya Shree M P	M.Tech	VTU,Belgaum	2013	Assistant Professor 1/8/2013	-----	100%	------	*None*	*None*	
	B.E	VTU,Belgaum	2011							
Mr. Venkatesh R	M.Tech	VTU,Belgaum		Assistant Professor 1/8/2013	----	100%	----	*None*	*None*	No
	B.E	VTU,Belgaum								
Mr. Gangadhar N	M.Tech	Kuvempu University	2010	Assistant Professor 1/2/2014	100 %	----	----	*None*	*None*	
	B.E	VTU,Belgaum	2007							

ACADEMIC YEAR 2014-2015-PG

Name of the faculty member	Qualification			Designation & Date of Joining in the institution	Distribution of teaching load (%)			Academic Research			Sponsored Research (Funded Research)	Consultancy and Product Development	Specialization
	Degree Starting from highest	University	Year of Graduation		Ist year	UG	PG	Faculty receiving Ph.D During the assessment year	Ph.D Guidance	Research Publications			
Mr.Nagasahadeva Reddy	Ph.D			Associate professor 08/01/2011	------	------	100%						
	M.Tech												Water Resources Engineering
	B.E												Civil Engineering
Mrs. Savitha C	Ph.D			Assistant professor 01/02/2014	----	----	100%						
	M.Tech	VTU, Belgaum											Structural Engineering
	BE	VTU, Belgaum											Civil Engineering
Mrs.Laxmi G				Assistant professor 1/2/2014	------	------	100%	*None*	*None*	None	None	None	
	M.Tech	VTU,Belgaum	2009										Structural Engineering
	B.E	VTU,Belgaum	2007										Civil Engineering

ACADEMIC YEAR 2013-2014-UG

Name of the faculty member	Qualification			Designation & Date of Joining in the institution	Distribution of teaching load (%)			Academic Research		
	Degree Starting from highest	University	Year of Graduation		Ist year	UG	PG	Faculty receiving Ph.D During the assessment year	Ph.D Guidance	Rese Publ o
Dr.Hanume Gowda	Ph.D			Professor 08/01/2012	-----	100%	-----			
	M.Tech									
	B.E									
Mr.Nagasahadeva Reddy	Ph.D			Assistant Professor 08/01/2011	------	100%	------			
	M.Tech									
	B.E									
Mrs. Paneendra Pallavi				Assistant professor	------	100%	------			
	M.Tech									
	B.E									
Mrs. Kavitha S	Ph.D	Dr.MGR University	Pursing	Assistant professor 23/08/2011	-----	100%	-----	*None*	*None*	1
	M.Tech	Dr.MGR University	2009							
	B.E	Dr.MGR University	2007							
Mr. Naveen Kumar	Ph.D			Assistant Professor 9/9/2010						
	M.Tech									
	B.E									
Mr. Vasanthamadhavan R	M.Tech			Assistant Professor 12/01/2011	-----	100%	-----	*None*	*None*	No
	BE									

Mr. Shankaraiah G M	M.Tech			Associate professor 16/07/2012	-----	100%	-----	*None*	*None*	No
	B.E									
Mr. Shiju Easo john				Associate professor 08/06/2012	----	100%	-----			
	M.Tech									
Mrs. Vathasla. S	M.Tech			Assistant Professor 08/01/2012						
	B.E									
Mr. Veerabhadragouda patil	M.Tech			Assistant Professor 08/03/2012						
	B.E									
Mr. Shiva Kiran Jagade	M.Tech			Assistant Professor 08/01/2012						
	B.E									
Mr. Rajakumar	M.Tech			Assistant Professor 1/02/2013	-----	100%	-----			
	B.E									

ACADEMIC YEAR 2013-2014-PG

Name of the faculty member	Qualification			Designation & Date of Joining in the institution	Distribution of teaching load (%)			Academic Research			Sponsored Research (Funded Research)	Consultancy and Product Development	Specialization
	Degree Starting from highest	University	Year of Graduation		Ist year	UG	PG	Faculty receiving Ph.D During the assessment year	Ph.D Guidance	Research Publications			

5.1. STUDENT-FACULTY RATIO (SFR) (20)

S: F ratio =N/F: N = No. of Students = 3X Where X is (Approved intake + 20% lateral entry intake + separate division, if any)
F= No. of faculty = (a + b - c) for every assessment year.
a: Total number of full time regular Faculty serving fully to 2nd,3rd ,4th year of the this program.
b: Total number of full time equivalent regular faculty (considering fractional load) serving this program from other program(s).
c: Total number of full time equivalent regular faculty (considering fractional load) of this program serving other program(s).

Year	X	N	F	SFR= N/F
CAY(2014-2015)	3X72	216	12	18
CAYm1(2013-2014)	3X72	216	12	18
CAYm2(2012-2013)	3X72	216	12	18
		Average SFR for three assessment years		18

5.2. FACULTY CADRE PROPORTION (25)

The Reference Faculty Cadre Proportion is 1(F1): 2(F2): 6(F3)
F1 : Number of professors required = 1/9 x Number of faculty required to comply with 15 : 1 Student – Faculty Ratio Based on no. of students(N) as per 5.1
F2 : Number of Associate professors required = 2/9 x Number of faculty required to comply with 15 : 1 Student – Faculty Ratio Based on no. of students(N) as per 5.1
F3 : Number of Assistant professors required = 6/9 x Number of faculty required to comply with 15 : 1 Student – Faculty Ratio Based on no. of students(N) as per 5.1
Note: If AF1 =AF2 =0 Then Zero Mark

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY	1	1	3	3	8	8
CAY*m*1	1	1	3	2	8	9
CAY*m*2	1	1	3	2	8	9
Average Numbers	RF1=1	AF1=1	RF2=2.33	AF2=2.33	RF3=8	AF3=8.6

Cadre Ratio Marks= ((AF1/RF1) + ((AF2/RF2)*0.6) + ((AF3/RF3)*0.4)*12.5

= (1/1) + (2.33/3*0.6) + (8.6/8*0.4)*12.5
=23.7

5.3 FACULTY QUALIFICATION (25)

FQ=2.5 x [{(10X + 6Y)/F}] Where X is no. of regular faculty with Ph.D., Y is no. of Regular faculty with M.Tech. F is no. of regular faculty required to comply 1:15 Student ratio.

	X	**Y**	**F**	**FQ=2.5 x [(10X +6Y)/F)]**
CAY(2015-	1	11	12	15.83
CAY*m*1(2014-15)	1	11	12	15.83
CAY*m*2(2013-14)	1	11	12	15.83
Average Assessment				15.83

=2.5 x [{(10*3) + (6*9)/12}]
= 17.5

5.4. FACULTY RETENTION (25)

No. of regular faculty members in CAY*m*2=12 CAY*m*1=15 CAY=16

Item	Marks	CAY(2015-16)	CAYm1(2014
>=90% of required Faculty members retained during the period of assessment	25		
>=75% of required Faculty members retained during the period of assessment	20		
>=60% of required Faculty members retained during the period of assessment	15		
>=50% of required Faculty members retained during the period of assessment	10		
<50% of required Faculty members retained during the period of assessment	0	1	1

5.5. INNOVATIONS BY THE FACULTY IN TEACHING AND LEARNING (20)

S.no	Title	Status
1	The work must be made available on Institute website	Yes
2	*The work must be available for peer review and critique*	Yes
3	*The work must be reproducible and developed further by other scholars*	Yes

- Faculty using with physical models and 3D models at the time of teaching -Drawing class
- Using animation and power point presentation
- Final year projects, guided by the faculties by using E tabs Cype software and stadd pro software.

5.6. FACULTY AS PARTICIPANTS IN FACULTY DEVELOPMENT / TRAINING ACTIVITES / STTPs (15)

- A Faculty scores maximum five points for participation
- Participation on 2 to 5 days Faculty development program: 3 points
- Participation > 5 days faculty development program: 5points

Name of the Faculty	Max. 5 per Faculty		
	CAY 2015-2016	**CAY*m*1 2014-2015**	**CAYm2 2013-2014**

Dr.D.L.Venkatesh Babu	0	0	0
Dr.W P PremKumar	0	0	5
Dr.Kumar Raju B C	0	0	0
Mr. Shashi Kiran C R	3	3	0
Mrs. Umadevi R	5	0	0
Mrs.Reena K	0	3	0
Mrs. Laxmi G	3	3	0
Mr. Gangadhar N	0	3	0
Ms. Sugandha N	3	5	0
Mrs. Gayathri G	3	0	0
Mr. Shlok Singh	3	0	0
Mrs.Kavitha S	5	3	0
Mrs Tanuja M R	5	0	3
Mr. Vishwanath G	3	0	0
Dr.Sankaran S	0	0	0
Dr. R Balamuragan	0	0	0
Sum	33	20	8
***RF*= Number of Faculty required to comply with 15:1 Student-Faculty ratio as per 5.1**	12	12	12
Asssessment=(3 X(Sum/0.5*RF)	16.5	9.99	3.99
Average assessment over three years (Marks limited to 15) = 10.16			

5.7. Research and Development (30)

- 5.7.1. Academic Research (10)

- Number of Quality Publications in Refereed/SCI journals, Citations, Books/Book Chapters (6)
- Ph.D. Guided /Ph.D. Awarded During The Assessment period While Working in the Institute (4)

1. Ph.Ds Guidance by Dr. D.L.VenkateshBabu

1) Ph D degree awarded in the year 2013 to Prof. Vijaya Kumar from Anna University, Chennai on the topic "Seismic Evaluation and Retrofitting of Reinforced Concrete Buildings".

2) Ph D degree awarded in the year 2014 to Prof. Ramadevifrom Anna University, Chennai on the topic "Investigations on Ductile behavior of Hybrid Fiber Reinforced Concrete Elements and Frames -with and without Infill".

3) Ph D degree awarded in the year 2016 to Prof. Krishna Priya A S from Anna University, Chennai on the topic "Enhance ment of strength and durability with silica fume and metakaolin by Bacterial prpecipiatationl".

4) Three students are submitted the thesis Anna University, Chennai (PhD viva-voce pending)

5) Five students are doing research under VTU University ,Belagam

2. **Dr. Kumar Raju B. C. has been awarded Ph.D during the Academic Year 2015-2016 from** National Institute of Technology Karnataka, Surathkal

Sl no.	***Name of the Teacher***	***Title of the Paper***	***Publication Citation***	***Date/Year of Publication***	***National or International Journal***
1	Dr. D.L.VenkateshBabu	Development of Ferrocement Formworks for Flexural Members	International Journal of Applied Engineering Research	ISSN 0973-4562 Vol. 10 No.62 (2015)	International Journal
		Isolation and identification of bacteria to improve the strength of concretes	Microbiological Research	Issue : 174 Month & Year : 2015	International Journal

				Page Nos. : 48-55	
		Behaviour of Hybrid Fibre-Reinforced Concrete Frames with Infills Against Lateral Reversed Loads	Arabian Journal for Science and Engineering	Springer Berlin Heidelberg ISSN : 1319-8025 Volume No. : 39 Issue : 10 Month & Year : JAN 2014 Page Nos. : 6959-6967	International Journal
		Steel Fibre Reinforced Latex Modified Concrete	International Journal of Engineering Research & Technology (IJERT)	ESRSA Publication ISSN: 2278-0181 Vol. 3 Issue 9, September-2014 pp 1273-1276	International Journal
		Studies on Behaviour of Hybrid Fibre Reinforced Concrete Frames with Infills Against Lateral Cyclic Loads	Archives Des Sciences	Vol 66, No. 4;Apr 2013, ISSN 1661-464X, pp 208-219	International Journal
		Strengthening of Concrete Specimens Using GFRP	International Journal of management , IT and Engineering	ISSN : Volume No. : 3	International Journal

				Issue : Month & Year : 2013 Page Nos. : 217-228	
		Seismic Evaluation of Reinforced Concrete Buildings	International Journal of Earth Sciences and Engineering	ISSN : Volume No. : 5 Issue : 3 (1) Month & Year : 2013 Page Nos.	International Journal
		Experimental Investigation on Strengthening of Reinforced Concrete Beam based on the Moment Rotation Relation	Archives Des Sciences	ISSN : Volume No. : 66 Issue : 1 Month & Year : 2013 Page Nos. : 556-585	International Journal
		Seismic Behaviour of Hybrid Fibre Reinforced Concrete Bare Frames.	International Journal of Engineering & Technology	ISSN : 0975-4024 Volume No. : 5 Issue : 5 Month & Year JAN 2013	International Journal

				Page Nos. : 3977-3985	
		Flexural Behavior of Hybrid (Steel-Polypropylene)Fibre Reinforced Concrete Beams	European Journal of Scientific Research	EuroJournals Publishing, Inc. 2012 ISSN 1450-216X Vol.70 No.1 (2012), pp. 81-87	International Journal
		Analytical Study on various types of FRP beams by using ANSYS	International Journal of Engineering Research and Applications	ISSN : Volume No. : 2 Issue : 5 Month & Year : 2012 Page Nos. : 593-598	International Journal
		Pushover Analysis of Existing Reinforced Concrete Framed Structures	European Journal of Scientific Research	ISSN : Volume No. : 71 Issue : 2 Month & Year : 2012 Page Nos. : 195-202	International Journal
		Structural Behavior of FRP Wrapped Beams under Experimental Investigation	International Journal of Earth Sciences and Engineering	ISSN : Volume No.	International Journal

				: 5 Issue : 5 Month & Year : 2012 Page Nos. : 1377-1383	
		Behaviour of hybrid fiber reinforced concrete slabs in frames under static loading	Eco. Env. & Cons. 18 (4)	EM International Eco. Env. & Cons. 18 (4) : 2012; pp. (975-979) Copyright@ ISSN 0971–765X	International Journal
		A survey of methods and techniques used for Seismic retrofitting of RC buildings	International Journal of Civil and Structural Engineering	ISSN : Volume No. : 2 Issue : 1 Month & Year : 2011 Page Nos. :56-66	International Journal
		A Survey of Methodologies for Seismic Evaluation of Building	Canadian Journal on Environmental, Construction and Civil Engineering	ISSN : Volume No. : 2 Issue : 5 Month & Year : 2011	International Journal

				Page Nos. : 50-55	
2	Dr. Kumar Raju B. C.	Identification of Hydrologically Active Areas in a Watershed using Satellite Data", *International Conference On Water Resources, Coastal And Ocean Engineering*	• *Aquatic Procedia* (Elsevier), 4, 1339-1344 DOI:10.1016/j.aqpro.2015.02.174	*2015*	*International Conference On Water Resources, Coastal And Ocean Engineering – ICWRCOE'*
		"Evaluating Uncertainty of the SWAT Model in the Upper Cauvery River Basin, Karnataka, India	• *International Journal of Earth Sciences and Engineering.*	2015	*International Journal*
3	**KAVITHA.S**	Experimental and numerical simulation of load deformation behavior of a reinforced concrete beam	IJSR	volume 5,issue 2 febraury 2016.	*International Journal*
		Evaluating the strength gain and structural properties of SCC by incorporating ROBO sand and GGBS	IJIFR	Volume 3.issue 6,febrauary 2016	*International Journal*
		Comparision of Effectiveness of structural frame systems in tall buildings	IJCR	Volume 8,issue 1,January 2016.	*International Journal*
		Study on Self Compacting Concrete of M30 Grade by Replacing Cement with Marble	IJARF	Volume 3, Issue 2, February 2016	*International Journal*

		Powder			
		Study on structure and extraction of bamboo fiber	ASJT	-feb 2016	*International Journal*
		Alternate Energy Production by Biodegradation of Organic (Food) Waste and Disposal at the source	IJARF	-volume 3, issue 2 feb 2016	*International Journal*
		Effect of alccofine and ggbs in self compacting concrete	Indian journal of science and technology,(SCOPUS RATED JOURNAL)*	june2016, volume 9issue 22	*national Journal*
		Dynamic analysis of tall tubular steel structures for different geometric configurations	IJERO	-Volume 4, issue 4, July 2016	*International Journal*
		studies on elevated temperature of fibre reinforced phosphogypsum	IJC IET(SCOPUS RATED JOURNAL).	(volume7, issue 2, march april 2016, pp234-246, SCOPUS RATED JOURNAL).	*International Journal*
		"Bamboo fibre analysis by scanning electron microscopy study"	IJCIET-(SCOPUS RATED JOURNAL)	volume 7,Issue 4,july2016pp234-241	*International Journal*
		Effect of Bamboo fibres in fresh and hardened properties of self	Indian journal of science and technology, (SCOPUS RATED JOURNAL)	june2016,volume 9,issue 22,august	*National Journal*

		compacting concrete		2016	
		Assessment of L/D Ratio of Eco Fibre - Bamboo as a Reinforcement Material in Concrete	IJET(SCOPUS RATED JOURNAL)	AUGUST 2016	*International Journal*
		Seismic performance of a RC frame with soft storey criteria	IJRET	-.vol 4,issue 3,march 2015	*International Journal*
		Experimantal and numerical simulation of ballistic impact on glass fibre reinforced composite panels	IJIRR	march 2015	*International Journal*
		Seismic vulnerability of flat plate column joint with out slab shear reinforcement	IJRET	april 2015,volume 4,issue 4	*International Journal*
		"Study on behavior of flat plate column connection with various types of slab shear reinforcement"	IJIFR	may 2015,volume 2,issue 9	*International Journal*
		"Seismic vulnerability of geometrically unsymmetrical RC building by considering the effect of shear walls at different position	IJIFR.	may 2015,volume 2,issue 9	*International Journal*

4		Environmental Management by Process stage – case study	International Journal of Advanced Research Foundation [IJARF]GJIF Impact Factor:4.73	February 2014.	International Journal
		Recycled Plastic and Crushed Rock Powder as Course Aggregate and Fine Aggregate in Structural Concrete	International Journal of Advanced Research Foundation [IJARF] GJIF Impact Factor:4.73	February 2014	International Journal
		Recycled Plastic and Crushed Rock Powder as Course Aggregate and Fine Aggregate in Structural Concrete	International Journal of Engineering Research and Technology [IJERT] Impact Factor:1.76	February 2014	International Journal
		Alternate Energy Production by Biodegradation of Organic (food) Waste and Disposal at the Source	International Journal of Advanced Research Foundation [IJARF] GJIF Impact Factor:4.73	Volume 3, Issue 2, February 2016	International Journal
		Study on Elevated Temperature on Phospogysum Concrete	IJCIET(Scopus Indexed Journal, Thomson Reuters Research ID – H-3771-2015 indexed Journal), Impact Factor 9.782	Volume 7, Issue 2, March – April 2016	
		A review on impact of climate change on Food Production	International Journal of Latest Trends in Engineering and Technology [IJLTET], Thomson Reuters ID Indexed Journal, Index	May 2016.	International Journal

			Copernicus ICV 77.02/100, 7.39/10, Cosmos impact Factor, 4.49/10, Global Impact Factor, 0.65/10		
5	**Mrs. Umadevi R**	Recycled Plastics & Crushed Rock Powder As Coarse Aggregate And Fine Aggregate In Structural Concrete	IJRAF	1. Vol. 2, Issue 2, February 2015.Page no.4-6. IF 4.73.	*International Journal*
		Seismic Performance Of A Rc Frame With Soft Storey Criteria.	IJRET	Vol. 4, Issue 3, March 2015, IF 3.935.	*International Journal*
		Experimental And Numerical Simulation Of Ballistic Impact On Glass Fibre Reinforcement Composite Panals.	IJIRR	Vol. 2, Issue 04, pp. 606-610, April, 2015, IF 4.251.	*International Journal*
		Seismic Vulnarabality Of Flat Plate Column Joint Without Slab Shear Reinforcement. Vol. 4, Issue 4, April 2015, IF 3.935.	IJRET	Vol. 4, Issue 4, April 2015, IF 3.935.	*International Journal*
		Study On Behavior Of Flat Slab Column Connection With Various Types Of Slab Shear Reinforcement.	IJIFR	Vol. 2, Issue 9, May 2015, Pg No.2988-2999, IF - 4.164.	*International Journal*

		Comparative Study of Courbon's Method and Finite Element Method of RC T–Beam and Deck Slab Bridge.	IJEMR	Vol.5, Issue 6, Dec 2015, IF-2.216.	*International Journal*
		Comparision of Effectiveness Of Structural Frame Systems In Tall Buildings, -	IJCR	Volume 8, Issue 2, Feb 2016, IF 6.225.	*International Journal*
		Evaluating The Strength Gain And Structural Properties Of SCC By Incorporating Robo Sand And GGBS,	IJIFR -	-Volume 3, Issue 6, Febrauary 2016, IF 4.781.	*International Journal*
		Alternate Energy Production by Biodegradation of Organic (food) Waste and Disposal at the Source.,	IJRAF-	Volume 3, Issue 2, February 2016, IF 4.73.	*International Journal*
		Study on SCC of M30 Grade By Replacing Cement With Marble Powder,.	IJRAF	Volume 3, Issue 2, February 2016, IF 4.73	*International Journal*
		Study On Elevated Temperature On Phospogypsum Concrete ,	IJCIET (Thomson Reuters Research ID: H-3771-2015 Indexed Journal)	Volume 7, Issue 2, March-April 2016, **IF 9.782**	*International Journal*
		A Review on Seismic Performance of Masonry Reinforced Structures	accepted for publishing in IJEE		*International Journal*

