



**SELF ASSESSMENT REPORT (SAR) FORMAT UNDERGRADUATE
ENGINEERING PROGRAMS (TIER-II) FIRST TIME ACCREDITATION**

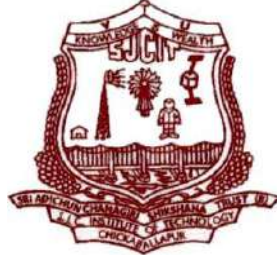
(Applicable for all the programs, except those granted full accreditation for 5 years as per Jan 2013 Manual)

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(December, 2015)

||JAI SRI GURUDEV||

S J C INSTITUTE OF TECHNOLOGY

B B ROAD, CHICKBALLAPUR-562101, KARNATAKA STATE



SELF ASSESSMENT REPORT (Tier-II)

UNDER GRADUATE PROGRAM

IN

CIVIL ENGINEERING

Submitted to



National Board of Accreditation

NBCC Place, 4th Floor East Tower, Bhisham Pitamah Marg,
Pragati Vihar New Delhi 110003

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SAR Contents

Serial Code	Item	Page No.
PART A	Institutional Information	1-9
PART B	Criteria Summary	10-399
	Program Level Criteria	10-323
1	Vision, Mission and Program Educational Objectives	10-19
2	Program Curriculum and Teaching –Learning Processes	20-118
3.	Course outcomes and program outcomes	119-175
4.	Students’ Performance	176-218
5.	Faculty Information and Contributions	219-266
6	Facilities and Technical Support	267-284
7	Continuous Improvement	285-310
	Institute Level Criteria	311-399
8	First Year Academics	311-323
9	Student Support Systems	324-369
10	Governance, Institutional support and Financial Resources	370-399
PART C	Declaration by the Institution	--
Annexure- I	Program Outcomes(POs) & Program Specific Outcomes(PSOs)	--

PART A

Institutional Information

PART A: Institutional Information

1. Name and Address of the Institution:

S J C Institute of Technology (SJCIT),
 P B No.20, B B Road,
 Chickballapur – 562101,
 Karnataka
 E-mail: principal@sjcit.ac.in website: www.sjcit.ac.in
 Phone No:- 08156 263181/82/83
 Mobile:- 9880373629
 Fax:- 08156 263180

2. Name and Address of the Affiliating University:

Visvesvaraya Technological University(VTU),
 Jnana Sangama, Santibastawad Road,
 Machhe, Belagavi – 590018,
 Karnataka
 E-mail:- registrar@vtu.ac.in website: www.vtu.ac.in
 Phone No:- 0831 2498100
 Fax:- 0831 2405467

3. Year of establishment of the Institution: 1986

4. Type of the Institution:

University	☐
Deemed University	☐
Government Aided	☐
Autonomous	☐
Affiliated	☒

5. Ownership Status:

Central Government	☐	State Government	☐
Government Aided	☐	Self - Financing	☒
Trust	☒	Society	☐
Section 25 Company	☐	Any Other (Please specify)	☐

**Provide Details: - Sri Adichunchanagiri Shikshana Trust®,
 Sri Adichunchanagiri Kshetra, Adichunchanagiri
 Nagamangala Taluk, Mandya District-571811, Karnataka**

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

Sri Adichunchanagiri Shikshana Trust ® is running more than 485 educational institutions across Karnataka, Tamilnadu and New Delhi states. The institutions comprises

of Primary and High Schools, Pre University Colleges, Degree colleges, Technical and Medical Institutions, Nursing Institutions, Architectural Institutions etc., The Institutions are predominantly established in the rural parts of Karnataka State. A partial list of educational Institutions run by the trust is presented in the following Table A 6.

Table A 6: Partial list of educational institutions run by the trust

Name of the Institution(s)	Year of Establishment	Programs of Study	Location
Sri Kalabyraveshwara Sanskrit College, Sri Kshethra	1974	Degree and Certificate programs in Sanskrit	Sri Kshethra, Mandya District, Karnataka State
SAC Arts, Commerce & Science College	1976	B.A. B.Com B.Sc BBM Post-graduation courses in arts, commerce and science	Mandya District, Karnataka State and other 14 degree colleges in different districts of Karnataka
Adichunchanagiri Institute of Technology	1980	B.E, M.Tech Ph.D M.B.A.	Chikkamagaluru district, Karnataka State
Sri Adichunchanagiri College of Education	1980	B.Ed	Hassan District, Karnataka State and other 4 colleges in different districts of Karnataka
Sri Adichunchanagri Industrial Training Centre	1984	ITI	Kolar district, Karnataka State and 40 other colleges in other districts of Karnataka

Adichunchanagiri Institute of Medical Sciences	1986	M.B.B.S. And P.G.	Mandya District, Karnataka State
GVK Polytechnic	1986	Diploma	Chitradurga district, Karnataka and 4 other colleges in other districts of Karnataka
Sri Kalabyaraweshwara Ayurvedic Medical College	1996	BAMS/MD/MS and Ayurveda	Bengaluru, Karnataka State
S J B Institute of Technology	2001	B,E, M.Tech Ph.D M.B.A.	Bengaluru, Karnataka State
B G S Institute of Technology	2005	B,E, M.Tech M.B.A.	Mandya District, Karnataka State
BGS B.P.Ed. College	2005	B.P.Ed	Chikkaballapura district, Karnataka State
BGS Global Institute of Medical Sciences	2013	M.B.B.S. and P.G.	Bengaluru, Karnataka State
SJB School of Architecture & Planning – Bangalore	2014	B.Arch	Bengaluru, Karnataka State
BGS School of Architecture & Planning, Bangalore	2015	B.Arch	Bengaluru, Karnataka State

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

Table A.7: List of Programs offered by the Institution

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
Bachelor of Engineering in Civil Engineering	UG	1986	1986	40	Yes	120	Not accredited	14/09 /2018	16/09 /2018	Yes	4
Master of Technology in Structural Engineering	PG	2010	2010	18	No	18	Eligible but not applied	-	-	No	2
Master of Technology in Infrastructure Engineering and Management	PG	2014	2014	18	No	18	Eligible but not applied	-	-	No	2
Bachelor of Engineering in Mechanical Engineering	UG	1986	1986	40	Yes	60	Granted accreditation for 3 years for the period	2018	2022	0	4
Bachelor of Engineering In Electronics and Communication Engineering	UG	1986	1986	40	Yes	180	Granted accreditation for 3 years for the period	2018	2022	0	4
Sanctioned Intake for Last Five Years for the BACHELOR OF ENGINEERING IN ELECTRONICS AND COMMUNICATION ENGINEERING											
Academic Year						Sanctioned Intake					
2020-21						180					

2019-20						180					
2018-19						180					
2017-18						120					
2016-17						120					
2015-16						120					
Bachelor of Engineering in Computer Science And Engineering	UG	1986	1986	40	Yes	180	Granted accreditation for 3 years for the period	2018	2022	0	4
Sanctioned Intake for Last Five Years for the BACHELOR OF ENGINEERING IN COMPUTER SCIENCE AND ENGINEERING											
Academic Year						Sanctioned Intake					
2020-21						180					
2019-20						180					
2018-19						120					
2017-18						120					
2016-17						120					
2015-16						120					
Bachelor of Engineering in Information Science And Engineering	UG	2000	2000	60	Yes	120	Applying for first time	-	-	0	4
Bachelor of Engineering In Aeronautical Engineering	UG	2014	2014	60	No	60	Applying for first time	-	-	0	4
Bachelor of Engineering In Aerospace Engineering	UG	2018	2018	60	No	60	Not Eligible for accreditation	-	-	0	4

Master of Technology in Machine Design	PG	2002	2002	18	Yes	09	Eligible but not applied	-	-	No	2
Sanctioned Intake for Last Five Years for the MASTER OF TECHNOLOGY IN MACHINE DESIGN											
Academic Year						Sanctioned Intake					
2020-21						9					
2019-20						18					
2018-19						18					
2017-18						18					
2016-17						18					
2015-16						18					
Master of Technology in Digital Communication and Networking	PG	2002	2002	18	Yes	09	Eligible but not applied	-	-	No	2
Sanctioned Intake for Last Five Years for the MASTER OF TECHNOLOGY IN DIGITAL COMMUNICATION AND NETWORKING											
Academic Year						Sanctioned Intake					
2020-21						9					
2019-20						18					
2018-19						18					
2017-18						18					
2016-17						18					
2015-16						18					
Master of Technology in Computer Science and Engineering	PG	2006	2006	18	Yes	09	Eligible but not applied	-	-	No	2
Sanctioned Intake for Last Five Years for the MASTER OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING											

Academic Year						Sanctioned Intake					
2020-21						9					
2019-20						18					
2018-19						18					
2017-18						18					
2016-17						18					
2015-16						18					
Master of Business Administration	PG	2000	2000	60	No	60	Eligible but not applied	-	-	No	2

8. Programs to be considered for Accreditation vide this application:

Table A.8: List of Programs considered for Accreditation

Sl. No.	Program Name
1.	B E in Aeronautical Engineering
2.	B E in Civil Engineering
3.	B E in Information Science and Engineering

9. Total number of employees in the institution:**A. Regular Employees (Faculty and Staff):****Table A.9a: Regular Employee Details**

Items		CAY (2020-21)		CAYm1 (2019-20)		CAYm2 (2018-19)	
		Min	Max	Min	Max	Min	Max
Faculty in Engineering	M	155	170	168	170	169	180
	F	39	42	41	42	42	45
Faculty in Maths, Science & Humanities	M	107	119	120	126	129	131
	F	42	45	45	46	47	49
Non-teaching staff	M	15	15	16	18	17	19
	F	06	06	05	06	05	05

B. Contractual Staff Employees (Faculty and Staff): (Not covered in Table A):**Table A.9b: Contractual Employee Details**

Items		CAY (2020-21)		CAYm1 (2019-20)		CAYm2 (2018-19)	
		Min	Max	Min	Max	Min	Max
Faculty in Engineering	M	0	4	01	01	02	02
	F	0	0	0	0	0	0
Faculty in Maths, Science & Humanities	M	0	0	0	0	0	0
	F	0	0	0	0	0	0
Non-teaching staff	M	0	0	0	0	0	0
	F	0	0	0	0	0	0

10. Total number of Engineering Students:**Table A.10: Details of engineering students**

Item	CAY 2020-21			CAYm1 2019-20			CAYm2 2018-19			
	UG	M.TECH	MBA	UG	M.TECH	MBA	UG	M.TECH	MBA	MCA
Total No. of boys	1634	25	53	1580	24	50	1567	33	48	
Total No. of girls	1141	23	64	1114	27	67	1114	33	71	
Total No. of students	2775	48	117	2694	51	117	2681	66	119	

11. Vision of the Institution:

Preparing Competent Engineering and Management Professionals to Serve the Society

12. Mission of the Institution:

- Providing Students with a Sound Knowledge in Fundamentals of their Branch of Study
- Promoting Excellence in Teaching, Training, Research and Consultancy
- Exposing Students to Emerging Frontiers in various domains enabling Continuous Learning
- Developing Entrepreneurial acumen to venture into Innovative areas
- Imparting Value based Professional Education with a sense of Social Responsibility

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

- i. **Name:** Dr. G T Raju
Designation: Principal
Mobile No: 9731292555
Email ID: principal@sjcit.ac.in
- ii. **NBA coordinator, if designated:**
Name: Dr. Ranganatha R
Designation: Professor
Mobile No: 9845312626
Email ID: rangnanath@sjcit.ac.in

PART B: Criteria Summary

Name of the program: Civil Engineering

Criteria No.	Criteria	Mark/Weightage
Program Level Criteria		
1.	Vision, Mission and Program Educational Objectives	60
2.	Program Curriculum and Teaching – Learning Processes	120
3.	Course Outcomes and Program Outcomes	120
4.	Students' Performance	150
5.	Faculty Information and Contributions	200
6.	Facilities and Technical Support	80
7.	Continuous Improvement	50
Institute Level Criteria		
8.	First Year Academics	50
9.	Student Support Systems	50
10.	Governance, Institutional Support and Financial Resources	120
	Total	1000

PART B

Program Level Criteria

CRITERIA 1

**Vision, Mission and
Program Educational Objectives**

Criterion 1	Vision, Mission and Program Educational Objectives	60

1. VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES (60)

1.1. State the Vision and Mission of the Department and Institute (5)

About Institute:

Sri Jagadguru Chandrashekaranaatha Swamiji Institute of Technology (SJCIT) is a premier institute imparting technical education since 1986. The Institute is managed by Sri Adichunchanagiri Shikshana Trust (R.) with the divine blessings of Byravaikya Jagadguru Padmabhushan Sri Sri Sri Dr.Balagangadharanatha Mahaswamiji's and spiritual guidance of Jagadguru Sri Sri Sri Dr.Nirmalanandanatha Mahaswamiji. The Trust runs more than 485 Institutions all over country. SJCIT is affiliated to Visvesvaraya Technological University (VTU), Belagavi. The Institution is recognized by the All-India Council for Technical Education (AICTE), New Delhi, Accredited by NAAC.

Vision of the Institute

Preparing Competent Engineering and Management Professionals to Serve the Society

Mission of the Institute

- M1: Providing Students with a Sound Knowledge in Fundamentals of their Branch of Study.***
- M2: Promoting Excellence in Teaching, Training, Research and Consultancy.***
- M3: Exposing Students to Emerging Frontiers in various domains enabling Continuous Learning.***
- M4: Developing Entrepreneurial acumen to venture into Innovative areas.***
- M5: Imparting Value based Professional Education with a sense of Social Responsibility.***

About Department:

The Department of Civil Engineering was started in the year 1986 with an intake of 40 and has carved its own niche in academics, research, consultancy, collaborative projects and publications over three and half decades. The intake has been increased to 120 during 2009. The department offers PG Degree in two disciplines: Structural Engineering & Infrastructure Engineering and Management with an intake of 18 each.

Vision of the Department

Building Competent Civil Engineers with a Societal Perspective

Mission of the Department

M1: Providing Conducive Learning Environment focusing on Planning, Analysis, Design and Detailing of Sustainable Infrastructure

M2: Imparting Training, Research and Consultancy in Collaboration with Research Institutes and Industries

M3: Equipping Students with Employability Skills through Internships, Industrial Interactions and Field Visits

M4: Exploring Comprehensive Environmental Aware Solutions for Various Fields of Civil Engineering with Multidisciplinary Approach

M5: Imbibing Lifelong Learning, Professionalism and Ethics among Civil

1.2. State the Program Educational Objectives (PEOs) (5)

The PEOs of Civil Engineering program describe accomplishments that graduates are expected to attain within three-five years after graduation. Graduates would have applied their expertise to contemporary problem solving, be engaged professionally, have continued to learn & adapt, and have contributed to their organizations through leadership & teamwork.

Program Educational Objectives

PEO1: Succeed in their Professional Career in Industries/Public sector/as Entrepreneur

PEO2: Engage in Continuous learning to be competitive in ever Changing world.

PEO3: Design Cost Effective and Sustainable Civil Engineering Structures Conforming to Standards.

1.3. Indicate Where the Vision, Mission and PEOs are Published and Disseminated among Stakeholders (10)

The Vision, Mission and PEOs of the Civil Engineering program are Published and Disseminated among all the Stakeholders. The details are presented in Table B 1.1

Table B 1.1 Vision, Mission and PEOs Publishing and Dissemination

Stakeholders	Published at	Dissemination Method
Internal Stakeholder <i>(Management, Principal, HOD, Faculty, Students, Non-Teaching Staff)</i>	- Institute Website www.sjcit.ac.in - Department News Letter - Department Notice boards - Classrooms - Department Laboratories - Department Library - Department Meeting Room - HOD Chamber - Faculty Cabins - Lab Manuals-e copy - Display Boards	- Orientation Programs - Department Meetings - Workshops - Seminars - Conferences - Faculty Development Programs - Training Programs - E-Mails
External Stakeholder <i>(Parents, Alumni, Employers, Professional Bodies, Industry)</i>	- Institute Website www.sjcit.ac.in - News Letters - College Prospectus	- Parent-Teachers Meetings - Alumni Interactions - E-Mails

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

The HoD, with the active participation of faculty members, develops the Vision, Mission and PEO statements of the department in alignment with Vision and Mission of the Institute. This is based on the considerations from feedback from stakeholders and the future scope of the department & the societal requirements.