6	**Sugandha N**	Recycled plastics & crushed rock powder as coarse aggregate and fine aggregate in structural concrete.		March 2015	*International Journal*
		A behavior and the study of efficient bracing system on a high rise rcc structure		MAY 2015	*International Journal*
		Seismic performance of a RC frame with soft storey criteria.	IJRET,	vol 4,issue 3,march 2015	*International Journal*
		Experimantal and numerical simulation of ballistic impact on glass fibre reinforced composite panels	IJIRR	march 2015	*International Journal*
		Seismic vulnerability of flat plate column joint without slab shear reinforcement,	IJRET	April 2015, volume 4, issue 4.	*International Journal*
		Study on behavior of flat plate column connection with various types of slab shear reinforcement ,	IJIFR	May 2015, volume 2, issue 9.	*International Journal*
		Seismic vulnerability of geometrically unsymmetrical RCbuilding by considering the effect of shear walls at different position	IJIFR	may 2015,volume 2,issue 9.	*International Journal*
		Comparision of Effectiveness of structural frame systems in tall buildings,	IJCR	Volume 8,issue 1,January	*International Journal*

				2016	
		Evaluating the strength gain and structural properties of SCC by incorporating ROBO sand and GGBS,.	IJIFR	Volume 3.issue 6,febrauary 2016	*International Journal*
		Alternate Energy Production by Biodegradation of Organic (food) Waste and Disposal at the Source.	IJRAF,	Volume 3, Issue 2, February 2016	*International Journal*
		study on scc of m30grade by replacing cement with marble powder	IJRAF,	Volume 3, Issue 2, February 2016	*International Journal*
		study on elevated temperature on phospo gypsum concrete	IJCIET,	volume7,issue 2,march-april2016	*International Journal*
7	Dr W.P. Prema Kumar	1) Experimental and numerical studies on free vibration characteristics of a three storied building frame	International Journal of Engineering Research & Technology (IJERT), Vol. 4, Issue 05, May-2015, pp. 241-245	2015	International
		2)Prediction of deflection of reinforced concrete beams using machine learning tool	International Journal of Emerging Technologies and Engineering (IJETE), Volume 4, Issue 05, May 2015, pp. 883-886. DII: http://dx.doi.org/10.17577/IJERTV4IS50936	2015	International
		3)Prediction of compressive, flexural and splitting tensile strengths of concrete using machine learning tool	International Journal of Emerging Technologies and Engineering (IJETE), Volume 4, Issue 05, May 2015, pp.	2015	International

			893-897. DII: http://dx.doi.org/10.17577/IJERTV4IS50950		
		4)Comparative performance of geo polymer concrete exposed to acidic environment	International Journal of Research in Engineering and Technology (IJRET), Volume: 04 Special Issue: 04 | ASHCE-2015 | May-2015, Available @ http://www.ijret.org, pp.27-31.	2015	International
		5) Buckling Behaviour of cylindrical panels	Nonlinear Engineering 2015; 4(2):67-75. DOI 10.1515/nleng-2014-0019.	2015	International
		6)Experimental investigation on properties of self compacting and self curing concrete with silica fumes and light weight aggregate	International Journal of Engineering Research & Technology (IJERT), Vol. 4, Issue 06, June-2015, pp. 203-210.	2015	International
		7)Effect of plan dimensions, seismic zone, infill on storey drifts and force response of L- shaped Reinforced concrete buildings	International Journal of Engineering Research & Technology (IJERT), Vol. 4, Issue 07, July-2015, pp. 112-123.	2015	International
		8)Development of high strength geopolymer concrete using low molarity NaOH	International Journal of Engineering Research & Technology (IJERT), Vol. 4, Issue 07, July-2015, pp. 194-200.	2015	International

		9)Force and Deformation Response of U shaped Multi storied reinforced concrete buildings	International Journal of Scientific Engineering and Applied Science, Volume 1, Issue 5, August 2015, pp.1-19.	2015	International
		10)Effect of partial replacement of cement I self compacting concrete by fly ash and metakaolin	International Journal of Engineering Research & Technology (IJERT), Vol. 4, Issue 07, July-2015, pp. 339-346.	2015	International
		11)Influence of plan dimensions, seismic zone, infill on the behavior of I shaped Reinforced concrete buildings	IOSR Journal of Mechanical and Civil Engineering", Volume 12, Issue 4,Ver. III (Jul.-Aug.2015), pp 42-57	2015	International
		12) Influence of plan dimensions, seismic zone, infill on the force and deformation responses of T shaped Reinforced concrete buildings	International Journal of informativel and Futuristic Research, volume 2 ,issue 11, july 2015 pp 4053-4072	2015	International
		13)strength characteristics of glass fiber reinforced self compacting concrete with fly ash and silica fume	International Journal of Engineering Research & Technology (IJERT), Vol. 4, Issue 08, August -2015, pp. 1-6.	2015	International
		14) Numirical simulation of masonary prism test using ANSYS and ABACUS	International Journal of Engineering Research & Technology (IJERT), Vol. 4, Issue 07, July-2015, pp. 1019-1027.	2015	International

		1)Experimental and Finite Element studies on free vibration of cylindrical skew panels	Science and Engineering of Composite Materials, 10.1515/secm-2013-0153, December 2013.	2014	International
		2)Finite element studies on free vibration of laminated composites cylindrical skew panels	Science and Engineering of Composite Materials, DOI 10.1515, secm-2013-0204, (**2013**).	2014	International
		3)Experimental and Finite element studies on free vibration of skew plates	International Journal of Advanced Structural Engineering, 2014, 6:1	2014	International
		4)Influence of steel fibers and partial replacement of sand by iron ore tailings on the compressive and splitting tensile strength of concrete	International Journal of Civil Engineering and Technology (IJCIET), Volume 5, Issue 3, March (2014), pp.117-123.	2014	International
		5) Effect of Partial replacement of cement with waste glass powder on the properties of concrete	International journal of structural engineering and civil engineering research, volume 3 No. 2 may 2014	2014	International
		6)Experimental and Finite element studies on Bukling of Laminated E-Glass woven fabric Epoxy composite plates	International journal of engineering research and technology pp.303-307,vol.3 issue 7 july-2014	2014	International
		7)Force and deformation responses of tall reinforced	International journal of engineering research and technology pp.94-	2014	International

		concrete building frames	107, vol.3 issue 8 August 2014		
		8)Support vector machines technique in analysis of concrete critical review	International journal of Emerging technology and engineering (IJETE). Volume 1. Issue 9 october 2014.pp 199-203	2014	International
		9)Experimental and Finite element studies on Buckling of skew plates under uniaxial compression	Science and engineering of composites materials	2013	***National***
		10) Finite element studies on Buckling of laminated cylindrical skew panels.	Science and engineering of composites materials	2013	***National***
8	***LAXMI G GANDAGE***	Title: Comparative Study of Different Types of Repair Materials in Flexure Volume-05 Issue-16. May 2016	International Journal of Research In Engineering And Technology [IJRET]	Volume-05 Issue-16. May 2016	International Journal
		Title: Flexural Performance of Reinforced Concrete Beams Repaired with Mortar Based Repair Materials www.ijarf.com, Volume 3, Issue 6, June 2016)	International Journal of Advanced Research And Foundation [IJARF]	www.ijarf.com, Volume 3, Issue 6, June 2016)	International Journal
		Strength performance of Cement soil	International Journal of Advanced Research And Foundation [IJARF]		International Journal
9	**Gayathri G**	Deflouridation of water using low cost adsorbents…	i-managers journal of civil engg vol-6	2015	International

		Deflouridation of water at rural areas	i-managers journal of civil engg	2015	International
10	**Vishwanath G**	Strength performance of Cement soil	International Journal of Advanced Research And Foundation [IJARF]		International Journal
		"Development of Pavement Management Strategies for Arterial Roads"	IJRET: International Journal of Research in Engineering and Technology IC- RICE 2013 PDACEG	eISSN: 2319-1163 pISSN: 2321-7308 November, 2013	International Journal
11	**Shlok Singh**	Comparative Study of Different Types of Repair Materials in Flexure Volume-05 Issue-16. May 2016	International Journal of Research In Engineering And Technology [IJRET]	Volume-05 Issue-16. May 2016	International Journal
12	**Tanuja M R**	Precast Diaphram Analysis : A comparative study between Beam Analogy and stress Analysis Using FEM Based Software(Etabs)	International journal of Emerging Research in Management and Technology	ISSN: 2278-9359 voilume:5, issue : 5 May-2016	International journal

5.7.2. Sponsored Research (05)

Note; Funded Research

- Amount > 20 Lakhs-5 Marks
- Amount > =16 Lakhs and < =20 Lakhs -4 Marks
- Amount > =12 Lakhs and <16 Lakhs -3 Marks
- Amount > =8 Lakhs and <12 Lakhs -2 Marks
- Amount >= 4 Lakhs and < 8 Lakhs -1 Mark
- Amount<4 Lakhs -0 Mark

5.7.3. Development activities (10)

- RESEARCH LABORATORIES;
    - Structural Engineering Laboratory

- Basic Material Testing Laboratory
- INSTRUCTIONAL MATERIALS;
  - Lab Manuals
  - Suppliers Manual

S.No	Details
1	Smart Class(MultiMedia Projector)

S.No	Details
1.	Animations
2.	Lab Description Charts
3.	Lab Manuals

5.7.4. Consultancy (From Industry) (05)

1.MOU with FE DESIGNS , an entity incorporated under the laws of India and having its Principal place of business at #35, 2 floor Vanivilas Road Basavanagudi, Bangalore, India 560 004, representing by its proprietor, Mr. Amarnath S N

2. CADD Centre, Kengeri

5.8. Faculty performance appraisal and Development system (FPADS) (30)

- The Faculty Performance is Evaluated by HOD for every Academic year With the use of appraisal Form A

5.9. Visiting / Adjunct / Emeritus Faculty Etc. (10)

S.No.	Name of the visiting faculty	University/College/Industry	Count hours
1	Prof. Ganganna	VTU	4 hours/week
2.	Er. Sri sunil R K M. E(str.),PGDM, DIS	CEO-3E- Services, Construction Engineer Quality services	3hours / week
3.	Er. B S Sudharshan	Office head- Stac Consultants	3hours / week
4.	Dr. Seenappa	VTU	4 hours /week

CRITERIA 6

Facilities and Technical Support

CRITERION 6	Facilities and Technical Support	80

6. FACILITIES AND TECHNICAL SUPPORT (80)

6.1. Adequate and well equipped laboratories, and technical manpower (30)

Sr. No.	Name of the Laboratory	No. of students per setup (Batch size)	Name of the Important equipment	Weekly utilization status	Technical Manpower support		
					Name of the technical staff	Designation	Qualification
1.	1st semester/2nd semester Basic Workshop Practice Lab 15WSL16/26	20	**Fitting Shop** ➢ Bench vice (make smith) ➢ Flat fix hacksaw frameTry square 8” ➢ Try square ➢ Vernier height gauge ➢ Anvil, ➢ Swage block ➢ **Welding shop** ➢ Chipping hammer ➢ Welding machine ➢ Welding cables ➢ Welding holder ➢ Earthing clamp ➢ Surface flate ➢ Sledge hammer	27hrs	Mr. Raghu	Asst. Instructor	I.T.I

2.	1st semester/2nd semester Computer Aided Engineering Lab 15CED14/24	20	➢ ACER LCD Monitor 19"inch ➢ Intel®Core™2 Duo CPU E7500 @ 2.93GHz,0.99 GB of RAM,320GB HDD ➢ Solid Edge software tool version 20 ➢ ACER keyboard and mouse ➢ UPS and Batteries	27hrs	Mr. Prashanth	Instructor	B.E.
3.	3rd semester Building Materials Testing Lab	20	➢ Universal Testing Machine ➢ Torsion Testing Machine ➢ Impact Testing Machine	09 hrs	Mr. Yogesh	Asst. Instructor	I.T.I
4.	3rd semester Survey Lab	20	➢ Total Station ➢ Theodolite ➢ Dumpy Level ➢ Prismatic Compass ➢ Plane Table ➢ Digital Planimeter	09 hrs	Mr. Naveen	Instructor	B.E.
5.	4th semester Geology Lab	20	➢ Folds ➢ Unfolded Bloack ➢ Anticlinal Folds ➢ Synclinal Folds &Recumberent Folds	09 hrs	Mr. Abdullah	Instructor	B. E.

6.	5th semester CAED Lab	20	➢ Quad-core 2.8GHz – Intel processor ➢ 1 GB RAM ➢ 320 GB Hard disk ➢ DVD Disk writer ➢ LCD Monitor **Major Software available in CAD Laboratory –** 1. STAAD PRO (Multiple users) 2. AutoCAD (Multiple users)	09 hrs	Mr. Venkat	Instructor	B.E.
7	5th semester Hydraulics and Hydraulic Machinery lab	20	➢ Impact of jet on vanes ➢ Pelton wheel turbine ➢ Francis turbine ➢ Kaplan turbine ➢ Single and multi stage centrifugal pump ➢ Reciprocating pump ➢ Venturimeter ➢ Orifice meter ➢ Air Blower test rig	09 hrs	Mr.Ramakrishnappa	Asst. Instructor	SSLC

08.	6th semester Geotechnology Lab	20	➢ Triaxial Shear Apparatus ➢ Direct Shear m/c ➢ Unconfined Compressive Strength m/c ➢ CBR Test m/c ➢ Variable Head permeability Setup ➢ Sand Replacement apparatus ➢ Hot Air Oven	09 hrs	Mr. Lakshman	Asst. Instructor	I.T.I.
9.	7th semester Environmental Engineering Lab	20	➢ Spectrophotometer ➢ BOD Incubator ➢ COD Digestion Apparatus ➢ Autoclave ➢ pH & Conductivity meters ➢ Jar Test Apparatus	09 hrs	Mr. Lakshman	Asst. Instructor	I.T.I.
10.	7th semester Concrete Lab	20	➢ Compression Testing Machine ➢ Los Angeles Abrasion Testing m/c ➢ Vee Bee Consistometer ➢ Impact Testing m/c ➢ Ductility Testing m/c ➢ Flash & Fire point setup ➢ Softening Point Setup	9hrs	Mr. R. Saravana	Instructor	DCE

Technical Manpower Support in the Department

Sl. No.	Name	Qualification	Designation	Experience (in years)
FOREMAN				
1	Ms. Meenakshi A	B. Arch	Foreman	04
INSTRUCTOR/ ASST. INSTRUCTOR/ MECHANIC				
1	Naveen	BE	Instructor	03
2	Abdulla	BE	Instructor	03
3	Venkat	BE	Instructor	01
4	R. Saravana	DCE	Instructor	01
5	Kumaran	DCE	Instructor	03
6	Krishnamurthy	ITI	Asst. Instructor	42
7	Laxman	ITI	Asst. Instructor	15
8	Ramakrishna	SSLC	Asst. Instructor	30

6.2. Additional facilities created for improving the quality of learning experience in laboratories (25)

Sr. No.	Facility Name	Details	Reason(s) for creating facility	Utilization	Areas in which students' are expected to have enhanced learning	Relevance to POs/PSOs
1.	Smart Class Room	Fully equipped shared Smart Class room with LCD projector and software's with the seating capacity of 80. Comfortable desks, chairs and teaching aids. Glass board, Fan, Tube light, chalk board.	For better understanding of Computer Aided Engineering Drawing lab and. Geotechnical Engineering Lab. The students can verify theoretical concepts in a practical environment by providing e-learning through online Web courses and Video lectures in Engineering, Sciences, Technology	Per Semester 15 hrs	➢ Autocad Drawing ➢ Using the various tools ➢ Video tutorials on various laboratory and field practicals in Geotechnology Laboratory such as: • SPT Test • Direct Shear Test • Triaxial Shear Test	PO: 1,2,3,5 PSO: 1,2
2.	Seminar Hall	Fully equipped shared seminar hall with Computer, Projector, Student Desk, White Board, Air conditioner, Fan, Cushion chair, Mic, Speaker, LED lights, Podium.	For better understanding of theoretical concepts and practical in various laboratories. The students can verify theoretical concepts in a practical environment by providing e-learning through online Web courses and Video lectures in Engineering, Sciences, Technology	Per Semester 12 hrs	➢ Seminars on various topics related to laboratories. ➢ Seminar on the recent technologies used in industry	PO: 1,2,4,5,10 PSO: 1,2
3.	Concrete Laboratory	Having the facilities of L-Box, U Box, J Ring, V Funnel in addition to all the experimental setups in curriculum.	*To conduct research activities in concrete by adding various admixtures, testing the strength of concrete cubes. In addition to the VTU curriculum, the listed arrangements are available so that students can make use of them in projects.*	Per Semester 06 hrs	➢ Concrete Technology ➢ Alternate Building Materials ➢ Geopolymers and admixtures	PO: 1,2,4,11 PSO: 1,2,3

4.	Total Station (Survey Laboratory)	Total Station device is available for students to enhance the process of survey in a digital and more accurate way.	In addition to the VTU curriculum, students can verify theoretical concepts in a practical environment. The students are required to stay in touch with the recent trends and equipment used in Civil Engineering. The field of survey is most important aspect of Civil Engineering and Total Student is the smart way of survey used now a days.	Per Semester 06 hrs	➢ Latest Trends in Survey. ➢ Digital Survey ➢ Need of the hour equipments	PO: 1,2,9,12 PSO: 1,3
5.	E-journal Facility	IEEE, Springerlink, Elsevier, ASCE.	Easy access . For research and project activities. To know about recent trends in science and technology.	Complete semester is opened to utilize	➢ Research activity ➢ Recent trends in engineering ➢ Project activity	PO:2,4,5,8,9, 10,11,12 PSO: 1,2,3
6.	Common Internet Facility	6 GB High bandwidth data is allocated to each student every month for academic purposes.	Facility to staff, students ; Easy access of internet	Complete semester is opened to utilize	➢ More knowledge apart from curriculum. Better understanding about practical.	PO: 1,2,3,4,5,10, 11, 12 PSO: 1,2,3
7.	English Language Laboratory	The English faculty is deputed to teach basic English for the first year students to make them to understand regular engineering concepts clearly.	First Year students will use this facility to increase communication skill.	Per semester 30 hrs	➢ Better Communication ➢ Understanding the concepts clearly ➢ To communicate with the faculty for better understanding the subjects.	PO: 8,9,10 PSO: 3
8.	Library	Central Library: • 440 Titles • 2309 No of Volumes • 6 National Journals • 2International Journals	For staff and students. The students will understand the content of each lab	Complete semester is opened to utilize	Students and staff can refer more than one text book and have a better understanding.	PO: 1,2,3,4,8,10, 11,12 PSO: 1,2,3

9.	Manual Records facilities	Provided manuals for Workshop practice, Foundry Forging, Material Testing, Survey Practice Lab, Hydraulics & Hydraulic Machinery lab, CAED Lab, Geotechnology lab.	The students will understand the content of each lab in advance. It will acts as a guidelines, instruction, handbook, to undertake the each experiments in each lab. To tabulate the obtained value by each experiments.	Complete semester	➢ For better understanding all the experiments ➢ Tabulating the obtained data ➢ Do's and Don'ts ➢ Safety measures	PO: 1,2,3,4,7 PSO: 1,2,3

6.3. Laboratories: Maintenance and overall ambiance (10)

1. Department has enough labs which are used for all the years on timetable basis to meet the curriculum requirements.
2. The courses which have practical work will be provided labs every week.
3. Conditions of chairs/benches are in good condition. Chair with desk are provided for individual students in Labs.
4. Labs are equipped with sufficient hardware and licensed software to run program specific curriculum and off program curriculum.
5. Sufficient laboratory manual are distributed to students.
6. Sufficient number of windows is available for ventilation and natural light and every lab has one exit.
7. Lighting system is very effective, along with the natural light in every corner of the rooms.
8. Emergency light connections available in Lab in case of power failure.
9. Cup-boards are available in each lab for students to place their belongings.
10. Each Lab is equipped with white/black board, computer, Internet, and such other amenities.
11. Research laboratory is available 24x7 for all faculties and students to carry research work and projects.
12. All the equipment are serviced regularly before the commencement of semester and are in good working condition.

6.4. Project laboratory (5)

Various equipment and laboratories are used by students of the departments for completion of their projects.

Sr. No.	Name of the Facilities	Utilization
1.	Solid Edge Version 20	1st, 2nd, 3rd semester students, PG students and Faculty members.

2.	AUTOCAD	5th, 6th semester students, PG students and Faculty members.
3.	STAAD PRO v 5.3	7th, 8th semester students, PG students and Faculty members.
4.	Geotechnology Laboratory	6th, 8th semester students, PG students and Faculty members,
5.	Concrete Laboratory	7th, 8th semester students, PG students and Faculty members.
6.	Material Testing Laboratory	3rd , 8th semester students semester, PG students, Faculty members
7.	Environmental Engineering Laboratory	5th, 8th semester students, PG students, Faculty members.