- These statements are discussed further among the members of Department Advisory Board (DAB) and Program Assessment Committee (PAC) before finalization.
- Finally, the Vision, Mission and PEOs are approved by the Principal. **Figure 1.1** shows the Snap Shots of PAC and DAB meeting. **Figure 1.2** shows the broader and preliminary steps followed in defining the Vision and Mission of the Department. Similarly, **Figure 1.3** depicts the process for defining the Vision and Mission of the Department.

Vision, Mission, and PEOs Formulation Committee

- Principal
- HOD - CIVIL
- Program Assessment Committee/IQAC
- Department Advisory Board
- Members – Faculty, Current Students, Alumni, Parents, Industry/Academia and Employers



Figure 1.1: Snapshots of PAC and DAB meeting

1.4.1 Process for defining the Vision and Mission

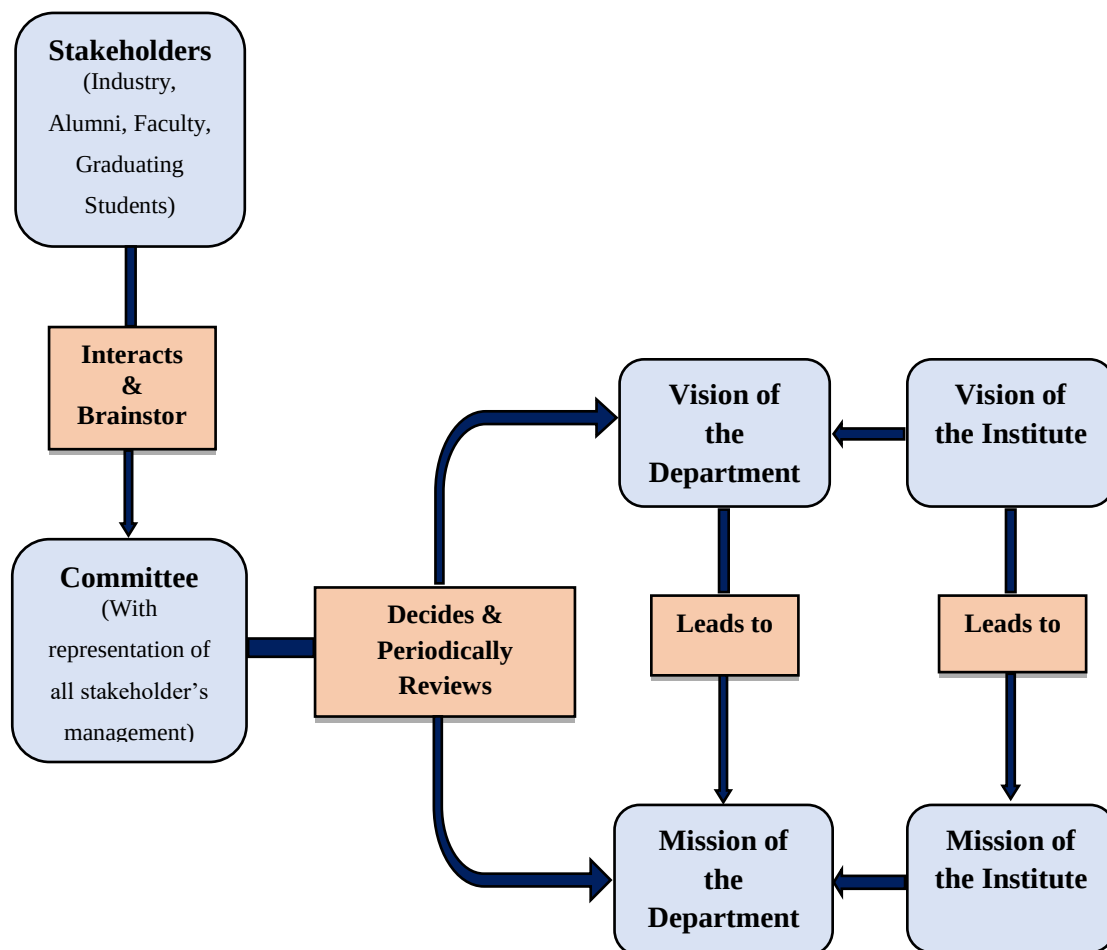


Figure 1.2 Broader steps for defining the Vision and Mission of the Department

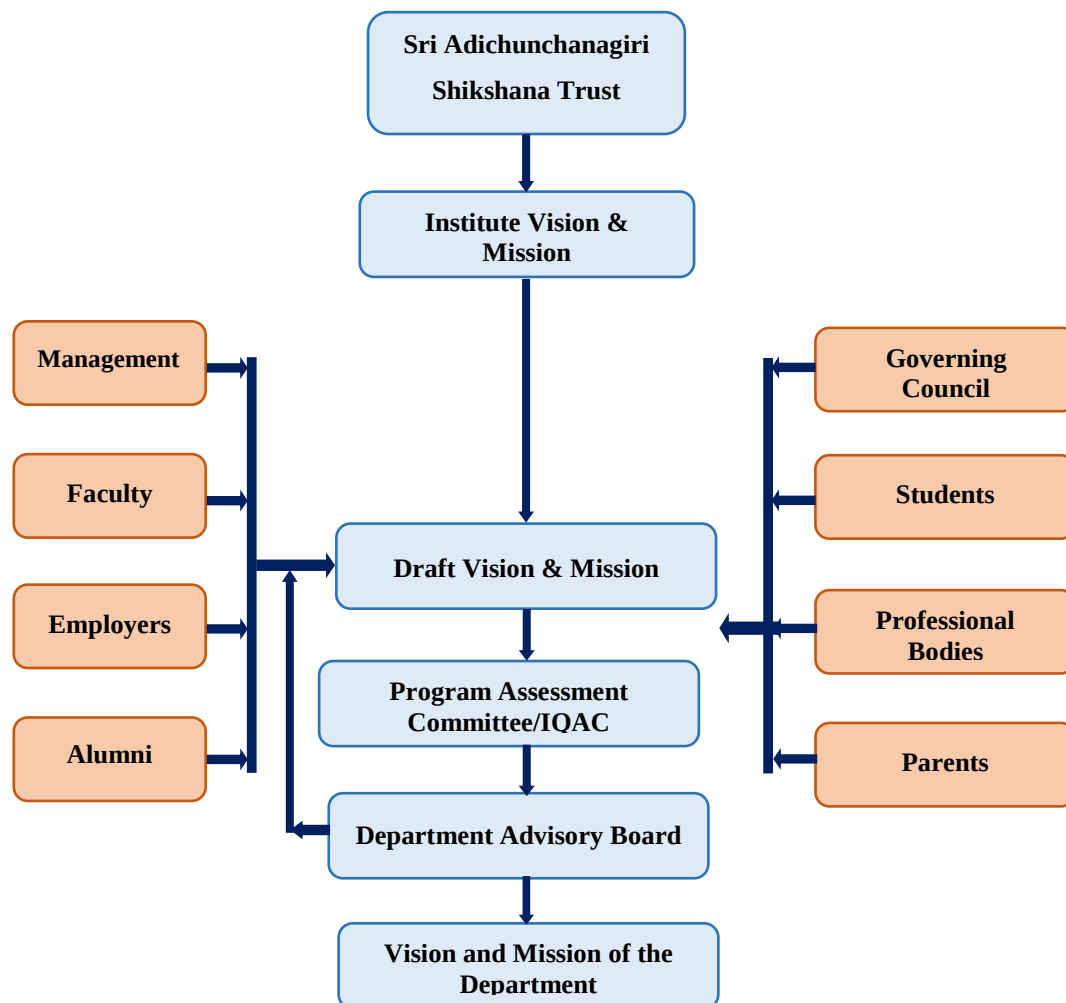


Figure 1.3 Process for defining the Vision and Mission of the Department

Stakeholders involved: Principal, HOD, Faculty members, Current Students, Alumni, Employers, Industry/Academia Professionals and Parents.

- Process:
 - Initial brainstorming sessions at different levels
 - Review, refinement, and validation (Experts, Professionals)
 - Wide publicity (Institute web site, department, campus)
 - Review “to close the loop” (5 years)
 - Regular interactions with faculty and students
- Process documentation
- Records of process implementation

1.4.2 Process for defining the PEOs of the program

The Program Educational Objectives (PEOs) describes what the Graduates of the Civil Engineering Program are expected to achieve within 3 to 4 years of completing the program. These are established through a well-defined and recorded consultation process as depicted in **Figure 1.4** involving the Key elements:

- These statements are discussed further among the members of Department Advisory Board (DAB) and Program Assessment Committee (PAC) before finalization.
- Finally, the Vision, Mission and PEOs are approved by the Head of the Institution / Management.

Following process has been adopted in framing department Programme Educational Objectives (PEOs):

1. The Head of the department along with Program Assessment Committee, held brain storming sessions with all the faculty members for defining PEOs of the department by considering the program outcomes, Institution & department vision, mission statements.
2. Draft PEOs statements were circulated among stakeholders for their feedback.
3. The suggestions & modifications provided by the stakeholders were analyzed in Department Advisory Board meeting & final PEOs are formulated.
4. Final Program Educational Objectives were forwarded for the approval by Head of the Institution / Management.
5. The approved Program Educational Objectives were published & disseminated to all the stakeholders.

The PEOs are evaluated periodically using a variety of instruments including faculty meetings, interactions with members of the students, alumni, employers and DAB, program exit surveys and parent's feedback. The process of defining Programme Educational Objectives (PEOs) is illustrated in the following process **Figure 1.4**.

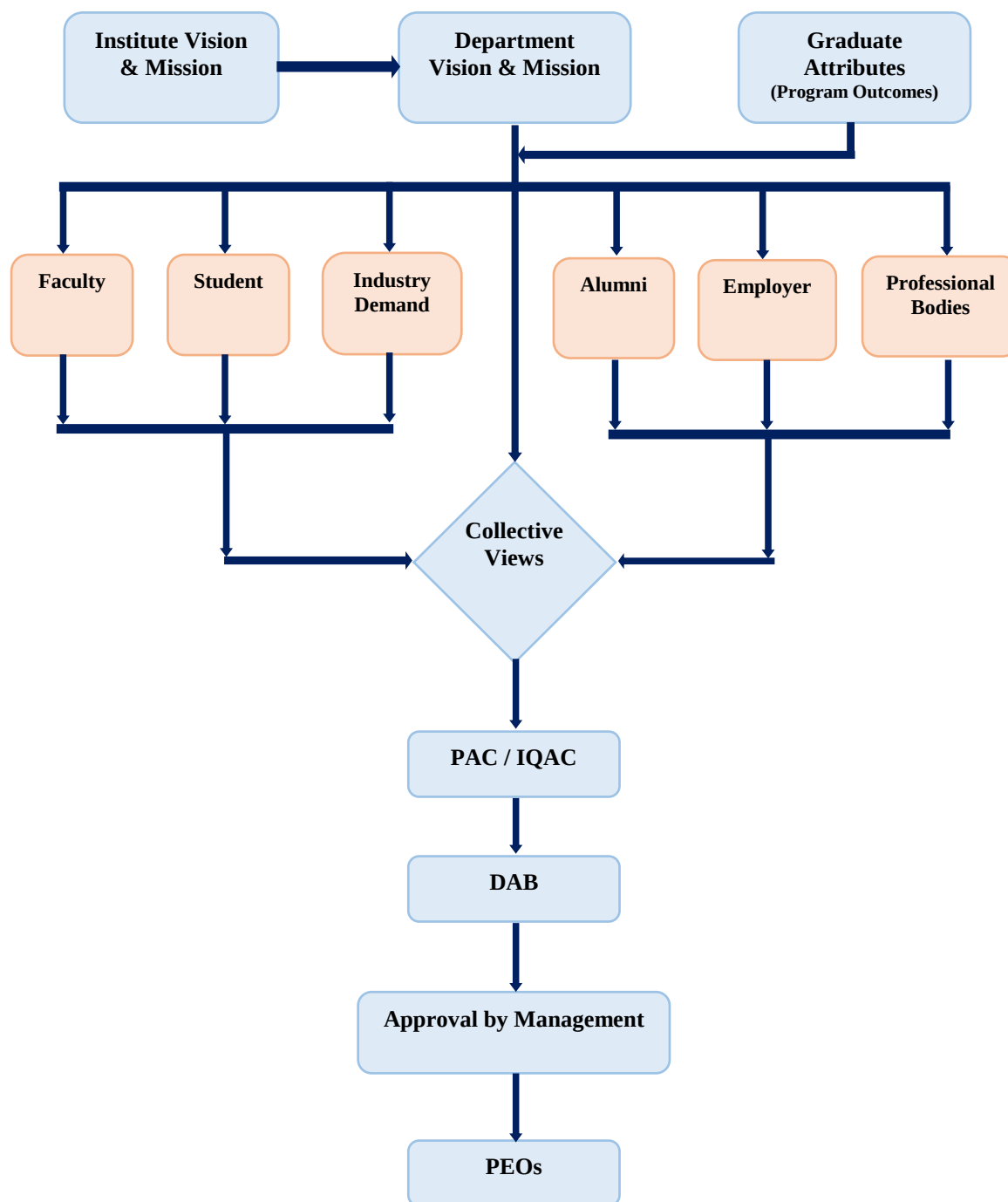


Figure 1.4 Process for defining the PEOs of the Department

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

The PEOs flow naturally from the mission statements of the Department and the Institution. Table B.1.2 shows the mapping of mission of civil department with the PEOs.

Table B 1.2: Mapping of PEOs with Mission of the Department

Mission →	M1 Providing Conducive Learning Environment focusing on Planning, Analysis, Design and Detailing of	M2 Imparting Training, Research and Consultancy in Collaboration with Research Institutes and	M3 Equipping Students with Employability Skills through Internships, Industrial Interactions and Field	M4 Exploring Comprehensive Environmental Aware Solutions for Various Fields of Civil Engineering	M5 Imbibing Lifelong Learning, Professionalis m and Ethics among Civil Engineering Students
↓ PEOs					
PEO1 Succeed in their professional career in industries/pub lic sector/as Entrepreneur	3	2	3	3	3
PEO2 Engage in continuous learning to be competitive in ever changing world	2	3	2	2	3
PEO3 Design cost effective and sustainable civil engineering structures conforming to standards	3	3	3	3	3

The consistency of each PEO statement with the Mission statements of the department has been described in Table B 1.3.