List of Projects:

Sl.No.	USN No.	Name	Topic/Title	Guided By	Laboratory
1	1AH09CV026	Shruthi S Kannur	Analysis and Design of housing chamber	G M Shankaraiah	CADD
	1AH09CV028	Varsha R			
	1AH10CV424	Shivaprasad H N			
	1AH10CV433	Yogesh S			
2.	1AH10CV411	Manu K	Recycled concrete aggregates in preparation of new concrete masonry units	K Nagasahedeva Reddy	Concrete Lab
	1AH10CV414	Prema B S			
	1AH10CV415	Devaraju R			
3.	1AH09CV002	Arun K	Preparation of	Dr.	Concrete Lab

	1AH09CV011	Karthigayan S	concrete using concrete shells and stone dust as a partial replacement of coarse and fine aggregates.	Hanumegowda	
	1AH09CV016	Mohammad Asif K S			
	1AH10CV417	Rama B C			
4.	1AH10CV401	Bharath K R	Experimental Study on concrete using recycled plastic as coarse aggregate	Umadevi R	Concrete Lab
	1AH10CV004	Harisha H M			
	1AH11CV405	Pavithra M N			
	1AH10CV432	Vishwanath K K			
5.	1AH09CV029	Ravi Kiran H L	Study of characteristic strength of concrete using rice husk ash as a partial replacement of cement and stone dust as a fine aggregate	Dr. Hanumegowda	Concrete Lab
	1AH10CV018	Shrikant Gowda B N R			
	1AH10CV026	Vinod U			
	1AH10CV027	Yogesh H V			
6.	1AH10CV002	Darshan Kumar G	Study on use of rice husk ash in concrete	Shashikiran C R	Concrete Lab
	1AH10CV009	Manoj M			
	1AH10CV419	Ravi Kumar H G			
	1AH11CV402	Harish Kumar			
7.	1AH11CV400	Chandan Kumar A	Analysis and design of a multi storied building using STAAD PRO and E Tabs	Laxmi G Gandage	CADD
	1AH11CV407	Vinaj R			
	1AH10CV422	Sanjay D			
	1AH10CV416	Raghuraj N			
8.	1AH10CV003	Girisha M R	Correlation of CBR with Index and Engineering properties for fine grained soil	Venkatesh R	Geotechnical Engineering
	1AH10CV010	Namratha R			
	1AH10CV015	Sharath B			
	1AH10CV016	Shivaraju G			

9.	1AH10CV008	Manjunath Y S	Ecofriendly concrete using by-products of steel industry	Reena K	Concrete Lab
	1AH11CV006	Rakshitha Gowda B C			
	1AH11CV007	Ranjitha N			
	1AH12CV403	Shalaka Priyadarshini C A			
10.	1AH10CV029	Dinesh D B	Self Curing Concrete	Manjula	Concrete Lab
	1AH10CV030	Prajwal S Patil			
11.	1AH13CV402	Darshan Jadhav Y M	Evaluation of strength behavior of coconut fiber reinforced concrete by partial replacement of cement with GGBS	Kavitha S	Concrete Lab
	1AH13CV403	Deepak H M			
	1AH12CV013	Niranjan Kumar H V			
	1AH12CV012	Ningaraju C S			
12.	1AH13CV412	Nikith Gowda	Deflouridation of drinking water using locally available absorbents	Gayathri G	Environmental Engg.
	1AH13CV416	Shashikiran G			
	1AH13CV420	Thirumalesh K C			
	1AH13CV422	Vinay Kumar B C			
13.	1AH12CV004	Charan K	An assessment of groundwater quality index in sugartown, mandya city	Gayathri G	Environmental Engg.
	1AH12CV005	Gangadhar Gowda			
	1AH12CV007	Jatteppa Sangogi			
	1AH12CV020	Swaroop A R			
14.	1AH13CV421	Vimlesh M R	Soil Stabilization using Solid Waste Products	Shlok Singh	Geotechnical Engineering
	1AH12CV019	Sindhura V R			
	1AH12CV018	Shruthi Kapse D			
	1AH12CV001	Akshai Kumar V P			
15.	1AH13CV417	Shiva Kumar	Analysis and Design of	Laxmi G Gandage	CADD

		Swamy Hiremath	Multi storied building using CYPE CADD		
	1AH13CV407	Janardhan C			
	1AH11CV005	P. Dhinesh			
	1AH13CV408	Jyothi K			

6.5. Safety measures in laboratories (10)

Sl. No.	Name of the Laboratory	Safety measures
1.	Workshop Practice Lab	• General Rules of Conduct in Laboratories are displayed. • Specific Safety Rules for students displayed. • First aid box, Fire extinguisher & Hand gloves are kept in each laboratory. • Students are wearing Lab Uniform. • Well trained technical supporting staff. • Avoiding the use of damaged equipment and providing needful equipment and components. • Periodical servicing of the lab equipment. • Maintain a clean and organized laboratory. • Avoiding the use of cell phones. • Appropriate storage areas. • Hand gloves, Safety shoes, Welding goggles, should be used in the lab. • Loose clothing and jewels etc. are prohibited. • Long hair must be completely covered

2.	CAED Lab	• General Rules of Conduct in Laboratories are displayed. • Specific Safety Rules for students displayed. • First aid box, Fire extinguisher & Hand gloves are kept in each laboratory. • Students are wearing Lab Apron. • Well trained technical supporting staff. • Avoiding the use of damaged equipment and providing needful equipment and components. • Periodical servicing of the lab equipment. • Maintain a clean and organized laboratory, • Avoiding the use of cell phones. • Appropriate storage areas. • Proper PC system is used.
3	Hydraulics & Hydraulic Machinery Lab	• General Rules of Conduct in Laboratories are displayed. • Specific Safety Rules for students displayed. • First aid box, Fire extinguisher & Hand gloves are kept in each laboratory. • Well trained technical supporting staff. • Periodical servicing of the lab equipment. • Appropriate storage areas. • The students are advised to Always enter the lab with safety shoes, hand gloves and safety glasses. • Disabling or removing safety devices is dangerous and should be avoided. • Any sharp tool or machine should be used carefully in supervision of Lab attendant or faculty. • Carefully inspect all protective equipment prior to use. Do not use defective equipment. • Do not tamper with safety devices.

4	Geology Lab	• General Rules of Conduct in Laboratories are displayed. • Specific Safety Rules for students displayed. • First aid box, Fire extinguisher & Hand gloves are kept in each laboratory. • Well trained technical supporting staff. • Do not touch stones and minerals without permission. • Count all stones before leaving lab. • Don't use mobile phones during lab hours. • Any sharp tool or machine should be used carefully in supervision of Lab attendant or faculty. • Do not use acids like HCL to identify the minerals. • Handle the rock and minerals carefully. • Do not split and powder the minerals.
5	Survey Lab	• General Rules of Conduct in Laboratories are displayed. • Specific Safety Rules for students displayed. • First aid box, Fire extinguisher & Hand gloves are kept in each laboratory. • Well trained technical supporting staff. • Periodical servicing of the lab equipment. • Appropriate storage areas. • Sharp tools should be used carefully in supervision of Lab attendant or faculty. • Do not play with instruments or chain. • Wear proper safety shoes. • Wear face mask.

6	BMT Lab	• General Rules of Conduct in Laboratories are displayed. • Specific Safety Rules for students displayed. • First aid box, Fire extinguisher & Hand gloves are kept in each laboratory. • Well trained technical supporting staff. • Periodical servicing of the lab equipment. • Appropriate storage areas. • Always enter the lab with safety shoes, hand gloves and safety glasses. • Wet cement is caustic, and can cause severe chemical burns to exposed skin and eyes. Hence it should be dealt with care. • Cement comprises of particles lesser than 45 microns. Always wear mask while working with cement. • Disabling or removing safety devices is dangerous and should be avoided.
7	GeoTechnology Lab	• General Rules of Conduct in Laboratories are displayed. • Specific Safety Rules for students displayed. • First aid box, Fire extinguisher & Hand gloves are kept in each laboratory. • Well trained technical supporting staff. • Periodical servicing of the lab equipment. • Appropriate storage areas. • Always enter the lab with safety shoes, hand gloves and safety glasses. • Wear proper safety shoes in concrete/materials labs. • Do not tamper with safety devices. • Do not attempt to repair/operate anything that you are not qualified torepair/operate. • Any sharp tool or machine should be used carefully in supervision of Lab attendant or faculty. • Carefully inspect all protective equipment prior to use. Do not use defective equipment.

8	Environmental Engineering Lab	• General Rules of Conduct in Laboratories are displayed. • Specific Safety Rules for students displayed. • First aid box, Fire extinguisher & Hand gloves are kept in each laboratory. • Well trained technical supporting staff. • Periodical servicing of the lab equipment. • Appropriate storage areas. • Always enter the lab with aprons,safety shoes, hand gloves and safety glasses. • Chemicals has to be handled very carefully and not to be touched withbare hands. • Concentrated acids such as H_2SO_4, HCL are highly toxic and dangerousand inhaling of the same is to be avoided. • The user's manual should be read and safety precautions to be understood before using the instruments such as spectrophotometer, turbidity meter etc.
9	Concrete and Highway Highway Lab	• General Rules of Conduct in Laboratories are displayed. • Specific Safety Rules for students displayed. • First aid box, Fire extinguisher & Hand gloves are kept in each laboratory. • Well trained technical supporting staff. • Periodical servicing of the lab equipment. • Appropriate storage areas. • Always enter the lab with aprons, safety shoes, hand gloves . • Place all the belongings out of the work area. • Do not obstruct door ways. • Report faulty equipment to the teaching assistant immediately. • Do not operate electrical equipment that has frayed or damaged power cords or connectors.

10	Auto-Cad Lab	• General Rules of Conduct in Laboratories are displayed. • Specific Safety Rules for students displayed. • First aid box, Fire extinguisher & Hand gloves are kept in each laboratory. • Well trained technical supporting staff. • Do not bring any food or drinks near the machine • Do not plug in external devices without scanning them for computer viruses. • Try not to touch any of the circuit boards and powersockets when a device is connected to them and switched on. • Students should not attempt to repair, open, tamper or interfere with any of the computer, printing, cabling, air conditioning or other equipment in the laboratory. • The workspace should be situated away from carpeted areas since carpets build up electrostatic charges.
11	Structure Analysis Lab	• General Rules of Conduct in Laboratories are displayed. • Specific Safety Rules for students displayed. • First aid box, Fire extinguisher & Hand gloves are kept in each laboratory. • Well trained technical supporting staff. • Always enter the lab with safety shoes, hand gloves and safety glasses. • Wear proper safety shoes in lab. • Do not tamper with safety devices. • Do not attempt to repair/operate anything that you are not qualified torepair/operate. • Any sharp tool or machine should be used carefully in supervision of Lab attendant or faculty. • Carefully inspect all protective equipment prior to use. Do not use defective equipment. • Loose clothing, especially loose trouser legs and sleeves, should not be worn in the laboratory.

CRITERIA 7

CONTINUOUS IMPROVEMENT

CRITERION 7	Continuous Improvement	50

7. CONTINUOUS IMPROVEMENT (50)

7.1. Actions taken based on the results of evaluation of each of the POs & PSOs (20)

POs & PSOs Attainment Levels and Actions for improvement – CAY

7.1 Actions taken based on the results of evaluation of each of the POs & PSOs (20)

POs Attainment levels & actions for improvement (2015-16) CAY

POs	Target level	Attainment level	Observations
PO1: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO1	2.62	2.57	Attainment is low in the following subjects **Observations :** 1. Lateral entry Students are not exposed to mathematical basic fundamental in that subjects 2. Students find it difficult to solve design subjects 3. Basic knowledge of analysis is not well understood 4. Subject involves both analysis and design which confuses 5. Solving design procedure problems found to be lengthy
Actions 1. Additional classes to be conducted improve the mathematical fundamental basics. 1. Additional classes to be conducted to introduce civil engineering fundamental basics. 2. More classes to be taught in tutorial classes 3.More emphasis on mathematical basic to be given in the previous course 4. More problems will be given for practice.			
PO2: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO2	2.18	2.2	Attainment is low in the following subjects **Observations :** 1. Lateral entry Students are not exposed to basic of engineering mathematics 2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy

Actions 1.Slow learners are identified in every semester based on internal assessment conducted. 2. Additional classes to be conducted for the slow learners. 3. More classes on analysis and design to be taught in tutorial classes 4. Practical approach of teaching to be adapted. 5. More problems will be given for practice.			
PO3: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.			
PO3	1.8	1.75	Attainment can be improved in the following subjects **Observations :** 1. Lateral entry Students are not exposed to basic of engineering mathematics 2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy
Actions 1.Environmental awareness Programs conducted for Practical approach of environmental issues in society. 2. More design classes to be taught in tutorial classes 3.More emphasis on mathematical basic to be given in the previous course 4. Practical approach of teaching to be adapted. 5. More problems will be given for practice.			
PO4: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.			
PO4	1.5	1.1	Attainment can be improved in the following subjects **Observations :** 1. Lateral entry Students are not exposed to basic of engineering mathematics 2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy
Actions 1. Additional classes to be conducted to introduce civil engineering fundemental basics.			

2. More design classes to be taught in tutorial classes 3.More emphasis on mathematical basic to be given in the previous course 4. Practical approach of teaching to be adapted. 5. More problems will be given for practice.			
PO5: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.			
PO5	1.6	0.9	Attainment can be improved in the following subjects **Observations :** 1. Lateral entry Students are not exposed to basic of engineering mathematics 2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy
Actions 1. Students are taken to the industrial visits like RMC Plant etc to understand the modern equipment usage in the laboratory 2.workshops are conducted to give the hands on experience to students and faculty.			
PO6: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.			
PO6	1.16	0.92	Attainment can be improved in the following subjects **Observations :** 1. Lateral entry Students are not exposed to basic of engineering mathematics 2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy
Actions 1. Technical talk on challenges in construction is conducted for the professional development. 2. Practical approach of teaching design to be adapted. 3. More problems will be given for practice			
PO7: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.			
PO7	1.5	1.2	Attainment can be improved in the following subjects **Observations :** 1. Lateral entry Students are not exposed to basic of engineering mathematics

			2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy
Actions 1. Technical talk on remote sensing and GIS is conducted for the professional development and usage of changes in technology. 2. More examples on the subject to be practiced by students in extra classes 3. More problems will be given for practice			
PO8: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
PO8	1	0.62	Attainment can be improved in the following subjects **Observations :** 1. Lateral entry Students are not exposed to basic of engineering mathematics 2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy
Actions 1. . Technical talk on highway software MX-Road is conducted for the professional development and usage of software to save time, Economical, Ecological and Ethical values in their profession effectively. 2. Technical talk on cement and its applications for economical usage of materials 2. More examples on the subject to be practiced by students in extra classes 3. More problems will be given for practice			
PO9: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
PO9	2.16	2.1	Attainment can be improved in the following subjects **Observations :** 1. Lateral entry Students are not exposed to basic of engineering mathematics 2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy
Actions 1. Additional classes to be conducted to introduce 2. More examples on the subject to be practiced by students in extra classes 3. More problems will be given for practice			

PO10: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.			
PO10	1.5	1.4	Attainment can be improved in **Observations :** 1. Solving design problems found to be lengthy. 2.
Actions: 1.			
PO11: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.			
PO11	1.66	1.5	Attainment can be improved in **Observations :** 1. Solving problems found to be lengthy
Actions: 1. More problems will be given for practice			
PO12: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.			
PO12	1	0.9	Attainment can be improved in the following subjects **Observations :** 1 Students find difficult to understand concepts 2. Subject involves both analysis and design which confuses students.
Actions: 1. More examples on design to be practiced by students in extra classes 2. Practical approach of teaching to be adapted.			

PSOs Attainment levels & actions for improvement (2015-16) CAY

PSOs	Target level	Attainment level	Observations
PSO1:student will able to use techniques,skills and modern engineering tools for civil engineering day to day practice			
PSO1	2.5	2.45	Attainment is low in the following subjects **Observations :**

			1. Lateral entry Students are not exposed to basic of engineering mathematics 2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy
Actions 1. Additional classes to be conducted to introduce design subjects 2. Practical approach of teaching design to be adapted. 3. More problems will be given for practice			
PSO2: students will able to participate in critical thinking and problem solving of civil engineering field that require analytical and design knowledge			
PSO2	1.88	1.5	Attainment is low in the following subjects **Observations :** 1. Lateral entry Students are not exposed to basic of engineering mathematics 2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy
Actions 1. Additional classes to be conducted to introduce design subjects 2. Practical approach of teaching design to be adapted. 3. More problems will be given for practice			
PSO3: students will able to persue of life long learning and professional development to face the challenging emerging needs of our society			
PSO3	1.87	1.8	Attainment is low in the following subjects **Observations :** 1. Lateral entry Students are not exposed to basic of engineering mathematics 2. Students find it difficult to solve the engineering problems 3. Basic knowledge of design is not well understood 4. Subject involves both analysis and design 5. Solving design problems found to be lengthy
Actions 1. Additional classes to be conducted to introduce design subjects 2. Practical approach of teaching design to be adapted. 3. More problems will be given for practice			

7.2. Academic Audit and actions taken thereof during the period of Assessment (10)

The Following audit agencies are visiting and conducting audit annually and giving their feedback:

1. AICTE
2. DTE
3. LIC
4. Management Committee
5. Academic review by principal after each internal assessment test thrice a semester
6. Stock verification/validation Committee
7. IQAC

The Recommendations /suggestions are being implemented

'Internal Quality Assurance Committee' for monitoring academic activities of department of Civil Engineering has been formed.

Sl.No.	Name	Designation
1	Dr. D.L.Venkatesh Babu, Head,Dept.of Civil Engg	Chairman
2	Dr. R.Siva subramanyam, Assoc.Professor,Dept of ME	Member from other department
3	Dr. Kumar raju B.C, Assoc.Professor,Dept of Civil Engg	Member
4	Prof.G.Gayathri.H.N, Asst.Professor,Dept.of Civil Engg	Member
5	Prof.S.Kavitha, Asst.Professor,Dept.of Civil Engg	Member
6	Prof.Laxmi, Asst.Professor,Dept.of Civil Engg	Member

The primary activities to be monitored and controlled by the committee are as below

Sl No.	Activity	Scheduled Completion Time (Odd and Even Semesters)
1	**Activities before commencement of classes**	
	a. Submission of staff requirement (if any) request to the Principal.	1st June; 1st December
	b. Electives selection	10th June; 10th December
	c. Subject assignment to faculty members	16th June; 16th December
	d. Lab manual preparation, if any	26th June; 25th December

	e. College level calendar of events	7th July; 6th January
	f. Departmental calendar of events	3 days after College CoE is received.
	g. Time table preparation	16th July; 15th January
	h. Lesson plan	25th July; 25th January
	i. List of students approved by Principal's office	28th July; 28th January
2	**Activities after commencement of classes**	
	a. Class monitoring and students' attendance registers.	Every day; Every week
	b. Class room teaching quality (theory and lab courses)	First and last week of every month and as and when needed.
	c. Performance of students in Internal Tests and actions initiated for poor performance.	After every test
	d. Students' attendance and counseling, if needed.	Every month
	e. Information on attendance and IA marks to be sent to parents / guardians	Attendance – Every month; IA Marks – Every test
	f. Display of time table for practical examinations	One week before the semester end date
	g. Finalization of IA marks and attendance	5 days before semester end date
	h. Performance in Semester End examinations	Within a week after the declaration of university results

7.3 Placement and Higher studies

Item	LYG	LYGm1	LYGm2
Number of students admitted corresponding to LYG including lateral entry(N)	**34**	**12**	**43**
Number of students who obtained jobs as per there record of placement office($x1$)	**7**	**4**	**16**
Number of students who found employment otherwise at the end of the final year($x2$)	**4**	**5**	**4**

X=x1+x2	**11**	**9**	**25**
Number of students who opted for higher studies with valid qualifying scores/ranks(*y*)	**-**	**3**	**4**
Average placement(x+y)/N	**0.324**	**1**	**0.558**
Average placement(P1+P2+P3)	**0.627**		
Assesment points	**10*0.627=6.27**		

7.4 Improvement in the quality of students admitted to the program

Item		**CAY**	**CAY m1**	**CAY m2**
Nation Level Entrance Examination (COMED K)	No. Of students admitted	01	NA	NA
	Opening score /Rank	36324	-	NA
	Closing score /Rank	36324	-	NA
State level entrance examination **(CET)**	No. Of students admitted	36	37	38
	Opening score /Rank	58362	30679	41950
	Closing score /Rank	121398	117476	113150
Management	No. Of students admitted	10	8	8
SNQ	No. Of students admitted	3	3	3
	Opening score /Rank	39736	30676	24953
	Closing score /Rank	57563	50033	45830

DTE ENTRANCE EXAM Examination for lateral entry or lateral entry details	No. Of students admitted	20	11	22
	Opening score /Rank	15552	8368	3547
	Closing score /Rank	22525	19650	16117
Management(lateral entry)	No. Of students admitted	-	4	1
Average CBSE/Any other Board Result of admitted students(Physics, Chemistry & Maths)		194.5	-	226.2

CRITERIA 8

FIRST YEAR ACADEMICS

CRITERION 8	FIRST YEAR ACADEMICS	50

8.1 First year student-Faculty Ratio (FYSFR) (5)

Assessment = (5 x 15)/average FYSFR (Limited to Max. 5)

Number of Branches Approved for Academic Year 203-14 = 7.

1. Aeronautical Engineering (60)
2. Biomedical Engineering (60)
3. Civil Engineering (60)
4. Computer science Engineering (60)
5. Electronics and Communication Engineering (60)
6. Electrical Engineering (60)
7. Mechanical Engineering (60)

Total intake 7 x 60 = 420.