Table B 1.3: Justification of PEOs with Mission of the Department

PEOs	Justification
PEO 1 Succeed in their professional career in industries/public sector/as Entrepreneur	It indicates that our graduates have abilities to analyse and experiment on the problems of construction field and have capabilities to design sustainable solutions. Research and consultancy skills are helpful to explore environmental aware solutions by innovative techniques. It is possible by well-balanced instructions, practical knowledge attained after graduation. Hence the PEO 1 is consistent with mission of the department. PEO 1 maps substantially with M1, M3, M4, M5 and moderately with M2.
PEO2 Engage in continuous learning to be competitive in ever changing world	This PEO indicates that the students have knowledge not only in core engineering area but also connected to outside world so as to work in multidisciplinary professional teams with good communicative skills. It can be achieved by balanced academic programme which incorporates sustainable development, research opportunities and knowledge sharing. PEO2 moderately maps with M1, M3, M4. In addition, PEO2 maps substantially with M2 and M5 as these Mission statements deals with the collaboration with industry relevant technical skills to have a good professional career in the field of civil engineering.
PEO3 Design Cost Effective and Sustainable Civil Engineering Structures Conforming to Standards	This PEO indicates that our graduates are educated, trained and prepared in all the areas with values and ethics. This PEO is consistent with mission components to impart managerial skills for construction and sustainable development for societal needs. The mission statements M1 and M2 deals with the learning process of curriculum with necessary domain knowledge and relevant technical skills. M3 and M4 focuses on ever challenging civil engineering industry for a successful career and to work in team with mutual respect and dignity. M5 focuses on Lifelong learning, Professionalism and Ethics hence maps substantially.

CRITERIA 2

**Program Curriculum and
Teaching - Learning Processes**

CRITERION 2	Program Curriculum and Teaching–Learning Processes	120

2.1. Program Curriculum (20)

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 curricular gaps, if any (10)

The Department of Civil Engineering is affiliated to Visvesvaraya Technological University, Belagavi, Karnataka. The entire program curriculum is designed and provided by the university. The curriculum is formulated and reviewed once in 4 years through Board of Studies (BoS) of VTU comprising a Chairman, senior Professors of Civil engineering discipline and representative members from Industry. Apart from the university syllabus, various curricular and extracurricular activities are carried out at the departmental level for the benefit of students and societal needs.

A. Process used to identify extent of compliance of university curriculum for attaining POs & PSOs

Undergraduate program is affiliated to Visvesvaraya Technological University, Belagavi and the curriculum is prescribed by the university. The schemes followed are:

- The Choice based credit system (CBCS) revised scheme for the academic year 2018-2019.
- The Choice based credit system (CBCS) revised scheme for the academic year 2017-2018.
- The CBCS scheme was introduced in the year 2015-2016.

For each course, outcomes are defined by the course coordinator and these are mapped to program outcomes and program specific outcomes. The program specific outcomes are defined by the department.

Generally, Curriculum maintains the balance in the composition of **Basic Science, Humanities, Professional Courses** and their distribution in **Core and Electives** with the specified depth and breadth offerings. If some components to attain COs or POs are not included in the curriculum provided by the VTU, then the department makes additional efforts to impart such knowledge by covering concepts through **Content beyond Syllabus**

which is added by proper **GAP analysis** process.

A typical action plan deployed by the Department for effectively operationalizing the given curriculum is detailed below:

Course Allotment: At the end of each semester, HoD conducts a departmental meeting to take stock of the next semester's academic requirements. After a thorough discussion, the courses and labs are allotted to the faculty members based on their priority, previous experience, specialization, the individual interest shown and in some cases, the HoD may map courses to a faculty based on the previous semester's results, student's feedback, staff position or similar demands.

Course Preparation: The faculty prepares lesson plan, notes, question bank, assignment questions, presentation materials, handouts etc., of the allotted courses for the entire syllabus during the vacation. The academic material prepared by the staff is reviewed by HoD, reviewers and suitable suggestions are provided. After corrective measures, the prepared academic material is made available to the students.

Lab Requirement: The labs are allotted with one Lab In-Charge. The concerned Lab In-Charge goes through the syllabus, takes stock of new requirements, replacements needed, servicing issues, etc. and submits material request form to HoD for corresponding action plan (calling quotations, purchase etc.,)

Also, the Lab In-Charge prepares and updates the lab manuals. All the staff members allotted to a particular lab is required to be familiar and thorough with the entire experiment set.

Calendar of Events: Based on the VTU calendar of events, college and department calendar of events is prepared. College calendar of events consists of the activities planned for the semester which includes internal test dates, project reviews, total number of working days and holidays. The college calendar of events is prepared and circulated among the faculties and displayed on the notice board. Department calendar of events contains conduction of events like organizing guest lectures, conferences, industrial visits and workshops.

Coverage of Syllabus: The faculty estimates the number of probable classes available for the given academic semester and prepare lesson plan accordingly for coverage of entire syllabus. The entire syllabus is supposed to be covered by each staff with proportionate spreading out for the internals.

IA Question Papers: The department maintains standards in the preparation of IA Question

papers based on the motto that “if students are properly trained and evaluated in the internal tests, they can perform better in the final exams”. The questions in the question papers are set as per syllabus by considering Bloom’s learning Levels. These question papers are scrutinized for framing of question, the coverage of syllabus; break up of marks and complexity level by the Program Assessment committee (PAC).

The COs and POs mapping, assessment and attainment process are carried out, the weak areas are pointed out and probable gaps are identified. The CO-PO table thus prepared is reviewed by faculty members to determine which components of PO are either not met or met to a certain level only.

For developing content beyond syllabus, the feedback from alumni and industry are discussed and analyzed. Also, the internet searching is done to assess the demand of Industries and a review on the syllabus provided by VTU and other universities has been done to identify the gaps.

A.1 Program Outcomes (POs) defined by NBA

Tables B 2.1 Program Outcomes (POs) defined by NBA

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, 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 considerations.
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.
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.
PO6	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.
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 a member or leader in diverse teams and in multidisciplinary settings.
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.
PO11	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
PO12	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.

A.2 Program Specific Outcomes(PSOs) of Civil Engineering Department

Table B 2.2 PSOs of Civil Engineering Program

PSO1	Apply civil engineering knowledge in analysis, design, laboratory investigations and construction aspects
PSO2	Solve problems in various fields of civil engineering with appropriate construction materials & technology

A.3 Extent of compliance of the University Curriculum for attaining the Program Outcomes:

Table B 2.3 Extent of compliance of the University Curriculum for attaining the POs & PSOs

COURSE CODE	COURSE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
Fundamental Courses – Basic Engineering Knowledge															
C102	Engineering chemistry	✓	✓	✓	-	-	-	-	-	-	-	-	-	✓	✓
C103	Programming in C and data structures	✓	✓	✓	✓	-	-	-	-	-	-	-	✓	✓	✓
C104	Computer Aided Engineering Drawing	✓	✓	✓	✓	-	-	-	✓	✓	-	-		✓	✓
C105	Basic Electronics	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-
C106	Computer Programming Laboratory	✓	✓	✓	✓	✓	-	-	-	-	-	-	✓	✓	✓
C107	Engineering Chemistry laboratory	✓	✓	✓	-	-	-	-	-	-	-	-		✓	✓
C108	Environmental studies	✓	✓	✓	✓		✓	✓	-	-	-	-	-	-	-
C110	Engineering Physics	✓	✓	✓	-	-	-	-	-	-	-	-	-	✓	✓