Year	Number of Students (Approved Intake Strength)	Number of Faculty Members (Considering fractional load)	FYSFR
2015-16	420	26	1:15
2014-15	420	22	1:15
2013-14	420	22	1:15
Average	420	23.33	1:15
Assessment= (5 x 15)/Average FYSFR (Limited to Max. 5)	3.2		

8.2 Qualification of Faculty teaching first year common courses (5)

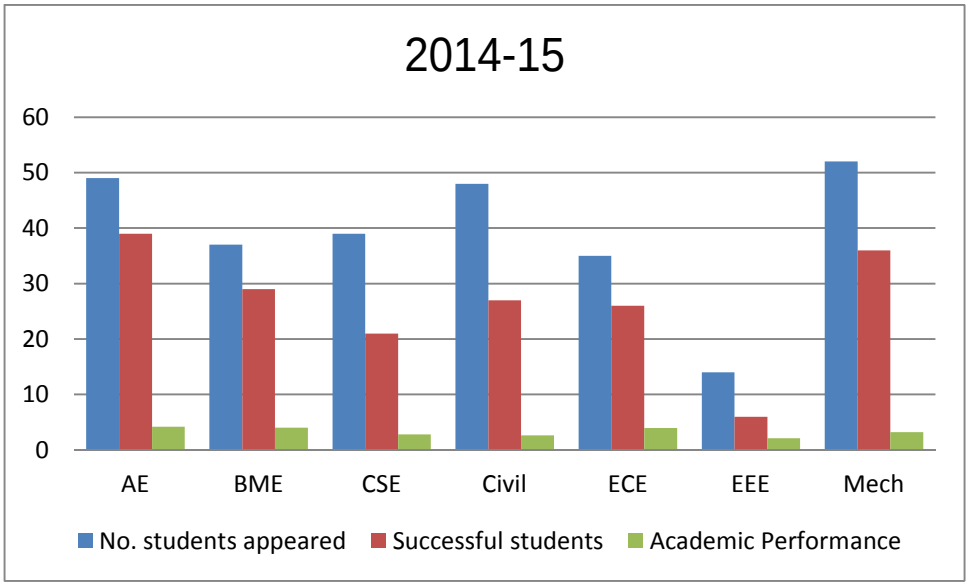
Year	X (No. of Regular Faculty with Ph.D)	y(No. of Regular Faculty with P.G Qualification)	RF (Number faculty members as per SFR of 15:1)	Assessment of Faculty qualification (5X + 3Y)/RF
2015-16	6	20	26	3.46
2014-15	6	16	22	3.54
2013-14	4	18	22	3.36
Average Assessment			3.45	

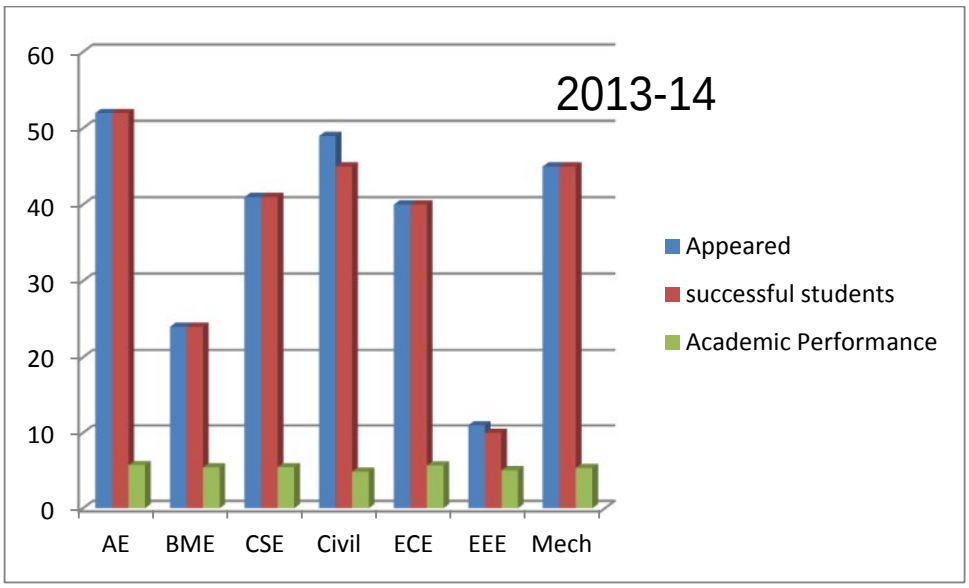
8.3. First year Academic Performance (10)

Academic Year	Branch	Appeared for Examination	No. Successful Students	Academic Performance
2015-16	AE	Results yet to be announced. Once it is declared academic performance will be calculated.		
	BME			

	CSE			
	Civil			
	ECE			
	EEE			
	Mech			
2014-15	AE	49	39	4.19
	BME	37	29	3.99
	CSE	39	21	2.79
	Civil	48	27	2.65
	ECE	35	26	3.96
	EEE	14	6	2.09
	Mech	52	36	3.22
2013-14	AE	52	52	5.71
	BME	24	24	5.43
	CSE	41	41	5.45
	Civil	49	45	4.86
	ECE	40	40	5.66
	EEE	11	10	5.02
	Mech	45	45	5.34

Academic Performance: (Mean of the percentage of marks in first year of all successful students/10) * number of successful students/ number of students appeared for Examination)





8.4. Attainment of course outcomes of first year courses (10)

8.4.1. Describe the assessment processes used to gather the data upon which the evaluation of course outcomes of first year is done. (5)

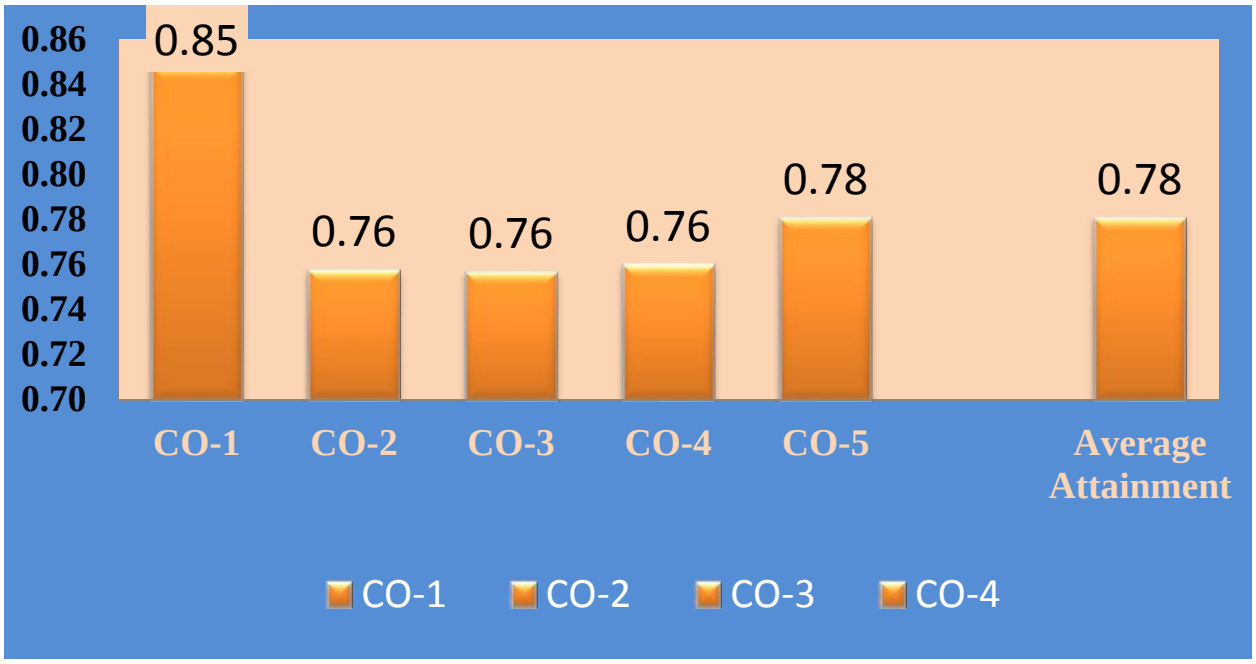
2015-16	✓ Three Internal tests for a maximum mark of 20 are conducted and best of two internals is considered. The average of it is considered for final internal assessment mark. ✓ The performance of a student in internal assessment with respect to the CO's is recorded. ✓ End semester University exam performance of students for the maximum mark of 80 is considered for external exam performance. ✓ The summation of these two performances is considered as cumulative assessment for a prescribed course out come. ✓ For laboratory assessment, the performance of a student in conduction of each experiment (10 marks), final lab internal test (10 marks) and external lab exam(80 marks) is considered.
2014-15	✓ Three Internal tests for a maximum mark of 25 are conducted and best of two internals is considered. The average of it is considered for final internal assessment mark. ✓ The performance of a student in internal assessment with respect to the CO's is recorded. ✓ End semester University exam performance of students for the maximum mark of 100 is considered for external exam performance. ✓ The summation of these two performances is considered as cumulative assessment for a prescribed course out come. ✓ For laboratory assessment, the performance of a student in conduction of each experiment(10 marks), final lab internal test(15 marks) and external lab exam(50 marks) is considered.
2013-14	✓ Three Internal tests for a maximum mark of 25 are conducted and best of two internals is considered. The average of it is considered for final internal assessment mark. ✓ The performance of a student in internal assessment with respect to the CO's is recorded.

	✓ End semester University exam performance of students for the maximum mark of 100 is considered for external exam performance. ✓ The summation of these two performances is considered as cumulative assessment for a prescribed course out come. ✓ For laboratory assessment, the performance of a student in conduction of each experiment(10 marks), final lab internal test(15 marks) and external lab exam(50 marks) is considered.

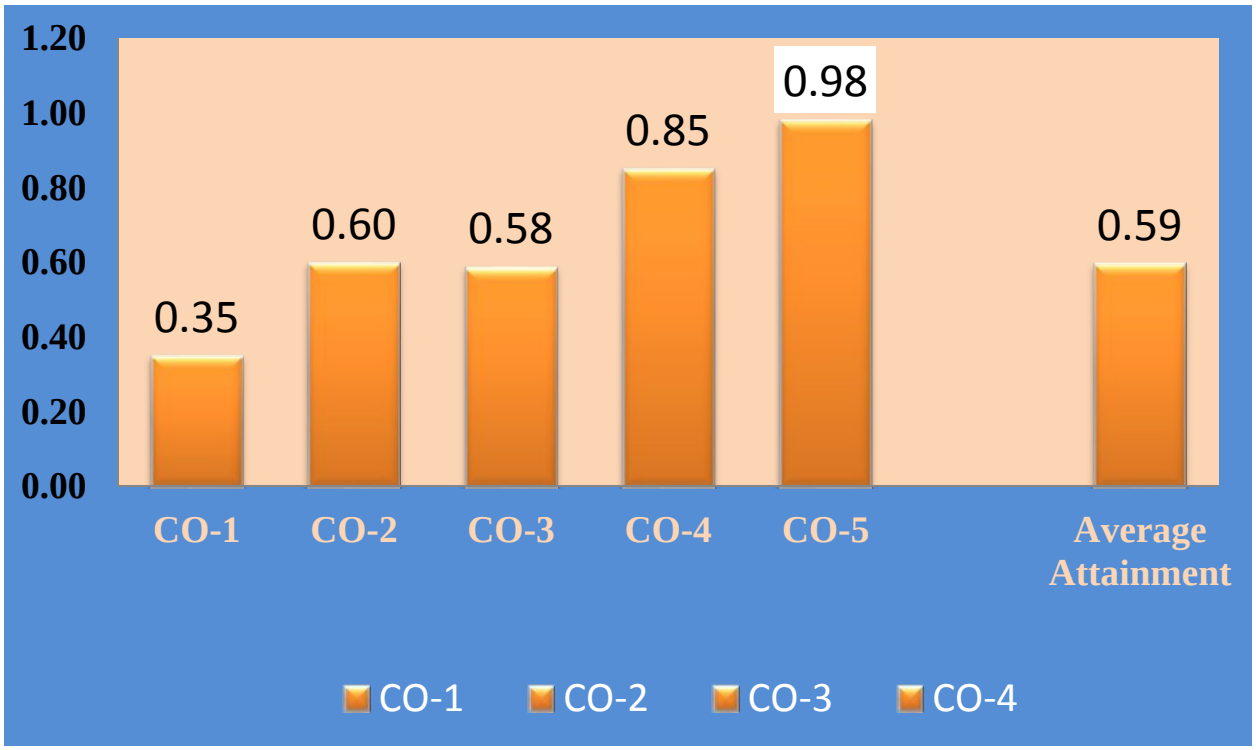
8.4.2. Record the attainment of course outcomes of all first year courses (5)