C112	Elements of Mechanical Engineering	✓	✓	-	-	-	-	-	-	-	-	-	✓	✓
C113	Basic Electrical Engineering	✓	✓	✓	-	-	-	-	-	-	-	-	-	-
C114	Workshop Practice	✓	✓	-	-	-	-	✓	✓	-	-	✓	✓	✓
C115	Engineering Physics lab	✓	✓	✓	-	-	-	-	-	-	-	-	-	-
Fundamental Courses - Knowledge of Mathematics														
C101	Engineering Mathematics-I	✓	✓	✓	✓	✓	-	-	-	-	-	✓	✓	✓
C109	Engineering Mathematics-II	✓	✓	✓	✓	✓	-	-	-	-	-	✓	✓	✓
C201	Engineering Mathematics – III	✓	✓	✓	✓	✓	-	-	-	-	-	✓	✓	✓
C209	Engineering Mathematics - IV	✓	✓	✓	✓	✓	-	-	-	-	-	✓	✓	✓
Core Contemporary – Basics Courses														
C111	Elements of Civil Engineering and Mechanics	✓	✓	✓	-	-	-	-	-	-	-	✓	✓	✓
C202	Strength of materials	✓	✓	✓	-	✓	✓	-	✓	-	-	✓	✓	✓
C204	Basic Surveying	✓	✓	✓	-	✓	-	-	✓	-	-	✓	✓	✓
C205	Engineering Geology	✓	✓	-	-	-	✓	✓	✓	-	-	✓	✓	✓
C206	Building Materials& Construction	✓	✓	-	-	-	✓	-	✓	-	-	✓	✓	✓
C207	Material Testing Laboratory	✓	✓	-	-	-	✓	✓	✓	✓	✓	-	✓	✓
C208	Basic Surveying Practice	✓	✓	✓	-	✓	✓	-	✓	✓	✓	-	✓	✓
C212	Concrete Technology	✓	✓	✓	✓	✓	✓	-	✓	-	-	✓	✓	✓
C214	Advance Surveying	✓	✓	✓	-	✓	-	-	✓	-	-	✓	✓	✓
C216	Engineering Geology Lab	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Core Contemporary Courses – Analysis and design of Structures														
C301	Design of RC Structural Elements	✓	✓	✓	✓	-	✓	-	✓	-	-	✓	✓	✓
C210	Analysis of Determinate Structures	✓	✓	✓	-	-	-	-	✓	-	-	-	✓	-
C302	Analysis of Indeterminate Structures	✓	✓	✓	-	-	-	-	-	-	-	✓	✓	✓
C306	Masonry Structures	✓	✓	✓	-	-	-	-	✓	-	-	✓	✓	✓
C309	Concrete & Highway Materials Lab	✓	✓	✓	-	✓	-	✓	✓	✓	✓	✓	✓	✓
C311	Design of steel structural elements	✓	✓	✓	✓	-	-	-	✓	-	-	✓	✓	-
C317	Finite Element Method	✓	✓	-	-	✓	-	-	-	-	-	✓	✓	✓
C402	Design of RCC& Steel Structures	✓	✓	✓	✓	✓	✓	-	✓	✓	-	✓	✓	✓
C411	Design of Pre-stressed Concrete Elements	✓	✓	✓	-	-	-	-	✓	-	-	✓	✓	✓
Core Competency Courses-Geotechnical engineering & Transportation engineering														
C213	Basic Geotechnical Engineering	✓	✓	✓	✓	-	✓	✓	✓	-	-	✓	✓	✓
C303	Applied Geotechnical Engineering	✓	✓	✓	✓	-	✓	✓	✓	-	-	✓	✓	✓
C307	Traffic Engineering	✓	✓	✓	✓	-	-	-	✓	-	-	✓	✓	-
C308	Geotechnical Engineering Lab	✓	✓	-	✓	✓	-	✓	✓	✓	✓	✓	✓	✓
C312	Highway Engineering	✓	✓	✓	-	-	✓	-	✓	-	-	✓	✓	-
C315	Ground Improvement Techniques	✓	✓	-	-	-	✓	✓	✓	-	-	✓	✓	✓

C413	Pavement Design	✓	✓	✓	-	-	-	✓	✓	-	-	-	✓	✓	✓
Core Competency Courses- Construction management															
C310	Construction management and Entrepreneurship	✓	✓	-	-	-	-	✓	-		✓	✓	✓	✓	✓
C410	Quantity surveying & Contracts Management	✓	✓	-	✓	-	-	✓	-	✓	✓	✓	✓	✓	-
Core Competency Courses- Software labs															
C304	Computer Aided Building Planning & Drawing	✓		-	-	✓	-	✓	✓	✓	-	✓	✓	✓	✓
C318	Software Application Lab	✓	✓	✓	-	✓	-	✓	✓	✓	✓	✓	✓	✓	✓
C408	Computer Aided Detailing of RCC and Steel Structures	✓	-	-	-	✓	-	✓	-	-	-	-	✓	-	-
Core Competency Courses- Environmental & Water Resource															
C203	Fluid mechanics	✓	✓	✓	-	-	-	✓	✓	-	-	-	✓	✓	✓
C211	Applied Hydraulics	✓	✓	✓	-	-	-	✓		-	-	✓	✓	✓	✓
C215	Fluid mechanics and Hydraulic Machinery Lab	✓	✓	✓	-	-	-	✓	✓	✓	-	✓	✓	✓	-
C305	Air Pollution and Control	✓	✓	✓	-	-	-	-	✓	-	-	✓	✓	✓	✓
C313	Water supply and treatment Engineering	✓	✓	✓	✓	-	✓	✓	✓	-	-	-	✓	✓	-
C314	Solid Waste Management	✓	✓	✓	-	-	✓	✓	✓	-	-	-	✓	✓	-
C316	Water Resources Management	✓	✓	-	-	-	-	✓	-	-	✓	✓	✓	✓	✓
C401	Municipal & Industrial Waste water Engineering	✓	✓	✓	✓	-	-	✓	-	-	-	-	✓	✓	✓
C403	Hydrology & Irrigation Engineering	✓	✓		-	-	-	✓	✓	-	-	-	✓	✓	✓
C407	Environmental Engineering Laboratory	✓	✓	✓	✓	-	✓	✓	-	-	-	✓	-	✓	✓
Internship/ Mini Project /Major Project															
C319	Extensive survey Project/Camp	✓	✓	✓	-	✓	-	-	✓	✓	✓	✓	✓	✓	✓
C409	Project + Seminar	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C414	Internship/Professional I Practice	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C415	Project work	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C416	Technical Seminar	✓	✓	-	-	-	-	✓	✓	-	✓	✓	✓	✓	✓

A.4 Process to identify the extent of Compliance of University Curriculum

The process used to identify the extent of compliance of university curriculum is through getting feedback on gaps from different stakeholders. It includes,

1. Seeking input from the teachers handling the course.
2. Seeking input from industry experts
3. Collecting feedback from placement cell/ Employers
4. Collecting alumni feedback

The Figure 2.1 & Figure 2.2 shows the process of Curriculum Gap analysis and process for assessment on gap analysis.

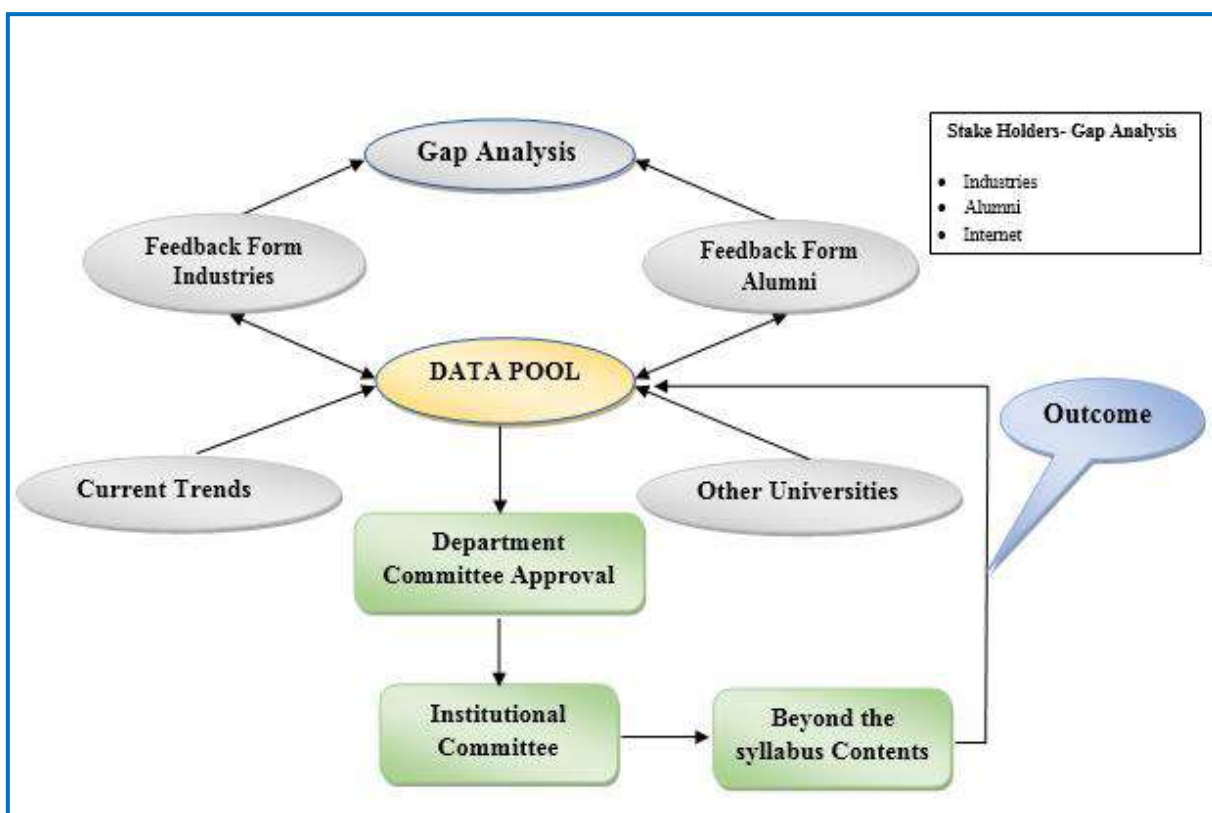


Figure 2.1 Process to identify the Curriculum Gaps

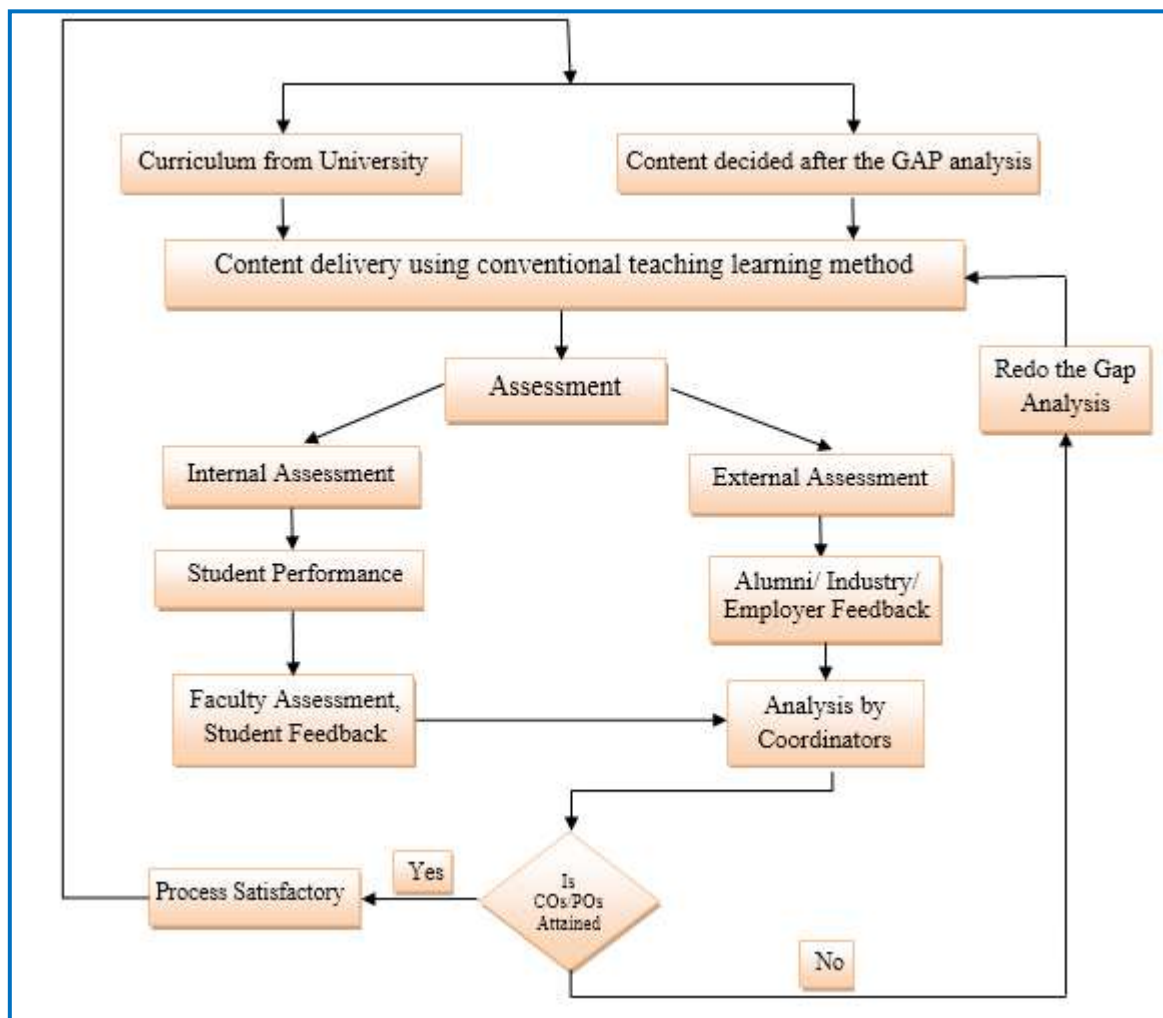


Figure 2.2 Process for Assessment on Gap Analysis

Implementation

Identified content beyond the syllabus for Theory and Lab if any, is included in lesson plan and covered in classroom by the course delivery faculty. If the topic or area is new, people from Industry are invited to deliver a talk.

Effectiveness

Effectiveness of this process is analyzed through feedback from the students and their performance in examinations. Also, from the alumni and industry experts.

Feedback from Students

Program Exit Survey, a questionnaire is prepared by the program coordinator and is given to students at end of the program to get feedback on the POs and PSOs. The results are analyzed to see whether the POs and PSOs are substantially or slightly mapped. Figures 2.3 (a) (b) &(c) shows the snapshots of sample students exit survey.

SJCIT Program IQAC-Exit Survey

Dear students,
At the end of program, you have assimilated all that is required to achieve a successful career. you are requested to rate your ability in each of the program outcomes (PO) and Program specific outcomes (PSO) on a 1 to 3 numerical scale (3-substantially, 2-moderately, 1- slightly) please take a few minutes and write the most appropriate level for each PO & PSO.

NAME
Short-answer text

USN
Short-answer text

Year of passing
Short-answer text

(a)

PO1-Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals and engineering specialization to the solution of complex engineering problems.
☐ Substantially
☐ Moderately
☐ slightly

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.
☐ Substantially
☐ Moderately
☐ slightly

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, cultural, societal and environmental considerations.
☐ Substantially
☐ Moderately
☐ slightly

(b)

	C	E	F	G	H	I	J	K	L
1	USN	PO1-Engineering	PO2-Problem analysis	PO3-Design/development of solutions	PO4-Conduct in	PO5-Modern tools	PO6-The engineer	PO7-Environment	PO8-Ethics
2	1sj15cv011	slightly	slightly	Moderately	slightly	slightly	slightly	slightly	slightly
3	1SJ16CV033	Substantially	Substantially	Moderately	Moderately	Substantially	Substantially	Moderately	Moderately
4	1SJ17CV086	Moderately	Moderately	Moderately	Moderately	Moderately	Moderately	Moderately	Moderately
5	1sj16cv402	Substantially	Moderately	Moderately	Moderately	Moderately	Moderately	Moderately	Moderately
6	1sj18cv434	Moderately	Moderately	Moderately	Moderately	Moderately	Moderately	Moderately	Moderately
7	1sj16cv099	Moderately	Moderately	Moderately	Moderately	Moderately	Moderately	Moderately	Moderately
8	1sj18cv412	Moderately	Moderately	Moderately	Moderately	Moderately	Moderately	Moderately	Moderately
9	1SJ17CV049	Moderately	slightly	slightly	Moderately	slightly	Substantially	slightly	slightly
10	1SJ17CV075	Moderately	Moderately	Moderately	Moderately	Moderately	Moderately	Moderately	Moderately
11	1SJ17CV058	Moderately	Substantially	Moderately	Moderately	Moderately	Substantially	Substantially	Substantially
12	1SJ10CV106	Moderately	Moderately	Moderately	Substantially	slightly	Moderately	Moderately	slightly
13	1sj17cv077	Moderately	Substantially	Moderately	Substantially	Substantially	Moderately	slightly	Moderately
14	1SJ17CV071	Substantially	Substantially	Substantially	Substantially	Substantially	Substantially	Substantially	Substantially
15	1SJ17CV068	Substantially	Substantially	Substantially	Moderately	Substantially	Substantially	Substantially	Substantially
16	1SJ18CV425	Moderately	Moderately	Substantially	Substantially	Moderately	Moderately	Substantially	Moderately
17	1sj18cv422	Substantially	Substantially	Substantially	Substantially	Substantially	Substantially	Substantially	Substantially
18		2.25	2.2	2.266	2.33	2.125	2.1	2.06	1.88

(c)

Figure 2.3 (a) (b) & (c) Snapshots of sample students Exit Survey.