Academic year 2014-15

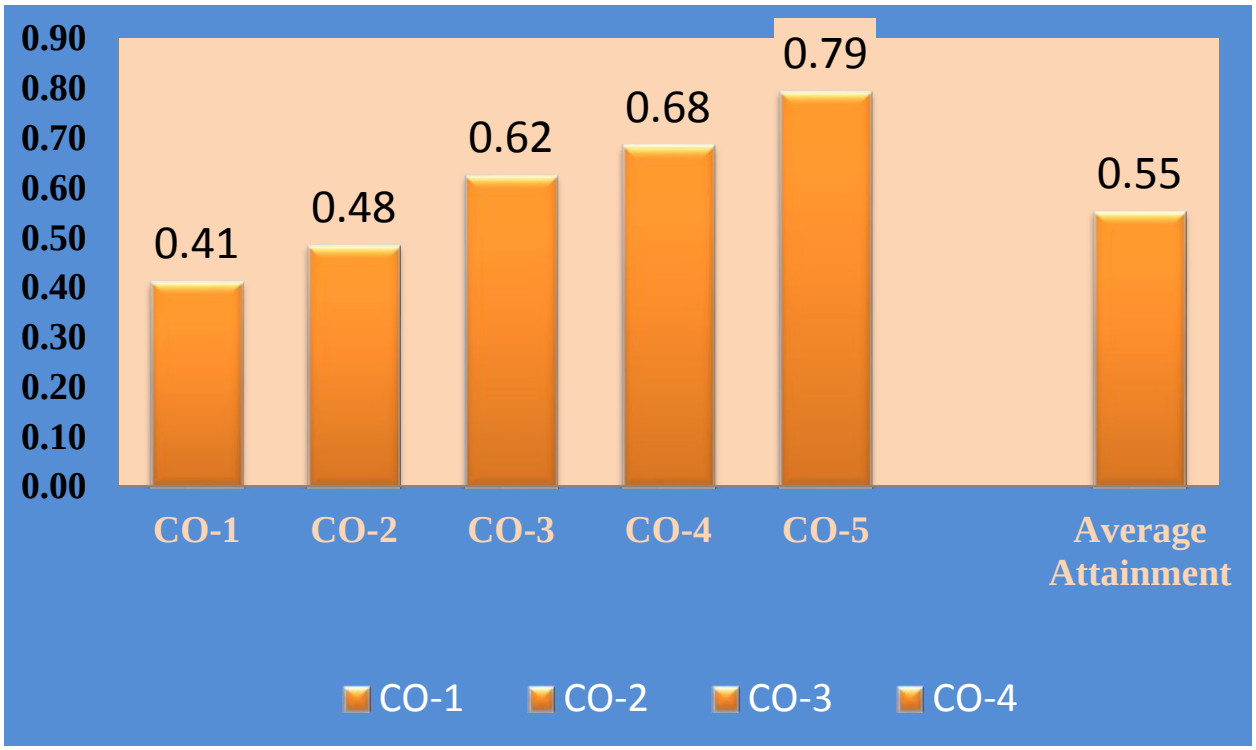
AE	Engineering Physics



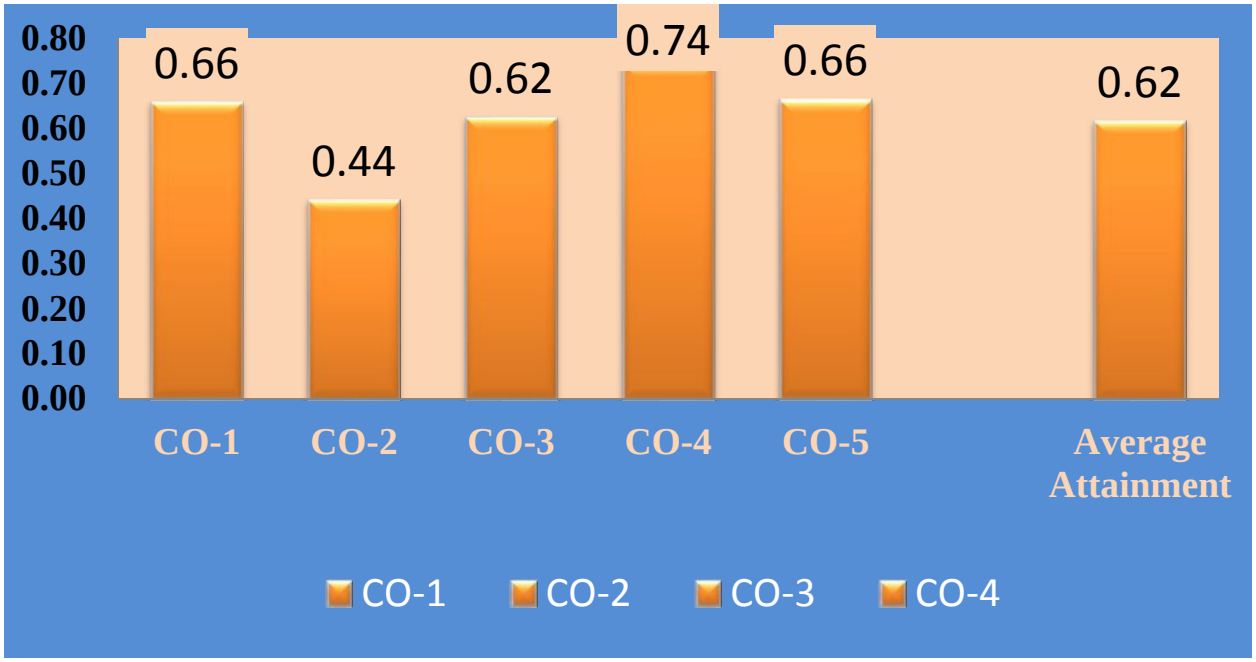
BME	Engineering Physics



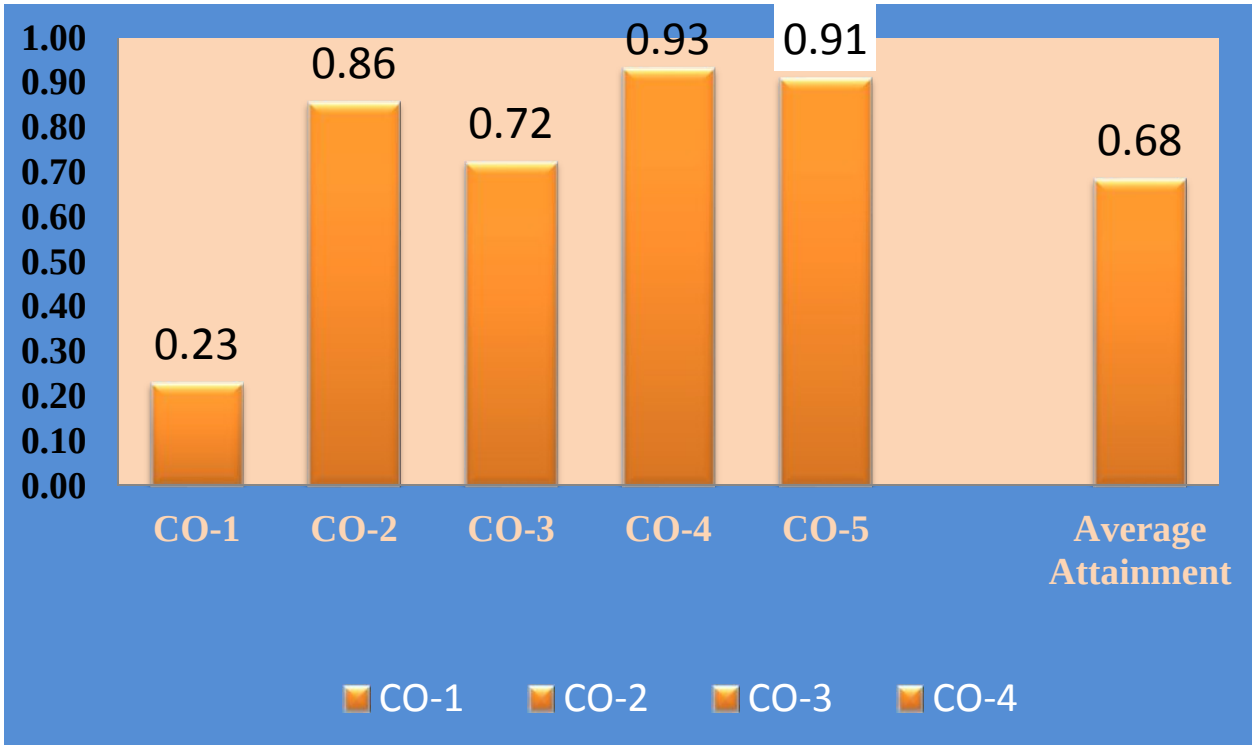
CSE	Engineering Physics



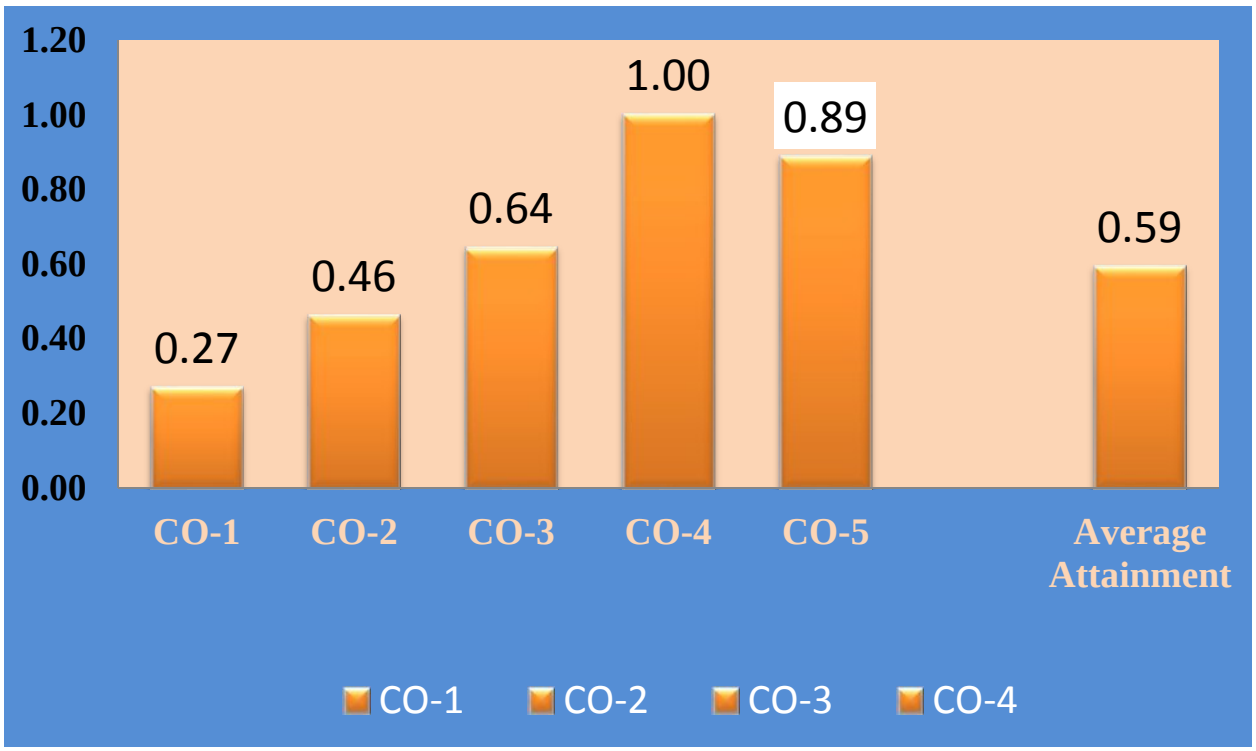
Civil	Engineering Physics



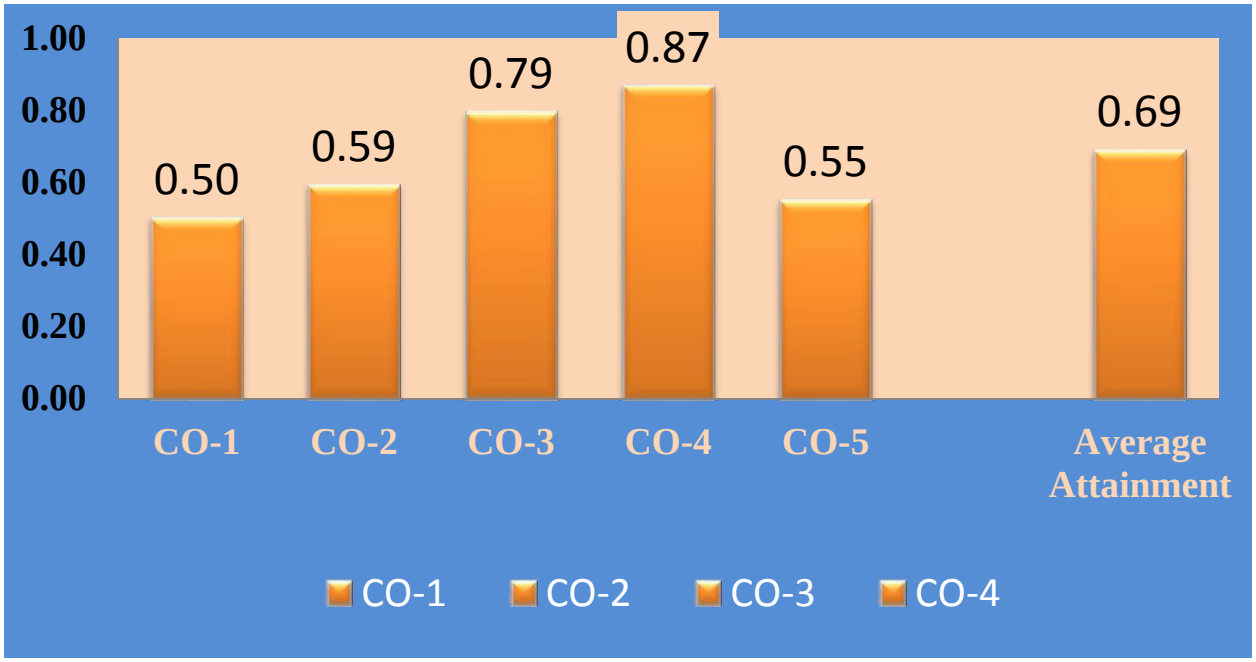
ECE	Engineering Physics



EEE	Engineering Physics



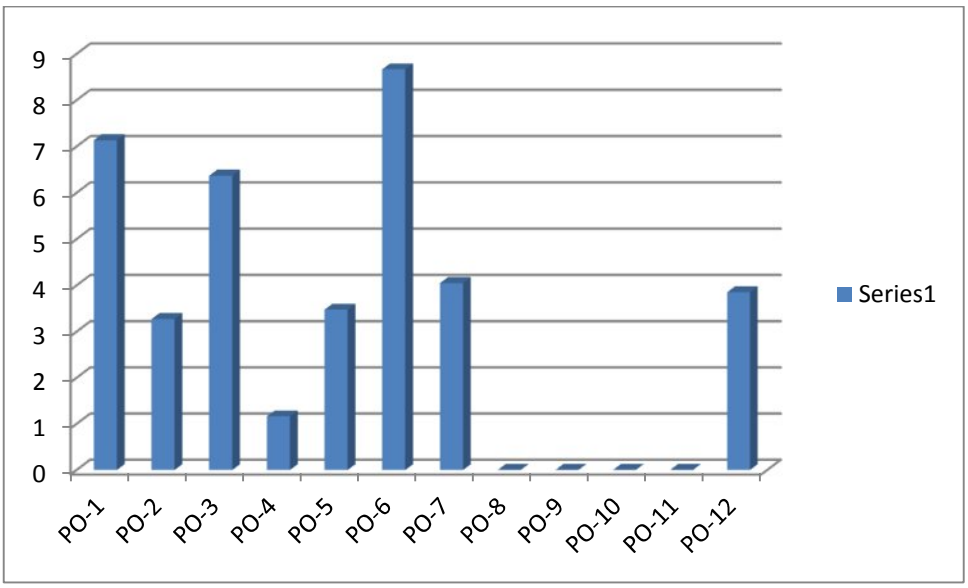
Mech	Engineering Physics



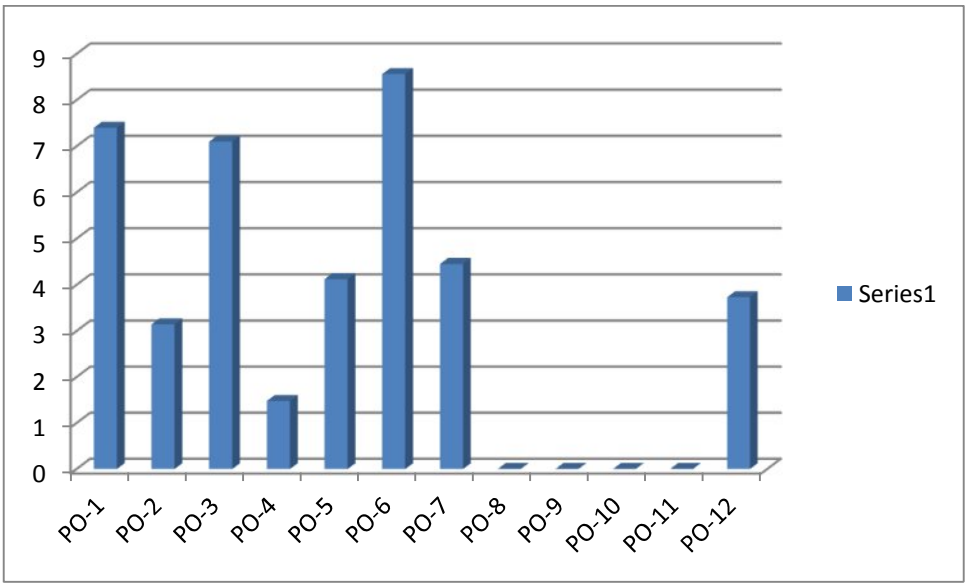
8.5 Attainment of Programme outcomes from first year courses(20)

2014-15 (Engineering Physics)

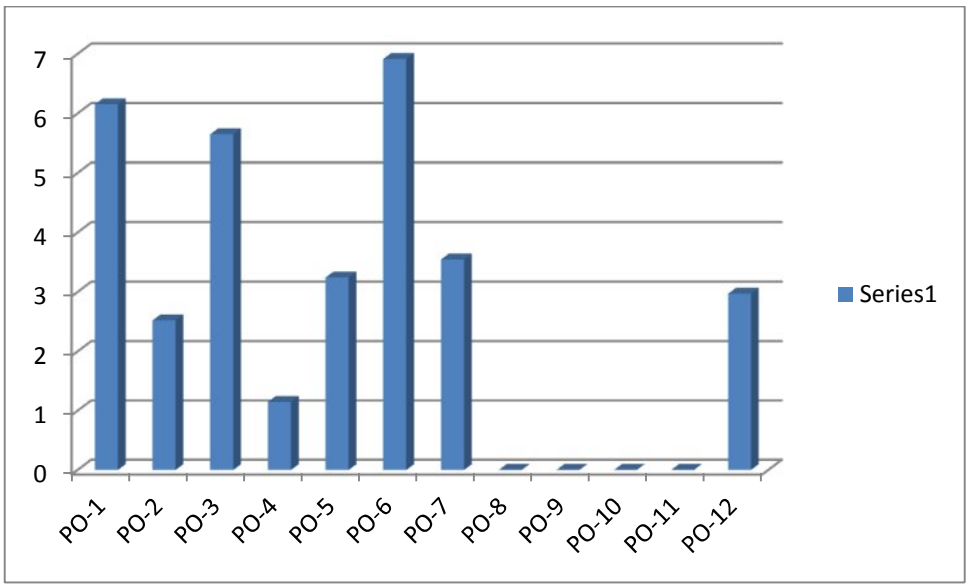
1. Aeronautical Engineering



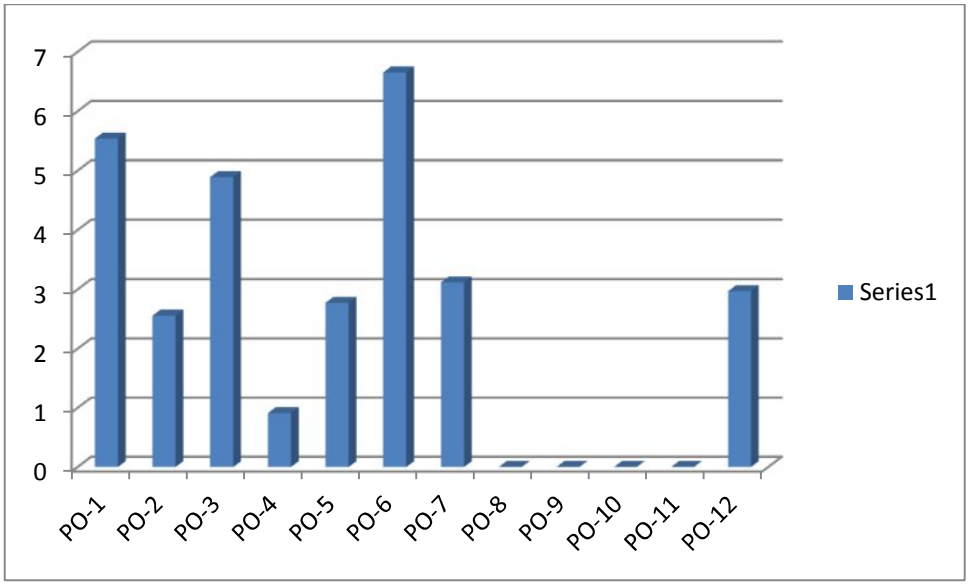
2. Biomedical Engineering



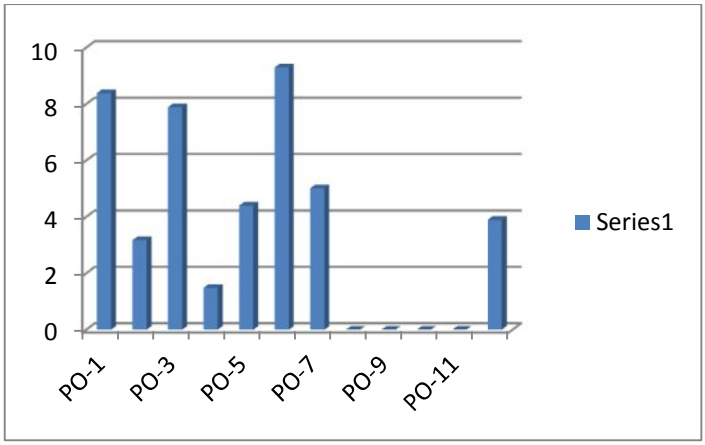
3. Computer Science & Engineering



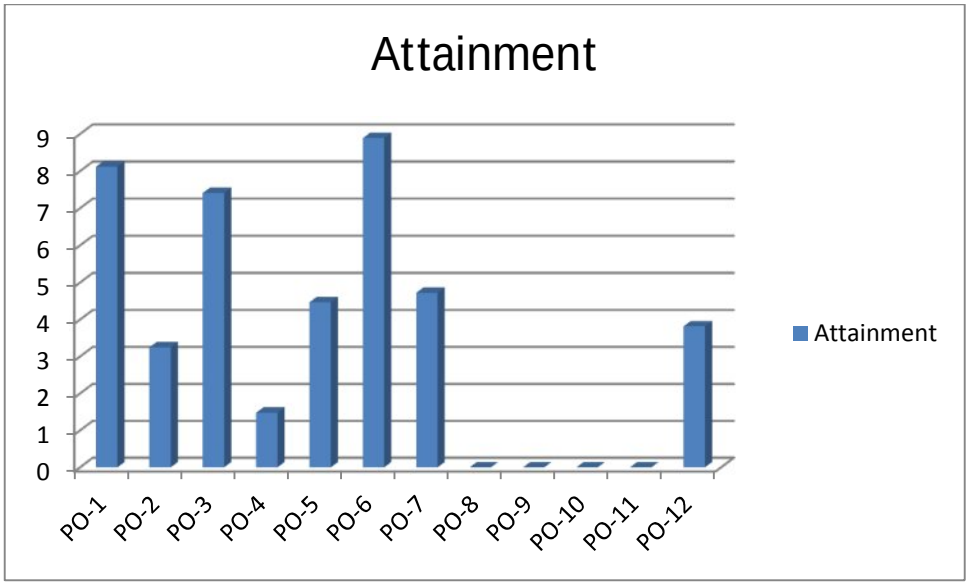
4. Civil Engineering



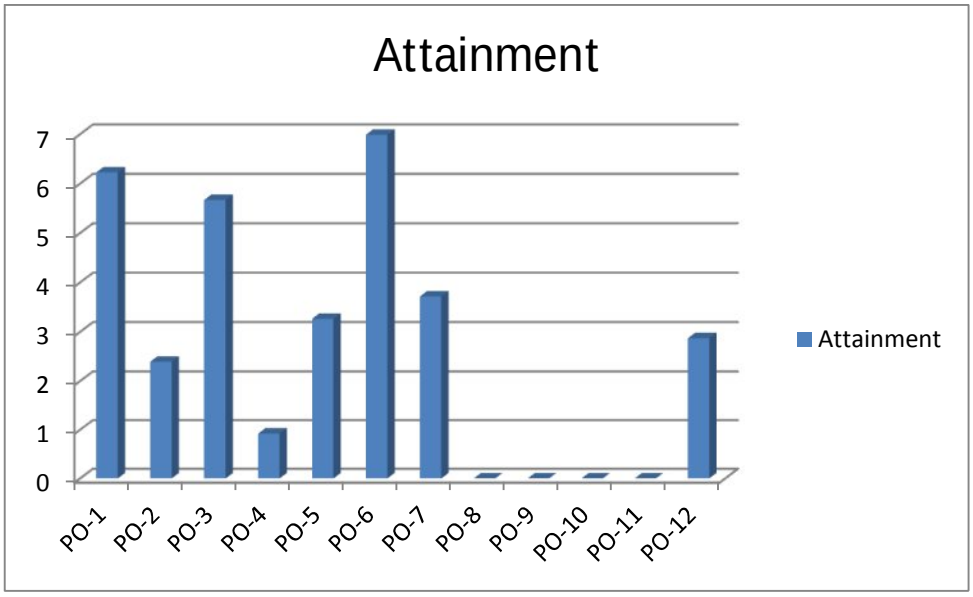
5. Electronics and communication Engineering



6. Electrical and Electronics Engineering



7. Mechanical Engineering



8.5.1. Indicate result of evaluation of each relevant PO and/or PSO, if applicable(15)

Academic Year 2014-15

Aeronautical Engineering

Courses	Subject	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
C101	Engg. Maths1	7.086	7.086	7.086	7.086	7.086	7.086	7.086	7.086	7.086	7.086	7.086	7.086
C102	Engg Maths2	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08

C103	Engg. Physics	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14
C104	Engg. Chemistry	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18
C105	Basic Electricals	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
C106	Basic Electronics	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14
C107	Elements of Mechanical Engg	5.066	5.066	5.066	5.066	5.066	5.066	5.066	5.066	5.066	5.066	5.066	5.066
C108	Computer Concepts and Programming	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86
Direct Attainment		5.739	5.739	5.739	5.739	5.739	5.739	5.739	5.739	5.739	5.739	5.739	5.739

Biomedical Engineering

Courses	Subject	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	Engg. Maths1	7.086	6.292	6.292	0	7.022	0	0	0	0	0	0	3.91
C102	Engg Maths2	8.41	0	6.34	0	7.12	0	0	0	0	0	0	4.65
C103	Engg. Physics	7.69	3.14	7.1	1.48	4.12	8.56	4.45	0	0	0	0	3.73
C104	Engg. Chemistry	4.58	5.88	7.33	0	0	6.59	5.74	0	0	0	0	4.91
C105	Basic Electricals	3.538	2.662	2.548	1.162	0	3.464	1.242	0	0	0	0.888	1.878
C106	Basic Electronics	7.14	5.45	5.07	0	0	0	0	0	0	0	0	1.47
C107	Elements of Mechanical Engg	5.066	4.528	4.528	0	5.042	0	0	0	0	0	0	2.77
C108	Computer Concepts and Programming	2.86	3.1	2.52	0	0	0	0	0.33	0	0.33	0	1.12
Direct Attainment		5.796	3.882	5.216	0.330	2.913	2.327	1.429	0.041	0.000	0.041	0.111	3.055

Computer Science Engineering

Courses	Subject	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	Engg. Maths1	7.086	6.292	6.292	0	7.022	0	0	0	0	0	0	3.91
C102	Engg Maths2	5.15	5.88	3.82	0	4.21	0	0	0	0	0	0	2.79
C103	Engg. Physics	6.152	2.522	5.65	1.148	3.244	6.916	3.546	0	0	0	0	2.972
C104	Engg. Chemistry	2.63	3.34	4.32	0	0	3.91	3.43	0	0	0	0	2.89
C105	Basic Electricals	3.812	2.904	2.816	1.244	0	3.828	1.296	0	0	0	1.04	2.036
C106	Basic Electronics	7.14	5.45	5.07	0	0	0	0	0	0	0	0	1.47

C107	Elements of Mechanical Engg	5.066	4.528	4.528	0	5.042	0	0	0	0	0	0	2.77
C108	Computer Concepts and Programming	2.86	3.1	2.52	0	0	0	0	0.33	0	0.33	0	1.12
Direct Attainment		4.987	4.252	4.377	0.299	2.4398	1.83175	1.034	0.041	0	0.0413	0.13	2.4948

Civil Engineering

Courses	Subject	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	Engg. Maths1	7.086	6.292	6.292	0	7.022	0	0	0	0	0	0	3.91
C102	Engg Maths2	4.918	4.42	4.42	0	4.982	0	0	0	0	0	0	2.67
C103	Engg. Physics	5.54	2.56	4.892	0.912	2.776	6.656	3.12	0	0	0	0	2.972
C104	Engg. Chemistry	3.35	4.32	5.32	0	0	4.75	4.16	0	0	0	0	3.53
C105	Basic Electricals	3.25	2.55	2.22	1.13	0	3	1	0	0	0	0.77	1.8
C106	Basic Electronics	7.14	5.45	5.07	0	0	0	0	0	0	0	0	1.47
C107	Elements of Mechanical Engg	5.066	4.528	4.528	0	5.042	0	0	0	0	0	0	2.77
C108	Computer Concepts and Programming	2.86	3.1	2.52	0	0	0	0	0.33	0	0.33	0	1.12
Direct Attainment		4.901	4.153	4.4078	0.2553	2.4778	1.80075	1.035	0.041	0	0.0413	0.0963	2.5303

Electronics and communication Engineering

Courses	Subject	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	Engg. Maths1	4.918	4.42	4.42	0	4.982	0	0	0	0	0	0	2.67
C102	Engg Maths2	6.17	7	4.53	0	4.94	0	0	0	0	0	0	3.3
C103	Engg. Physics	8.388	3.174	7.89	1.484	4.4	9.3	5.018	0	0	0	0	3.

													896
C104	Engg. Chemistry	3.06	3.96	4.92	0	0	4.29	3.76	0	0	0	0	3.28
C105	Basic Electricals	5.2	3.92	3.6	1.77	0	4.88	1.75	0	0	0	1.19	2.79
C106	Basic Electronics	7.14	5.45	5.07	0	0	0	0	0	0	0	0	1.47
C107	Elements of Mechanical Engg	5.066	4.528	4.528	0	5.042	0	0	0	0	0	0	2.77
C108	Computer Concepts and Programming	2.86	3.1	2.52	0	0	0	0	0.33	0	0.33	0	1.12
Direct Attainment		5.35	4.444	4.6848	0.4068	2.4205	2.30875	1.316	0.041	0	0.0413	0.1488	2.662

Electrical and
Electronics Engineering

Courses	Subject	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	Engg. Maths1	4.918	4.42	4.42	0	4.982	0	0	0	0	0	0	2.67
C102	Engg Maths2	4.59	4.116	4.116	0	4.634	0	0	0	0	0	0	2.49
C103	Engg. Physics	8.12	3.248	7.412	1.48	4.472	8.888	4.724	0	0	0	0	3.816
C104	Engg. Chemistry	4.19	1.38	2.24	1.2	0	2.3	2.3	0	0	0	0	2.3
C105	Basic Electricals	4.325	4.985	3.255	0	3.54	0	0	0	0	0	0	2.39
C106	Basic Electronics	7.14	5.45	5.07	0	0	0	0	0	0	0	0	1.47
C107	Elements of Mechanical Engg	5.066	4.528	4.528	0	5.042	0	0	0	0	0	0	2.77
C108	Computer Concepts and Programming	2.86	3.1	2.52	0	0	0	0	0.33	0	0.33	0	1.12

Direct Attainment	5.151	3.903	4.1951	0.335	2.8338	1.3985	0.878	0.041	0	0.0413	0	2.3783

Mechanical Engineering

Courses	Subject	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	Engg. Maths1	4.918	4.42	4.42	0	4.982	0	0	0	0	0	0	2.67
C102	Engg Maths2	6.81	7.7	4.98	0	5.44	0	0	0	0	0	0	3.61
C103	Engg. Physics	6.228	2.396	5.668	0.92	3.264	6.988	3.716	0	0	0	0	2.872
C104	Engg. Chemistry	3.95	5.07	6.39	0	0	5.66	4.95	0	0	0	0	4.26
C105	Basic Electricals	3.396	2.6	2.576	1.168	0	3.548	1.315	0	0	0	0.98	2.25
C106	Basic Electronics	7.14	5.45	5.07	0	0	0	0	0	0	0	0	1.47
C107	Elements of Mechanical Engg	5.066	4.528	4.528	0	5.042	0	0	0	0	0	0	2.77
C108	Computer Concepts and Programming	2.86	3.1	2.52	0	0	0	0	0.33	0	0.33	0	1.12
Direct Attainment		5.046	4.408	4.519	0.261	2.341	2.0245	1.2476	0.041	0	0.0413	0.1225	2.6278

CRITERIA 9

STUDENT SUPPORT SYSTEMS

CRITERION 9	STUDENT SUPPORT SYSTEMS	

STUDENT SUPPORT SYSTEM

9.1 Mentoring System

- An effective Student mentoring system (SMS) has already been implemented in our college.
- All the students of the college are coming under this system from the date of joining the college.
- A complete track of the student activities like Academic, Curricular, Co curricular Extra Curricular achievements, Social activities and the details of Parent Meetings are registered in the system.
- A Mentoring Register has been distributed to all the staffs of the college .Each staff is allocated with 10- 15 students under the mentoring system.
- Faculties will have a meeting with the students periodically and their Academic progress and all his activities are discussed and noted in the register
- Any discrepancies in the student behaviour like Attendance , etc will be questioned and will be counseled with care
- Staff will be submitting the register to the high level Mentoring /Counselling committee with members like Head of the institution ,HOD
- The committees will scrutinize case by case and suggest corrective measures
- If necessary the committee will have discussions with the Parents and Medical Counselor

9.2. Feedback analysis and Rewards and Corrective Measures

Three types of Feedback system is followed

1. **Direct Feedback from the Students**
   Every department have constituted Class Committees for Each semester with Staffs and student Members .Student members are invited to express their view on Subjects on the Academic Environment of the department and the feedback is collected by the chairman of the Committee and submitted to the HOD for further actions.
2. **Interactive Feedback**
   Principal will be conducting interactive meeting only with the section of students regarding the Academic activities and collect the feedback from the students directly.
3. **Consolidate Feedback**
   Feedback forms are circulated and collected from all students of the class collected
   Various awards for the students based on the performance of the awards

Rewards

- College Toppers based on the academic performance
- Best outgoing Student award
- Department Toppers
- Certificate to Students having 100% Attendance
- Certificate to students securing topper in each subject

9.3. Feedback on Faculties

9.3.1 INTRODUCTION

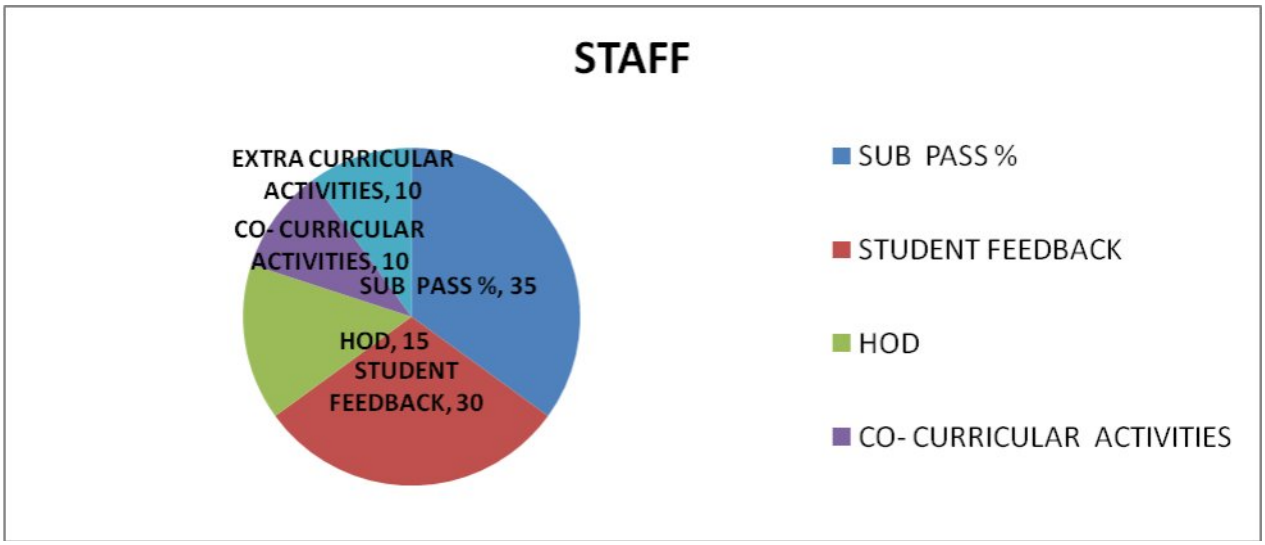
Staff appraisal report consists of the appraisal PERCENTAGE for the different entities of the College like Student, Staff and Vice Principals and the following feedback has been carried out

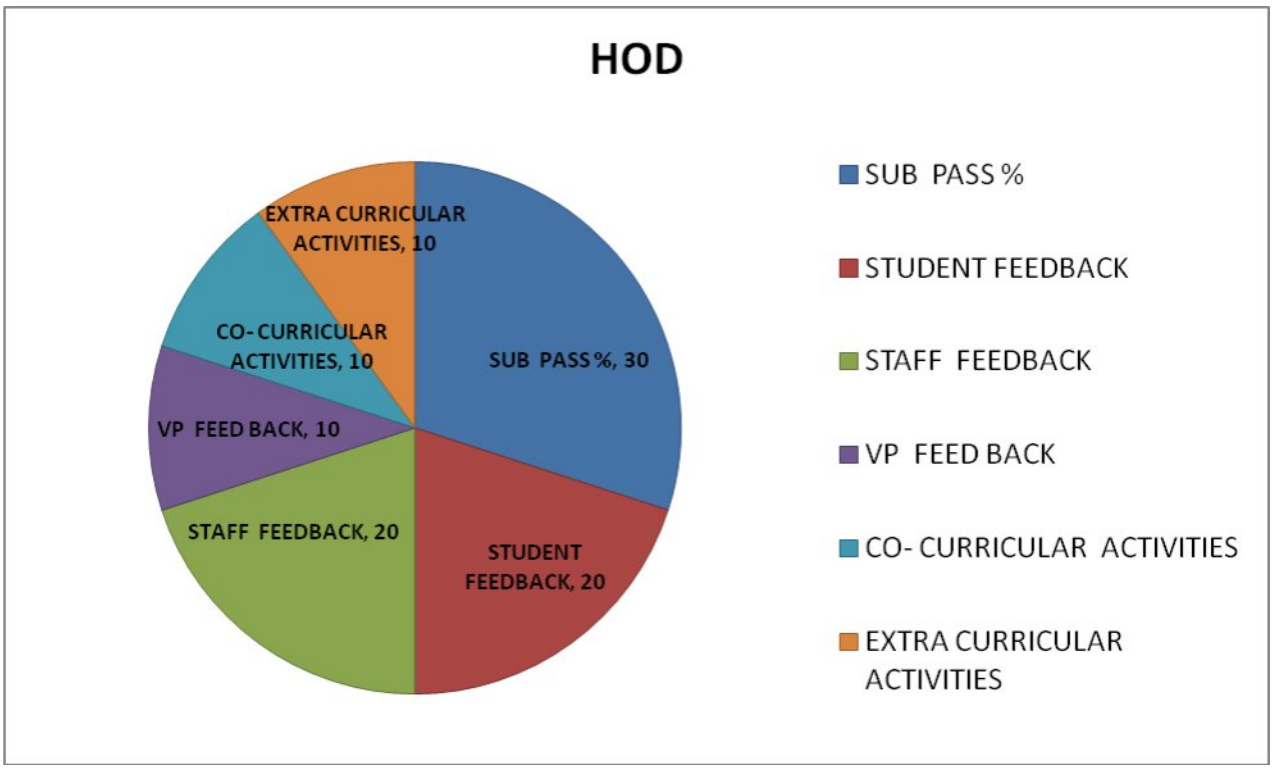
1) Student on Staffs
2) Staffs self appraisal (Department wise)
3) Staffs on HOD (Department wise)
4) Staffs on VPs Department wise on VP ADMIN VP ACADEMIC
5) HOD on staffs (Department wise)
6) HOD on VPs (Department wise)
7) VP's on HOD (VP ADMIN,VPACADAMIC)

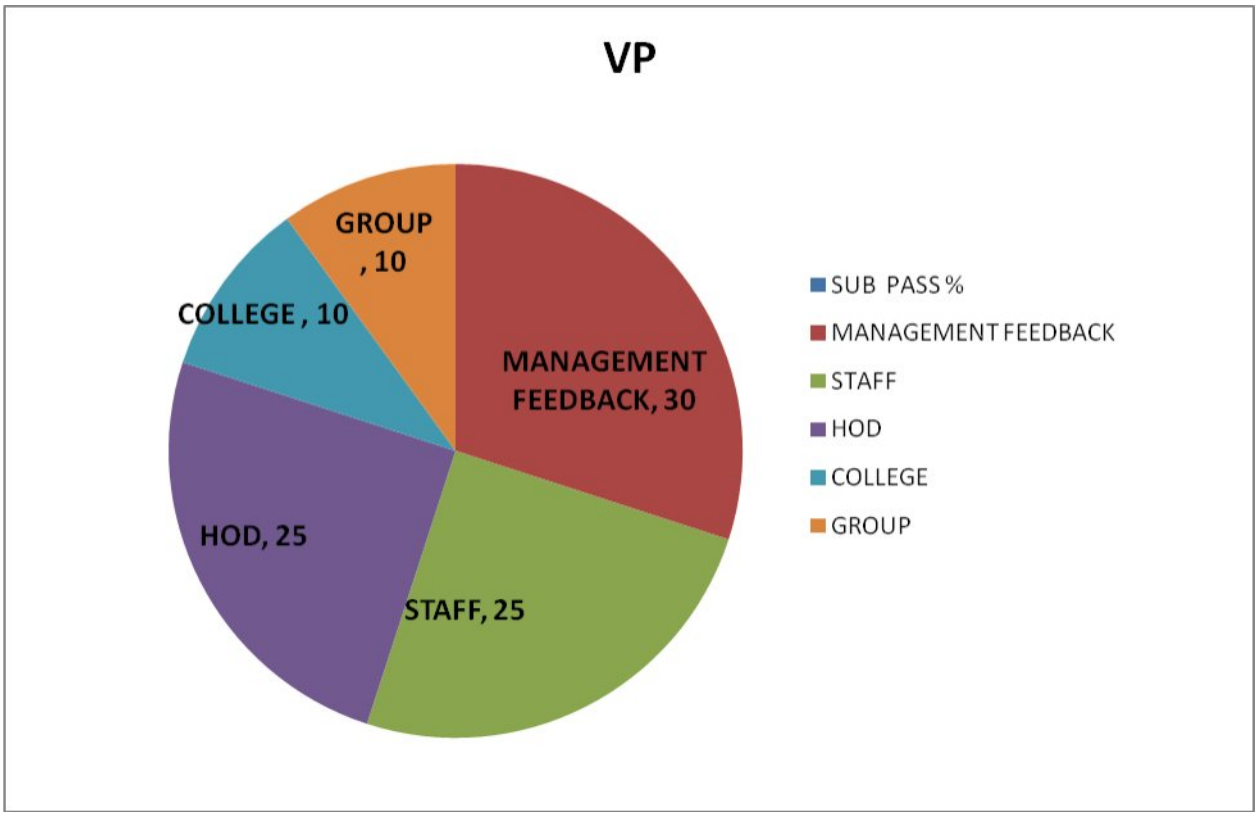
9.3.2.0 Methodology of Appraisal

Based on the feedback forms carried out following methodology is adapted

Table-WEIGHTAGE MATRIX							
CATAGEORY	**SUB PASS %**	**STUDENT FEEDBACK**	**HOD**	**CO-CURRICULAR ACTIVITIES**	**EXTRA CURRICULAR ACTIVITIES**		**TOTAL**
STAFF	35	30	15	10	10		100
CATAGEORY	SUB PASS %	STUDENT FEEDBACK	STAFF FEEDBACK	VP FEED BACK	CO-CURRICULAR ACTIVITIES	EXTRA CURRICULAR ACTIVITIES	
HOD	30	20	20	10	10	10	100
CATAGEORY	SUB PASS %	MANAGEMENT FEEDBACK	STAFF	HOD	COLLEGE	GROUP	
VP		30	25	25	10	10	100







9.4. Self Learning

- Wi-Fi enabled campus
- Internet access to all the computers for the benefit of students.
- Edusat Program from the university.
- Projects, Internship Modeling Webinar, Video conferring Edusat, NPTEL materials
- Accession of Journals
- Newspaper of major languages
- Open Book Test
- e-notes for all subjects of all Department
- Digital Library

9.5 Carrier Guidance, training and Placement

Date	Sl. no	Branch/Institution	Company Name	Activity	Remarks
4/9/2015	1	Purvankara	Sherphify	Seminar 1st year students	The seminar was very informative to the students, as the students had access to get in touch with the top employers and various study materials about the employable skills.
10/9/2015	2	MGIRD	Communication Skills	Seminar 2nd year students	The seminar was very informative to the students, as we have explained the importance of Communication skills in the industries.
11/9/2015	3	NASSCOM -iPrimed	Sherphify	Seminar 3rd & 4th year students	The seminar was very informative to the students, as the students had access to get in touch with the top employers and various study materials about the employable skills.
12/9/2015	4	MGIRD	NIIT	Seminar on Industries prerequisit skills	Good and students were eager to take up the aptitude test.
15/09/2015	5	Larsen&Toubro	IOS Creative Infotech	Introduction on Prototyping and Apple application development programe affiliated with	Students were happy and wanted to take up further test on Prototyping as it's a basic requirements demanded the companies to build/work on a project.

				VTU.	
16/092015	6	KPTCL	-	Soft Skills	Bhagya:-Deployed soft skills program on Inportance of Communication skills
22/09/2015	7	KPTCL	IOS Finishing School	Certificate program conducted by IOS Finishing School/VTU on Prototyping	This certification program was informative also; added more value to the profile.
29/09/2015	8	KPTCL	ICFAI Business School	Seminar on Industries prerequisit skills & Aptitude test	The seminar was very informative to the students, as the students were able to get an idea of the industries requirements.
23/09/2015 to 3/10/2015	9	Larsen & Toubro	Soft Skills Training Program	Conducted 2 hours seminar on Soft skills " Importance of Communication skills/ Time Management/Critical thinking/ Creativity/ Documentation.	The students were very happy and wanted more classes on soft skills regularly.
12/10/2015	10	Larsen & Toubro	Soft Skills Training Program	Importance of Time Management for 1st year and 2nd year students	
13/10/2015	11	KPTCL	Soft Skills Training Program	Critical Thinking for final year students	
15/10/2015	12	Toonmedia-Free-Japanese Language training program	Soft Skills Training Program	Creativity for 2nd year students	

16/10/2015	13	Reddonatura	Soft Skills Training Program	Group Discussin on Current Affairs for final year students	
20/10/2015	14	IBS(ICFAI Business School)	Soft Skills Training Program	Points to be discussed during the HR rounds for Final Year students	
6/11/2015	15	Aseuro Technologies	Yellamma Dassapa Institution of Technology	Campus Recruitment	Met Mr. Ramesh Rao, requested for an invite our students for campus drive, said that the next drive will happen only in the month of Jan 2016, he'll keep us posted on the same.
7/11/2015	16	Aseuro Technologies	Seven Sense	Conducted 1 hour seminar on importance of knowing the bridge between the institutions and industries	Students were happy and wanted to take up more sessions on this aptitude test etc.
7/11/2015	17	Larsen & Toubro	Seven Sense Aptitude Test	Rajeev from Seven Sense: Conducted 1 hour Aptitude test at CS lab with 40 students were present for the test	Students were happy and wanted to take up more of aptitude test etc.
9/11/2015	18	KPTCL	T&P Initiative	Soft Skills Training Program on Communication skills for 1st Year students	Students were happy and wanted to take up more of aptitude test etc.
13/11/2015	19	Ind Expo (Karnataka CNC Tech Pvt Ltd-Rajajinagar-Bangalore-10)	T&P Initiative	Off Campus Recruitment	SJBIT
13/11/2015	20	ATS ELGI Industrial Sales Corporation	T&P Initiative	Soft Skills Training Program on Effective communication	Students were happy and wanted to take up more of sessions based on the market rquirements.

				skills for 3rd Year students	
14/11/2015	21	ARK Industries Singasandra Village, Begur Hobli, Bangalore South	Ashwini(HR & marketing)	Informed that they will inform about the number of candidates list in another 15days for their new project starting up shortly.	Students required from CV, ECE & EEE
14/11/2015	22	Comtron Electric(India) Jayanthi Nagar post, Bangalore-43	Sunil	Informed that they will inform about the number of candidates list in 4days for the internships and MoU's will be signed accordingly.	Students required from CV.
30/11/2015	23	Sri Vigneshwara Enterprises Rajajinagar Industrial town, Bangalore-44	Dr.Shobha Anand Reddy/ Senior Faculty	Was OK with the MoU draft and agreed to sign the MoU on 4th Dec 2015	
1/12/2015	24	Prithvi Chemical Manufacturing Co. Pvt Ltd KSSIDC Industrial Area, Tumkur Dist-572168	Mr. Mukund Jhunjhunwala, Business Head, Operations, iPRIMED Educations Solutions,/ Mr. Santosh Abraham, Associate VP, NASSCOM Foundation, Bangalore, NAVIN KUMAR-CEO iprimed	Requested to run the Aricent Employability program at ACS College of Engineering from Feb 2016 till Mar 2016 followed with On Campus Drive in the month of April 2016 for ECE, BME and CSE departments.	In collaboration with NASSCOM and NSDC and NO's

4/12/2015	25	KASSIA Magadi Chord Road, Vijayanagar, Bangalore-40 Small scale industries association	Executive Director-Dr.Shobha Anand Reddy	Signed MoU for 1 year	
8/12/2015	26	QUALIDE LS Andhrahalli Main Road, Near Peenya 2nd stage, Bangalore-91	GE. Vasanth Kumar	Redirected to Head office Kumarakrupa Road Bangalore for further Approval.	
10/12/2015	27	SECO Smart Technologi es Authorised Distributers for SECO Make Cutting Tools & Accessories	Mr. Girish Rajarajeshwari Nagar	Recommended to meet AE maintenance Rajajinagar	
14/12/2015	28	JAYALAK SHMI POLY PACKS PVT LTD Manufactur ers of Plastic Speciality Polyfilms & Allied Packaging Products	Mr. Girish Rajarajeshwari Nagar	Recommended to meet the chief Engineer at Anand Rao Circle	
15/12/2015	29	TIDE Technology Informatics Design Endeavour	Mr. Raghupathi.	Sumitted the written application at the dispatch and gave the acknowledgeme nt and asked to revisit after 4days.	

17/12/2015	30	KSIC A Government of India Enterprise	Sujitha	Requested to meet the HR head directly at Kumarakrupa Road	
18/12/2015	31	MSME	Shiva Kumar-Asst HR	Accepted the letter and informed to follow-up on Friday, since the HR head Mr.Vikasranjan is on vacation.	
18/12/2015	32		CE-transmission Zone/ Mrs. Mythili EE	Advised to Informed the number of students attending the industrial tour along with the specified date,also; asked to contact the HRD-Training at Hoody for guest lecture.	
19/12/2015	33		Mr.B.G.Sreedhara	Proposed for Japan Desk, need to speak to the management about the same to take further decision.	
28/12/2015	34		Aayush Gupta	Intrested in EEE branch students, and would let us know in the near future.	
30/12/2015	35		Lima Sadhukhan	Requested to deploy industry specific training program, would be scheduled shortly.	
8/1/2016	36		Sandeep.C	Requested to organize a campus drive at ACS College of Engineering	

13/01/2016	37		Sandeep.C and team	Conducted Campus drive a ACS College of Engineering. 3students got selected for final round of interview and 1 got selected for the HR round, which is shortly to be scheduled at the clients site.	
14/01/2016	38		Sujisha (HR)	Informed that they have listed college on which they choose to permit for project works as well as campus drives and will get back if our college is been shortlisted.	
18/01/2016	39		Mr.Balachandra PS	Submitted the Xerox of the written application and requested to do the needful at the earliest. permitted to visit the station on 10th Feb 2016, got the confirmation letter to visit the Somanahalli industry visit.	
20/01/2016	40		Venkatesh R	Invited for Campus drive	

20/01/2016	41		Umesh B A	Introduced the ACS College of Engineering (Company is interested to hire ME & Automobile students)	
20/01/2016	42		Shashikiran KR	Introduced the ACS College of Engineering (Company is interested to hire ME students in future)	
20/01/2016	43		Suhail Ahmed.S	Introduced the ACS College of Engineering and requested to come for campus drive.	
21/01/2016	44		J.S Babu SS Fabrication, Boilers, Tig Welding, Railings, SS & Aluminium 3D Letters	Introduced the ACS College of Engineering (Company is interested to hire CVE students in future)	
21/01/2016	45		Ashwin D.Acharya	Introduced the ACS College of Engineering (Company is interested to hire All the branches)Dropped and email requesting for a campus drive	
21/01/2016	46		Praveen.B Chair man	Introduced the ACS College of Engineering (Company is interested to hire All the branches)Dropped and email requesting for a campus drive	

21/01/2016	47		Ravikiran Kulkarni CEO	Introduced the ACS College of Engineering (Company is interested to hire ME students)	
21/01/2016	48		Suresh.S	Introduced the ACS College of Engineering (Company is interested to hire AE students)	
25/01/2016	49		Vinod Kumar S.B Marketing Head	Introduced the ACS College of Engineering (Company is interested to hire ME students)	
25/01/2016	50		Malleswaram Bangalore-03	Introduced the ACS College of Engineering and requested to come for campus drive.	
28/01/2016	51		Ravi Oran Asst.Manager	Introduced the ACS College of Engineering and requested to come kfor campus drive.	
28/01/2016	52		Devaraj.K MSME Development Institute Ministry of Micro, Small& Medium Enterprises. Rajajinagar-bangalore-10	Introduced the ACS College of Engineering and requested to provide the data of the SME, need to visit to collect the data in 2nd week of Feb 2016.	
1/2/2016	53		Purushotham.B V Fully Loaded Training Faculty	Introduced and requested to started the training since 2nd Feb 2016.	
3/2/2016	54		Lokesh.S Soft Skill trainer	Diployed soft skills programs based on Industry specific	

				knowledge.	

9.6 Entrepreneurship Cell

Entrepreneurship cell is established at ACS College of Mechanical Engineering and various events was organized to know the importance of being an entrepreneur and ways to get financial assistance to become an entrepreneur and at present **Entrepreneurship Awareness** programme is going to be organized between 18-20th February 2016 to create awareness to the faculty and students

9.7. Co-Curricular and Extra-Curricular Activities

1. Extra-Curriculum Activities

Sl.No	Events
1.	Rangoli
2.	Poetry Writing
3.	Sudoku
4.	Mehendi
5.	Essay Writing (English/Kannada)
6.	Debate (English/Kannada)
7.	Quiz
8.	Pick N Speak (English/Kannada)
9.	Pot Painting
10.	Sketching
11.	Cooking without fire
12.	Painting
13.	Dumb Charades
14.	Anthakshari
15.	Collage

Sports Facities:

Sports Club

International Cricket Ground

Gymnasium

Foot Ball Ground

Basket Ball Ground

Volley Ball Court

Recreation Room

1. Chess
2. Carrom
3. Table Tennis
4. Swimming Pool

CRITERIA 10

GOVERANCE, INSTITUTIONAL SUPPORT & FINANCIAL RESOURCES

CRITERION 10	GOVERANCE, INSTITUTIONAL SUPPORT & FINANCIAL RESOURCES

10.1.2 GOVERNING BODY

10.1.2.1 List of Governing Council Members for the year 2013-2014

Sl.No	Name	Qualification	Designation
1	Sri. A. C. Shanumugam Founder, MCET, Former MLA & MP	B. A., L L.B.,	Chairman & Managing Trustee
2	Sri. A.C.S Arun Kumar President, Dr. M.G.R University	B.Tech (Hons) MBA	Vice Chairman & Member
3	Dr. P.T. Manoharan Vice-Chancellor, University of Madras, Chennai	Ph. D	Advisor & Member
4	Prof. Venkatachalappa .M Former Prof & Head, Dept of Maths, Central College, Bangalore	Ph. D	Advisor & Member
5	Dr. K. Ramachandra Former Director, GTRE, Bangalore	Ph. D	Advisor & Member
6	Dr. H.B Paniraj, Principal, Rajiv Gandhi Institute of Technology, Bangalore	Ph. D	VTU Nominated Member
7	Prof. A.M Prasanna Kumar Prof & HOD of ECE, ACSCE, Bangalore	ME	Member
8	Sri. Ramesh. C Assoc Prof, Dept of Mech Engg, ACSCE, Bangalore	ME	Member
9	Dr. Krishna Kumar Regional Officer, AICTE, South West Region, Bangalore	Ph. D	Member
10	Prof. H.U. Talwar DTE, Govt. of Karnataka, Bangalore	ME	Member
11	Dr. M.R. Shivakumar Principal, ACSCE, Bangalore	Ph. D	Ex-Officio Member Secretary & Principal

Ex-Officio Member & Secretary

10.2.1.2List of Governing Council Members List of Governing Council Members for the year 2014-2015

Sl.N	Name	Qualification	Designation

o			
1	Sri. A. C. Shanumugam Founder, MCET	B. A., L L.B.,	Chairman
2	Dr. P.T. Manoharan Former Vice-Chancellor, University of Madras, Chennai	Ph. D	Advisor & Member
3	Sri A.C.S ArunKumar, Vice chairman, Rajarajeswari Group of Institutions	B.Tech(Honors) MBA	Member
4	Prof. Venkatachalappa .M Former Prof & Head, Dept of Maths, Central College, Bangalore	Ph. D	Advisor & Member
5	Prof R.M Vasagam Former Vice Chancellor,AnnaUniversity, Chennai	Ph. D	Advisor & Member
6	V.T.U Nominee	Ph. D	VTU Nominated Member
7	Dr.RaviKumar B N Prof & HOD of Civil Engg, ACSCE, Bangalore	Ph.D	Member
8	Prof R.Elangovan Prof & HOD of Aeronautical Engg, ACSCE, Bangalore, Bangalore	ME	Member
9	Dr M.sunderasan Regional Officer& Director, AICTE, South West Region, Bangalore	Ph. D	Member
10	Prof. H.U. Talwar DTE, Govt. of Karnataka, Bangalore	ME	Member
11	Dr. H.B Phani Raju Principal, ACSCE, Bangalore	Ph. D	Ex-Officio Member Secretary & Principal

Ex-Officio Member & Secretary

10.2.1.3List of Governing Council Members List of Governing Council Members for the year 2015-2016

List of Governing Council Members

Sl.No	Name	Qualification	Designation
1	Sri. A. C. Shanumugam Founder, MCET	B. A., L L.B.,	Chairman

2	Dr. P.T. Manoharan Former Vice-Chancellor, University of Madras, Chennai	Ph. D	Advisor & Member
3	Sri A.C.S ArunKumar, Vice chairman, Rajarajeswari Group of Institutions	B.Tech(Honors) MBA	Member
4	Prof. Venkatachalappa .M Former Prof & Head, Dept of Maths, Central College, Bangalore	Ph. D	Advisor & Member
5	Prof R.M Vasagam Former Vice Chancellor,AnnaUniversity, Chennai	Ph. D	Advisor & Member
6	V.T.U Nominee	Ph. D	VTU Nominated Member
7	Mr. Sundramoorthy Former Scientist ISRO & Mission Director Indian Commn Satellite System, Bangalore		Member
8	Prof R.Elangovan Prof & HOD of Aeronautical Engg, ACSCE, Bangalore, Bangalore	ME	Member
9	Dr Ramesh Unni Krishnan Director cum Regional Officer,AICTE, South Western Region, Bangalore	Ph. D	AICTE Nominee & Member
10	Prof. H.U. Talwar DTE, Govt. of Karnataka, Bangalore	ME	Member
11	Dr. Dr. Punal M Arabi Professor & Head, Dept. of Bio-Medical Engg., ACS College of Engineering, Bangalore.	Ph. D	Ex-Officio Member Secretary & Principal
12	M.S.Murali Principal, ACSCE, Bangalore	Ph. D	Faculty Nominee & Member

10.1.2 Administrative Set-up:

We at ACSCE believe in FAMILY KIND of work culture. Basically it aims at love and affection to each and every stake-holder of the institute. In particular, the concept of process owners, which facilitates a perfect decentralization of activities and delegation of authorities, has proven itself to be a key concept in the success achieved by the institute on different counts. The working methodology basically a student centric, which is the dearest and highly responsible element of the system.

Involvement of each and everyone in the decision-making at their respective levels is ensured through decentralization and delegation of powers. Hence there are various institutional committees consisting of

faculty and staff members. Transparency associated therein also forms an important feature of the work culture. This is done through an institutional rule book and code of conduct document which is easily accessible by any one as the copies are available in the library, with the HODs and the Principal.

The institute functions with perfect decentralized administration as depicted in Figure 1 that has complete transparency in the decision making process.

Functions of Key Administrative Positions:

The functions of various key positions are depicted in Table below.

Position	**Functions**
Governing Council	• Frame directive principles and policies • Amend and approve policies from time to time • Approve budgets
Chairman/Chairman Rep i.e., Executive Director	• To look after the overall development of the institute • Mobilize external resources to strengthen the institute • Plan & provide for necessary facilities / equipments for development • Instill confidence and devotion in every member of the institute
Principal	• Design & define organization structure • Define & delegate responsibilities of various positions in the organization • Ensure periodic monitoring & evaluation, of various processes & sub- processes • Ensure effective purchase procedure • Define quality policy and objectives • Prepare annual budget • Conduct periodic meeting of various bodies such as Governing Council, LMC, Standing Committee and Grievances Redressal Committee etc • Manage accounts and finance • Employee recruitment process • Office Administration • Compliance with AICTE, DTE & University • Admission • Resource Generation

	• Internal and External examinations • Library Up gradation
Vice- Principal	• To discharge routine duty of Principal during absence of Principal • Annual Magazine • Resource Provision • Transport • Alumni interaction • Housekeeping including hostels • Prepare and execute academic calendar • Oversee the teaching-learning process • Carry out result analysis and submit corrective measures to Principal • Initiate supplementary teaching measures • Co-curricular activities • Formation of student council • Cultural activities • Sports activities • Student discipline • Student health care • Student orientation
I/C Quality Management System and Estate	• QMS coordination as MR • Establish, implement and maintain quality management system • Arranging internal audits and MRM • Maintain up-to-date master documents with history of revision. • Oversee Employee Attendance System & Maintain the monthly attendance report • Maintaining updated building plans • Overall building maintenance
Public Relations Officer	• Propose admission policy • Arrange campaign • Execute the admission process • Design and print admission brochure

	• Maintain and update college website • Maintain softcopy of photographs • Publicity of events
I/C Alumni Association	• Formation of student council (SC) • Arrange periodic meetings of SC • Ensure alumni registration • Prepare alumni news letter • Arrange meet • Proposing annual budget
I/C Workshop	• Smooth running of college workshop • Preparing Material Requirement • Oversee the routine work • Oversee the college bus service • Oversee the generator facility
I/C Employee Development Cell, Training Officer	• Identifying training needs of employees • Notify the employees about various Employee Development programmes • Arrange Employee Development Programmes • Maintain training records
Administrative Officer	• Liasoning with AICTE, DTE and University • College roster • Service Books • Faculty personal files • Recruitment process • Maintain minutes of meeting (all) • New proposals • Co – ordinate day to day activities of office • Purchase process • AICTE, DTE, SU committee preparation • Annual College budget • Shikshan Shulka Samiti requirements
Placement Officer	• Liaison with industry

	• Student Training and Placement • Identify and provide for training needs of students • Arrange campus interviews • Proposing annual T & P budget
I/C Library	• Plan and execute modus operandi of routine activity of the library • Plan and propose expansion / development • Maintain library discipline and culture • Prepare annual budget for library
I/C Counseling Cell	• Facilitate career guidance to students • Assist students suffering from psychological disorders • Arrange for professional counselors • Maintain record of counseling activities • Student academic counseling • Provide slow-pace programme for weaker students • Arrange remedial classes for weaker students
I/C Monitoring Cell	• Central time table • Monitoring of lectures and practical • Conduction of internal examinations • Students feedback • Collective attendance of students • Co-ordinate the activities of class teachers • Submission of term work and POE mark lists
I/C Student Professional Activities	• Organize events through students professional societies / chapters • Organize paper and design contests • Encourage student participation • Publication of technical magazine and news letters • Record of student participation and achievements in Co-curricular and extra – curricular activities • Maintain record of such events
I/C Gymnasium/ Sports	• Ensure smooth conduct of sports • Ensure proper use of gym • Purchasing of sport items

	• Encourage students to participate in zonal tournaments • Creation and upkeep of sports facilities • Proposing annual budget
Head of Departments	• Plan and execute academic activities of the department • Maintain discipline and culture in the department • Maintain the department neat and clean • Pick and promote strengths of students / faculty / staff • Monitor academic activities of the department • Propose Department Budget • Adhere to QMS Procedures • Maintain records of departmental activities and achievements

10.1.2.3 Define Rules, Procedures, Recruitment and Promotional Policies, etc..,

- The rules and policies regarding recruitment and promotion are as per AICTE and Moogambigai Charitable and Education Trust (MCET).
- The AICTE pay scales are implemented periodically.
- Additional increments are given to staff members who excel in academics and research.

Recruitment Procedure:

- **Advertisement:** In leading News Papers requesting the eligible candidates as per AICTE norms to apply within a given time to the Principal.
- **Applications:** The applications along with the Resume and supporting documents will be collected at the office of HR, RRGI, Bangalore.
- **Listing:** After the applications are received, a list will be prepared highlighting the eligibility, Qualification and experience.
- **Merit List:** Will be prepared as per the requirements of the individual department.
- **Expert Body**: An expert panel consisting of Special officer, Principal, HOD, subject expert and a University nominee will be formed.
- **Call Letters:** Eligible Candidates will be called for interview.
- **Interview**: Discussions with the candidates to know their potentials, strengths, teaching skills etc., will be conducted.
- **Selection**: Based on the performance and requirement, selection list in the order of merit will be prepared.
- **Orders:** Appointment orders are issued to selected candidates.

- **Duty report:** Selected Candidates should report to the duty on or before the given time.

10.1.3 GRIEVANCE REDRESSAL SYSTEM

Grievance Redressal Cell headed by **Dr. M.S. Murali** shall meet within a week from the date of receipt of any petition/complaint from anybody and take necessary action as deem fit and initiate necessary action for solving problem.

Grievance Redressal Committee for the academic year 2013-14 & 2014-2015 at ACSCE is reconstituted as under consequent on relocation of some of the faculty members.

GRIEVANCE REDRESSAL COMMITTEE FOR ACADEMIC YEAR 2015-16

Sl No	Name	Designation
1.	Dr. M.S. Murali	Chairman
2.	Prof. R.R. Elangovan	Convener
3.	Mrs. Vanishree Moji	Representative of Faculty
4.	Mr. Siddesha. H.S	Student Welfare Officer
5.	Respective Head of Departments	Representative of Faculty
6.	Mrs. Usha. M	Representative of Staff
7.	Ms. Dhanya G	Student Representative
8.	Mr. Riyaz Ali Durani	Student representative

GRIEVANCE REDRESSAL COMMITTEE FOR ACADEMIC YEAR 2014-15

Sl. No.	Name	Designation
1.	Prof R. Elangovan Vice-Principal, ACSCE, Bangalore-74	Chairman
2.	Dr. H. B. Phani Raju, Principal, ACSCE, Bangalore-74	Convener

3.	Mrs. Vanishree Moji Asst. Professor, Dept. of ECE, ACSCE,Bangalore-74	Representative of Faculty
4.	Mr. Siddesha. H.S Dept of Mechanical, ACSCE,Bangalore-74	Student Welfare Officer
5.	Respective Head of Departments ACSCE,Bangalore-74	Representative of Faculty
6.	Mrs. Usha. M Instructor Dept of CSE, ACSCE,Bangalore-74	Representative of Staff
7.	Mr. Tabrez Nadvi A Dept of AE,8th Sem BE, Department of AE ACSCE, Bangalore-74	Student Representative
8.	Ms. Gayathri A.V 8th Sem BE, Dept of CSE, Bangalore	Student representative

GRIEVANCE REDRESSAL COMMITTEE FOR ACADEMIC YEAR 2013-14

Sl. No.	Name	Designation
1.	Prof. Dr. M. Murugesh Mudaliar Rector-RRGI, Bangalore	Chairman
2.	Prof. Dr. M.R. Shivakumar Principal, ACSCE, Bangalore	Convener
3.	Mrs. Vanishree Moji Dept of ECE, ACSCE, Bangalore	Representative of Faculty
4.	Mr. Siddesha. H.S Dept of MECH, ACSCE, Bangalore	Student Welfare Officer
5.	Respective Head of Departments ACSCE, Bangalore	Representative of Faculty
6.	Mrs. Usha. M Asst Prof Dept of CSE, ACSCE, Bangalore	Representative of Staff
7.	Mr. Pradeep M.S 6th Sem BE, Dept of MECH, ACSCE, Bangalore	Student Representative
8.	Ms. Deepika J 6nd Sem BE, Dept of ECE, ACSCE,	Student representative

	Bangalore	

Anti-Ragging Committees for the academic year 2013-14:

2. The following team members are informed to act members of Anti- ragging group from 1.8.2013
3. Group members are informed to make surprise visits as per the schedule given below and one of the team members are requested to write a brief report after Inspection in the register.

1. These groups are formed to prevent and to curb the menace of Ragging.
2. ANTI RAGGING COMMITTEE: (To Monitor in both in Morning & Evening)

Sl. No.	Name of the Member	Designation	Contact No
1.	Prof. A.M Prasanna Kumar	Vice Principal	8867590052
2.	Mr. Siva subramaniyam. R	Asso Prof	9945535836
3.	Prof. Ramesh C	Asso. Prof	9035366043

ANTI RAGGING SQUADS (Lunch Break) Canteen, Campus, Classrooms, Library

Sl. No.	Name of the Member	Designation	Contact No
1.	DR. Selvarani	Professor & HOD	9964144757
2.	Dr. RaviKumar B.N	Asst.Prof	8861331671
3.	Mr. Vijay Mahantesh	Asst.Prof	9845011148

3. DEDICATED CADRE OF WARDEN: Visit to Canteen, Campus, Classrooms, Hostel

Sl. No.	Name of the Member	Designation	Contact No
1.	Mr. Madesha J	Hostel Warden	9945898247
2.	Mrs. Chitrakala	Hostel Warden	9900026015

4. PROFESSIONAL COUNSELOR: (Evening around 3 Pm) Visit to Canteen , Cam[pus, Classrooms

Sl. No.	Name of the Member	Designation	Contact No

1.	Mr. A.M. Prasanna Kumar	Professor	8867590052
2.	Dr. Ravikumar B N	Professor	8861331671
3.	Dr. Raju B.R	Professor	8884451258
4.	Mrs. Selvarani	Professor	09887150218

In addition to the committees or bodies presented above, the college has the following Non-statutory committee

Sl. No	Committee	Headed By
1	Academic	Dr. M.R Shivakumar
2	Sports	Prof. Ramesh C
3	Cultural	Mrs. Deepa
4	Placement	Mr. Nabi
5	Library	Dr. Selva Rani
6	Hostel and canteen	Dr. C.S. Pillai
7	Transport	Mr. M.S Shivakumar
8	College Day	Mr. R Sivasubramanian
9	Student Welfare	Mr. A.M. Prasanna Kumar
10	Magazine	All Department Heads
11	Drug Abuse	Dr. Ravikumar B N
12	Co-operative	Mr. Sanjeev kumar
13	Seminar	Mr. A.M. Prasanna Kumar
14	Workshop	Mr. A.M. Prasanna Kumar
15	Conference	Mr. A.M. Prasanna Kumar
16	Promotion of Brand image	Dr. C.S. Pillai
17	Parent/Relation	All Department Heads
18	Disciplinary	All Department Heads
19	ISTE	Dr. Suresh R
20	EDUSAT Programme	Prof. A. M. Prasanna Kumar
21	Alumni Association	Mr. Ramesh C
22	Media Co-ordinator	Dr. Suresh R

23	NSS Co-ordinator	Mr. M.S. Shivakumar
24	Mentoring of Student Welfare	Respective Mentors
25	Counselling	Mr. A.M. Prasanna Kumar
26	Research Development	Dr. Selvarani
27	Project Exhibition	Dr. Raju. B R
28	Estate Officer	Mr. Athipathiraj
29	NBA	NIL
30	ISO	Mr. R Sivasubramanian
31	Purchase	Mr. A.M. Prasanna Kumar
32	Journal	Mr. Ravikumar .N
33	Chairman's Vision • Incubation Centre • Software Development Cell • Energy Park	Vice Principal (Academic,Admin)
34	LIC/AICTE Coordinators	Mr. lLokanadham M
35	Industry Institution Interaction Cell	Mr. Yogi Adarsh
36	Red Cross	Mr. Ramesh C
37	GD Cell	Dr. C.S. Pillai
38	Attendance/ Class Teaching of Every Class/ Student Progress Communication	Individual Faculties
39	a) Cultural Club	Mrs. Deepa
	b) Heritage Club	Mr. M S Shivakumar
	c) Sports Club	Mr. R. Siva subramanian
	d) Green Club	Mr. Laxmi G Gandagi
	e) Creative Club	Mrs. Jyothi Metan
	f) Innovation Club	Mr. Mahantesh Matapath
	g) Yoga Club	Dr. C.S. Pillai
	h) Cricket Club	Mr. Ramesh C

10.1.4 Delegation of financial power

S.NO	DESGNATION	LIMIT TO SANCTION
1	PRINCIPAL	2,00,000
2	HOD'S	5,000

List of faculty members who are administrators/decision makers for various assigned jobs:

Sl. No.	Name	Position
1	Mr. S Vijay Anand	Executive Director
2	Dr. M. R. Shivakumar	Principal
3	Mr. A.M. Prasanna Kumar	Vice Principal(Administration)
4	Mr. A.M. Prasanna Kumar	Head of Department – Electronics & Communication
5	Dr. Selvarani	Head of Department – Computer Science & Engineering
6	M.R. Shivakumar	Head of Department – Electrical Engineering
7	Dr. Neerajarani	Head of Department – Basic Sciences
8	Mr. Ramesh C	In-Charge, Alumni Association
9	Mr. Ramesh C	In-Charge, Workshop
10	Mr. A.M. Prasanna Kumar	In-Charge, Counseling Cell
		In-Charge, Student Professional Activities Cell
11	Mr. Venkata swamy	Administrative Officer
12	Dr. Neerajarani	Chairman, Central Library
13	Anti-Ragging	Dr. M. R. Shivakumar

Anti-Ragging Committees for the academic year 2014-15:

4. The following team members are informed to act members of Anti- ragging group from 1.8.2014
5. Group members are informed to make surprise visits as per the schedule given below and one of the team members are requested to write a brief report after Inspection in the register.
5. These groups are formed to prevent and to curb the menace of Ragging.
6. ANTI RAGGING COMMITTEE: (To Monitor in both in Morning & Evening)

Sl. No.	Name of the Member	Designation	Contact No
1.	Prof. R. R. Elangovan	Vice Principal	9176602009
2.	Mr. Sivasubramaniyam. R	Asso Prof	9945535836
3.	Dr.Senthil Kumaran.T	Asso. Prof	8884000900

4	Mrs. Vanishree Moji	Asst. Prof	

ANTI RAGGING SQUADS (Lunch Break) Canteen, Campus, Classrooms, Library

Sl. No.	Name of the Member	Designation	Contact No
1.	Dr. Pillai. C.S	Professor & HOD	9964144757
2.	Mr. Shashikiran C.R	Asst. Prof	9663856954
3.	Mr. Vijay Mahantesh	Asst. Prof	9845011148

7. DEDICATED CADRE OF WARDEN: Visit to Canteen, Campus, Classrooms, Hostel

Sl. No.	Name of the Member	Designation	Contact No
1.	Mr. S.B. Verma	Hostel Warden	9900030927
2.	Mrs. Chitrakala	Hostel Warden	9900026015

8. PROFESSIONAL COUNSELOR: (Evening around 3 Pm) Visit to Canteen , Cam[pus, Classrooms

Sl. No.	Name of the Member	Designation	Contact No
1.	Mr. A.M. Prasanna Kumar	Professor	8867590052
2.	Prof. R.R. Elangovan	Professor	9176602009
3.	Dr. Selvanandham. S	Professor	8884451258
4.	Dr. M. Eshwaramoorthy	Professor	09887150218

In addition to the committees or bodies presented above, the college has the following Non-statutory committee

Sl. No	**Committee**	**Headed By**
1	Academic	Dr. H.B. Phaniraju
2	Sports	Dr. M. Eshwaramoorthy
3	Cultural	Mrs. Deepa
4	Placement	Mr. Shivakumar
5	Library	Dr. Selvanandham. S

6	Hostel and canteen	Dr. C.S. Pillai
7	Transport	Mr. M.S Shivakumar
8	College Day	Mr. R Sivasubramanian
9	Student Welfare	Mr. A.M. Prasanna Kumar
10	Magazine	All Department Heads
11	Drug Abuse	Dr. B.N Ravikumar
12	Co-operative	Mr. Sanjeev kumar
13	Seminar	Prof. R.R. Elangovan
14	Workshop	Prof. R.R. Elangovan
15	Conference	Prof. R.R. Elangovan
16	Promotion of Brand image	Dr. C.S. Pillai
17	Parent/Relation	All Department Heads
18	Disciplinary	All Department Heads
19	ISTE	Dr. Mukesh
20	EDUSAT Programme	Prof. A. M. Prasanna Kumar
21	Alumni Association	Mr. Dhanya Prakash R Babu
22	Media Co-ordinator	Dr. T. Senthil Kumaran
23	NSS Co-ordinator	Mr. M.S. Shivakumar
24	Mentoring of Student Welfare	Respective Mentors
25	Counselling	Mr. A.M. Prasanna Kumar
26	Research Development	Dr. M. Eshwaramoorthy
27	Project Exhibition	Prof. R. Elangovan
28	Estate Officer	Mr. Athipathiraj
29	NBA	Mr. R. Siva subramanian
30	ISO	DR. Muruganandham
31	Purchase	Mr. A.M. Prasanna Kumar
32	Journal	Mr. Ravikumar .N
33	Chairman's Vision • Incubation Centre • Software Development Cell • Energy Park	Vice Principal (Academic,Admin)

34	LIC/AICTE Coordinators	Mr. Krishnakumar. A
35	Industry Institution Interaction Cell	Mr. Yogi Adarsh
36	Red Cross	Mr. Chandrashekhar B
37	GD Cell	Dr. C.S. Pillai
38	Attendance/ Class Teaching of Every Class/ Student Progress Communication	Individual Faculties
39	i) Cultural Club	Mrs. Deepa
	j) Heritage Club	Ms. Prathibha
	k) Sports Club	Mr. R. Siva subramanian
	l) Green Club	Mrs. Gayathri Joshi
	m) Creative Club	Mr. Munikrishna D
	n) Innovation Club	Mrs. Surekha Nigudgi
	o) Yoga Club	Dr. C.S. Pillai
	p) Cricket Club	Mr. Manjunath Prasad

10.1.4 Delegation of financial power

S.NO	DESGNATION	LIMIT TO SANCTION
1	PRINCIPAL	2,00,000
2	HOD'S	5,000

Sl. No.	Name	Position
1	Mr. S Vijay Anand	Executive Director
2	Dr. H.B. Phaniraju	Principal
3	Prof. R.R. Elangovan	Vice Principal(Administration)
4	Mr. A.M. Prasanna Kumar	Vice-Principal
5	Dr. A. Muruganandham	Head of Department – Electronics & Communication
6	Dr. C.S. Pillai	Head of Department – Computer Science & Engineering
7	Mr. Dinakar	Head of Department – Electrical Engineering
8	Dr. Selvanandham	Head of Department – Basic Sciences
9	Mr. Dhanya Prakash. R. Babu	In-Charge, Alumni Association

10	Prof. R.R. Elangovan	In-Charge, Workshop
		In-Charge, Counseling Cell
11	Mr. A.M. Prasanna Kumar	In-Charge, Student Professional Activities Cell
12	Mr. C.S. Rajagopalan	Administrative Officer
13	Dr. Selvanandham. S	Chairman, Central Library
14	Anti-Ragging	DR. H.B. Phaniraju

List of faculty members who are administrators/ decision makers for various assigned jobs

Anti-Ragging Committees for the academic year 2015-16:

6. The following team members are informed to act members of Anti- ragging group from 1.8.2015
7. Group members are informed to make surprise visits as per the schedule given below and one of the team members are requested to write a brief report after Inspection in the register.

9. These groups are formed to prevent and to curb the menace of Ragging.

10. ANTI RAGGING COMMITTEE: (To Monitor in both in Morning & Evening)

Sl. No.	Name of the Member	Designation	Contact No
1.	Prof. R. R. Elangovan	Vice Principal	9176602009
2.	Mr. Siva subramaniyam. R	Asso Prof	9945535836
3.	Dr.Senthil Kumaran.T	Asso. Prof	8884000900

ANTI RAGGING SQUADS (Lunch Break) Canteen, Campus, Classrooms, Library

Sl. No.	Name of the Member	Designation	Contact No
1.	Dr. Pillai. C.S	Professor & HOD	9964144757
2.	Mr. Shashikiran C.R	Asst.Prof	9663856954
3.	Mr. Vijay Mahantesh	Asst.Prof	9845011148

11. DEDICATED CADRE OF WARDEN: Visit to Canteen, Campus, Classrooms, Hostel

Sl. No.	Name of the Member	Designation	Contact No

1.	Mr. S.B. Verma	Hostel Warden	9900030927
2.	Mrs. Chitrakala	Hostel Warden	9900026015

12. PROFESSIONAL COUNSELOR: (Evening around 3 Pm) Visit to Canteen , Cam[pus, Classrooms

Sl. No.	Name of the Member	Designation	Contact No
1.	Mr. A.M. Prasanna Kumar	Professor	8867590052
2.	Prof. R.R. Elangovan	Professor	9176602009
3.	Dr. Selvanandham. S	Professor	8884451258
4.	Dr. M. Eshwaramoorthy	Professor	09887150218

In addition to the committees or bodies presented above, the college has the following Non-statutory committee

Sl. No	**Committee**	**Headed By**
1	Academic	Dr. M.S. Murali
2	Sports	Dr. M. Eshwaramoorthy
3	Cultural	Mrs. Deepa
4	Placement	Mrs. Bhagyalakshmi .L
5	Library	Dr. Selvanandham. S
6	Hostel and canteen	Dr. C.S. Pillai
7	Transport	Mr. M.S Shivakumar
8	College Day	Mr. R Sivasubramanian
9	Student Welfare	Mr. A.M. Prasanna Kumar
10	Magazine	All Department Heads
11	Drug Abuse	Dr. W. Prema Kumar
12	Co-operative	Mr. Sanjeev kumar
13	Seminar	Prof. R.R. Elangovan
14	Workshop	Prof. R.R. Elangovan
15	Conference	Prof. R.R. Elangovan
16	Promotion of Brand image	Dr. C.S. Pillai
17	Parent/Relation	All Department Heads

18	Disciplinary	All Department Heads
19	ISTE	Dr. Mukesh
20	EDUSAT Programme	Prof. A. M. Prasanna Kumar
21	Alumni Association	Mr. Dhanya Prakash
22	Media Co-ordinator	Dr. T. Senthil Kumaran
23	NSS Co-ordinator	Mr. M.S. Shivakumar
24	Mentoring of Student Welfare	Respective Mentors
25	Counselling	Mr. A.M. Prasanna Kumar
26	Research Development	Dr. M. Eshwaramoorthy
27	Project Exhibition	Prof. R. Elangovan
28	Estate Officer	Mr. Athipathiraj
29	NBA	Mr. R. Siva subramanian
30	ISO	DR. Muruganandham
31	Purchase	Mr. A.M. Prasanna Kumar
32	Journal	Mr. Ravikumar .N
33	Chairman's Vision • Incubation Centre • Software Development Cell • Energy Park	Vice Principal (Academic,Admin)
34	LIC/AICTE Coordinators	Mr. Krishnakumar. A
35	Industry Institution Interaction Cell	Mr. Yogi Adarsh
36	Red Cross	Mr. Chandrashekhar B
37	GD Cell	Dr. C.S. Pillai
38	Attendance/ Class Teaching of Every Class/ Student Progress Communication	Individual Faculties
39	q) Cultural Club	Mrs. Deepa
	r) Heritage Club	Ms. Prathibha
	s) Sports Club	Mr. R. Siva subramanian
	t) Green Club	Ms. Vamsha Deepa N

	u) Creative Club	Dr. M. Punal Arabi
	v) Innovation Club	Mrs. Surekha Nigudgi
	w) Yoga Club	Dr. C.S. Pillai
	x) Cricket Club	Mr. Manjunath Prasad

10.1.4 Delegation of financial power

S.NO	DESGNATION	LIMIT TO SANCTION
1	PRINCIPAL	2,00,000
2	HOD'S	5,000

List of faculty members who are administrators/decision makers for various assigned jobs:

Sl. No.	Name	Position
1	Mr. S Vijay Anand	Executive Director
2	Dr. M.S. Murali	Principal
3	Prof. R.R. Elangovan	Vice Principal(Administration)
4	Mr. A.M. Prasanna Kumar	Vice-Principal
5	Dr. A. Muruganandham	Head of Department – Electronics & Communication
6	Dr. C.S. Pillai	Head of Department – Computer Science & Engineering
7	Dr. S.S. Patil	Head of Department – Electrical Engineering
8	Dr. Selvanandham	Head of Department – Basic Sciences
9	Mr. Dhanya Prakash. R. Babu	In-Charge, Alumni Association
10	Prof. R.R. Elangovan	In-Charge, Workshop
		In-Charge, Counseling Cell
11	Mr. A.M. Prasanna Kumar	In-Charge, Student Professional Activities Cell
12	Mr. C.S. Rajagopalan	Administrative Officer
13	Dr. Selvanandham. S	Chairman, Central Library
14	Anti-Ragging	Dr. M.S. Murali

10.2. Budget Allocation, Utilization, & Public Accounting at Institute Level

Total Income at Institute level: For CFY, CFYm1, CFYm2 & CFYm3

CFY: Current FinancialYear, CFYm1 (Current Financial Year minus 1, CFYm2 (Current Financial Year minus 2) and CFYm3 (Current Financial Year minus 3)

For CFY

Total Income				Actual expenditure (till 31/10/2015)			Total No. of students:
Fee	Govt.	Grant(s)	Other Sources (specify)	Recurring including Salaries	Non-recurring	Special projects/Any other, specify	Expenditure per student (Oct -15)
710	NIL	NIL		533.33		-	0.48

Note: Similar tables are to be prepared for CFYm1, CFm2 & CFYm3.

Items	Budgeted in CFY	Actual expenses in CFY (till Oct - 15)	Budgeted in CFYm1	Actual expenses in CFYm1 (14-15)	Budgeted in CFYm2	Actual expenses in CFYm2 (13-14)	Budgeted in CFYm3	Actual expenses in CFYm3 (12-13)
Infrastructure Built-up	160.00	75.27	110.00	104.41	110.00	111.61	200.00	143.66
Library	10.00	5.33	25.00	22.16	5.00	2.99	25.00	21.88
Laboratory equipment	25.00	13.59	70.00	67.75	40.00	39.90	80.00	70.50
Laboratory consumables	5.00	1.13	50.00	46.08	5.00	2.71	4.00	1.16
Teaching and non-teaching staff salary	500.00	257.75	400.00	422.56	350.00	303.54	300.00	253.65
Maintenance and spares	25.00	11.36	30.00	26.54	30.00	27.49	30.00	25.95
R&D	45.00	19.39	5.00	3.43	3.00	1.00	5.00	3.99
Training and Travel	15.00	1.86	10.00	7.72	10.00	7.08	4.00	2.67
Miscellaneous expenses*	2.00	0.6	2.00	1.15	2.00	0.42	2.00	0.60
Others, specify	400.00	147.05	400.00	320.42	400.00	343.51	400.00	312.94
Total	1187.00	533.33	1102.00	1022.22	955.00	840.25	1050.00	837.00

Total Budget at program level: For CFY, CFYm1, CFYm2 & CFYm3

CFY: Current FinancialYear, CFYm1 (Current Financial Year minus 1, CFYm2 (Current Financial Year minus 2) and CFYm3 (Current Financial Year minus 3)

For CFY

Total Income		Actual expenditure (till 31/10/2015)		Total No. of students:
Non-recurring (For whole year)	Recurring (For whole year)	Non-recurring	Recurring	Expenditure per student
-	710	533.33		0.48

Note: Similar tables are to be prepared for CFYm1, CFYm2 & CFYm3.

Items	Budgeted in CFY	Actual expenses in CFY (till Oct-15)	Budgeted in CFYm1	Actual expenses in CFYm1 (14-15)	Budgeted in CFYm2	Actual expenses in CFYm2 (13-14)	Budgeted in CFYm3	Actual expenses in CFYm3 (12-13)
Laboratory equipment	25.00	12.42	75.00	66.07	40.00	36.48	50.00	47.48
Software	5.00	1.17	4.00	1.68	5.00	3.42	25.00	23.02
Laboratory consumables	3.00	1.13	75.00	46.08	4.00	2.71	2.00	1.16
Maintenance and spares	25.00	11.36	60.00	26.54	30.00	27.49	25.00	25.95
R & D	25.00	19.39	8.00	3.43	2.00	1.00	5.00	3.99
Training and Travel	5.00	1.86	8.00	7.72	8.00	7.08	3.00	2.67
Miscellaneous expenses*	2.00	0.6	2.00	1.15	2.00	0.42	2.00	0.60
Total	90.00	47.93	232.00	152.67	91.00	78.60	112.00	104.87

Total Income at Institute level: For CFY, CFYm1, CFYm2 & CFYm3
CFY: Current FinancialYear, CFYm1 (Current Financial Year minus 1, CFYm2 (Current Financial Year minus 2) and CFYm3 (Current Financial Year minus 3)

For CFY

Total Income (14-15)				Actual expenditure (14-15)			Total No. of students:
Fee	Govt.	Grant(s)	Other Sources (specify)	Recurring including Salaries	Non-recurring	Special projects/Any other, specify	Expenditure per student
802.59	NIL	NIL	1.06	827.18		-	0.81

For CFY

Total Income (13-14)				Actual expenditure (13-14)			Total No. of students:
Fee	Govt.	Grant(s)	Other Sources (specify)	Recurring including Salaries	Non-recurring	Special projects/Any other, specify	Expenditure per student
651.65	NIL	NIL	2.02	492.65		-	0.47

For CFY

Total Income (12-13)				Actual expenditure (12-13)			Total No. of students:
Fee	Govt.	Grant(s)	Other Sources (specify)	Recurring including Salaries	Non-recurring	Special projects/Any other, specify	Expenditure per student
460.65	NIL	NIL	4.72	388.20		-	0.57

10.4 Library and Internet:

Carpet area of library (in m^2)	600 sq ft
Reading space (in m^2)	600 sq ft
Number of seats in reading space	148
Number of users (issue book) per day	40
Number of users (reading space) per day	50
Timings: During working day, weekend, and Vacation	8:30am to 8:00 pm
Number of library staff	03
Number of library staff with a degree in Library	01
Library Management	01
Computerization for search, indexing	Yes
Issue/return records bar coding used	Yes
Library services on Internet/Intranet INDEST or other similar membership archives	Yes

10.5.2 Titles and volumes per title (4)

Number of titles: 6144

Number of volumes: 27984

	Number of new titles added	Number of new editions added	Number of new volumes added
2011-2012	498	94	14699
2012-2013	351	87	17553
2013-2014	161	38	18699
2014-15	314	104	2303

Scholarly journal (3)

Details		2014-15	2013-14	2012-13	2011-12	2010-11
Engg. and Tech.	As soft copy	7	-	-	-	-
	As hard copy	109	101	101	101	101

Digital Library (3)

Availability of digital library content:

If available, mention number of courses, number of e-books, etc. : 09

Availability of an exclusive server : Yes

Availability over Intranet/Internet : Yes

Availability of exclusive space/room : Yes

Number of users per day : 15

Library expenditure on books, magazines/journals, and miscellaneous content (5)

Year	Expenditure				Comments if any
	Books	Magazines/journals (for hard copy subscription)	Magazines/journals (for soft copy subscription)	Misc. content	
2010-2011	232635	47013	323510		
2011-2012	692317	258201	386750		
2012-2013	504130	269670	1579032		
2013-2014	130693	261181	1579032		
2014-2015	66575	273655	1308022		

INTERNET (5)

Name of the Internet provider	city online and BSNL
Available bandwidth	60Mbps
Access speed	100Mbps
Availability of Internet in an exclusive lab	Yes
Availability in most computing lab	Yes
Availability in Departments and other units	Yes
Availability in Faculty rooms	Yes
Institute own e-mail facility to faculty/students	Yes
Security/privacy of e-mail/internet users	Yes

ACS
College of Engineering
(ISO 9001 : 2008 Certified)
(Approved by AICTE, New Delhi, Govt.of Karnataka & Affiliated to Visvesvarya Technological University, Belgaum)
Sponsored by : MOOGAMBIGAI CHARITABLE AND EDUCATIONAL TRUST

Declaration

I undertake that, the institution is well aware about the provisions in the NBA's Accreditation manual concerned for this application, rules, regulations, notifications and NBA expert visit guidelines in force as on date and the institute shall fully abide by them.

It is submitted that information provided in the Self Assessment report is factually correct. I understand and agree that an appropriate disciplinary action against the institute will be initiated by NBA, in case any false statement/ information is observed during pre-visit, visit, post visit and subsequent to grant of accreditation.

Date: 09.02.2016

Place: Bangalore

9/02/16.

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