Feedback from Parents - The program coordinator will collect the feedback from the parents about their experience and also their wards opinion on the program. It helps to improve the overall system. Figure 2.4 show the Snapshots of sample feedback from the parents.

PARENTS-TEACHER MEETING FEEDBACK FORM

1. Views on Organizing Parents teacher meeting:
 Excellent ☐ Very Good ☒ Good ☐ Not required ☐

2. Academic Progress of your ward at SJCIT:
 Excellent ☐ Very Good ☒ Good ☐ Not required ☐

3. Teaching standard at SJCIT and Teachers approach towards student:
 Excellent ☐ Very Good ☒ Good ☐ Not required ☐

4. In which area (curricular-extracurricular) your ward required improvement?
 How SJCIT can help him/her to overcome it:
Improve the placement in Engineering

5. Which things make SJCIT BEST / What have you liked best at SJCIT?
SJCIT's Civil Engineering - gives a good knowledge and students learn a very good handle for students

6. Valuable suggestions for improving teaching process at SJCIT:
Please send a Attendance by message every week. Please give last month's mark and attendance every week.

Student Name: KIRAN E
 Student USN No: 151200011 Branch: CIVIL
 Semester: II Sec: A Proctor Name: Shalibhawan A
 Parents name: Kanwarthiah Y.T Occupation:
 Contact no. Home: _____ Mobile: 944847445 / 944847445
 E-mail: _____ Signature: [Signature]

P.O. No. 20, B.D. Road, Chickballapur - 562 101, Phone: 08156 - 261181, 261182, 261183, 261184 Fax no: 08156 - 261180 Email: sjcit@sjcit.ac.in Web Site: www.sjcit.org

Figure 2.4 Snapshots of sample Feedback from Parents

Feedback from the Recruiters/Employers: A questionnaire is prepared by the program coordinator and is given to the recruiters during recruitment process to see whether the program outcomes and program specific outcomes are substantially or slightly. Figures 2.5 (a), (b), (c) & (d) show the Snapshots of sample survey taken from the employers.

Employer Survey - PEOs

SJCIT Vision: "SJCIT IS COMMITTED TO QUALITY EDUCATION, TRAINING AND RESEARCH"

As part of our evaluation about the Civil Engineering Department of SJCIT, we request you to take few minutes to complete this brief questionnaire. We are looking for your opinion in the following areas. Your participation is greatly appreciated.

Please characterize the accomplishments of SJCIT graduates in your company, focusing on these years after graduation. Based on PEO's with a 1 to 3 numerical scale (3-substantially, 2-moderately, 1-slightly).

PEO1: Graduates will have successful career in civil engineering industries, public sector or as Entrepreneurs.
 PEO2: Graduates will pursue higher education in leading institutes/engage in continuing education to be competitive in the organization.
 PEO3: Graduates will design cost effective and sustainable civil engineering structures conforming to standards.

Name of the company: _____

Short-answer text: _____

Name of the Graduate: _____

Short-answer text: _____

Job Title: _____

Short-answer text: _____

(a)

LEVEL OF TECHNICAL CONTRIBUTION (PEO-1) *

Graduates will have successful career in civil engineering industries, public sector or as Entrepreneurs.)

☐ Substantially

☐ Moderately

☐ Slightly

Level of communication skills (PEO-1 Graduates will have successful career * in civil engineering industries, public sector or as Entrepreneurs.)

☐ Substantially

☐ Moderately

☐ Slightly

Have they been deserved to higher level? (PEO2: Graduates will pursue higher education in leading institutes/engage in continuing education to be competitive in the organization.) *

☐ Substantially

☐ Moderately

☐ Slightly

(b)

Level of success in learning new areas, engaging in professional development and adapting to technological change (PEO2: Graduates will pursue higher education in leading institutes/engage in continuing education to be competitive in the organization.) *

☐ Substantially

☐ Moderately

☐ Slightly

Level of ethical and social responsibility (PEO-3: Graduates will design cost effective and sustainable civil engineering structures conforming to standards) *

☐ Substantially

☐ Moderately

☐ Slightly

Demonstrate ability to work well in a team (PEO-3: Graduates will design cost effective and sustainable civil engineering structures conforming to standards) *

☐ Substantially

☐ Moderately

☐ Slightly

Any other suggestions *

(c)

Name of the Graduat	Job Title	LEVEL OF TECHN	Level of communic	Have they been	Level of success	Level of ethical	Demonstrate abil	Any other suggestions
Lathashree N	AutoCAD Engineer	Substantially	Substantially	Moderately	Substantially	Substantially	Substantially	Upgrade your software skills
Yashvanth	Site engineer	Slightly	Slightly	Slightly	Moderately	Slightly	Slightly	Practical skills is required
Chandra Mohan	Site engineer	Substantially	Substantially	Substantially	Substantially	Substantially	Substantially	Nothing
David	Quantity surveyor	Moderately	Moderately	Moderately	Moderately	Substantially	Moderately	Over a period of time gradually they
Tanushree B S	Structural engineer trainee	Substantially	Moderately	Substantially	Moderately	Slightly	Substantially	Improve the communication skills
Suprita s	Planning engineer	Moderately	Substantially	Substantially	Substantially	Moderately	Substantially	Needs leadership qualities
Mahesh R	Technical Executive	Moderately	Substantially	Substantially	Moderately	Substantially	Substantially	Update software skills
Abilash H	Site Engineer	Substantially	Moderately	Moderately	Substantially	Substantially	Substantially	Presentation skills can be updated
Sachin M Kumbar	Measurement Executive	Substantially	Moderately	Substantially	Substantially	Moderately	Substantially	Good

(d)

Figure 2.5 (a), (b), (c) & (d) Snapshots of sample Employers survey on PEOs

Feedback from Alumni: A questionnaire is prepared by the program and course coordinator and it is given to the alumni. It will be done once in every year to see whether the POs and PSOs are substantially or slightly mapped. Figures 2.6 show the Snapshots of sample Alumni survey.

SJCIT -Alumni feedback -CED

Dear students,
At the end of program, you have assimilated all that is required to achieve a successful career. you are requested to rate your ability in each of the program outcomes (PO) and Program specific outcomes (PSO) on a 1 to 3 numerical scale (3-substantially, 2-moderately, 1- slightly) please take a few minutes and write the most appropriate level for each Po & PSO.

NAME

Short-answer text

USN *

Short-answer text

Batch of study (20XX to 20XX) *

Short-answer text

(a)

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

☐ Substantially

☐ Moderately

☐ slightly

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.

☐ Substantially

☐ Moderately

☐ slightly

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, cultural, societal and environmental considerations.

☐ Substantially

☐ Moderately

☐ slightly

(b)

SJCIT -Alumni feedback -CED (Responses)									
File Edit View Insert Format Data Tools Extensions Help Last edit was 2 minutes ago									
	B	C	D	E	F	G	H	I	
1	NAME	USN	Batch of study (20	PO1-Engineering knowle	PO2-Problem analysis: k	PO3-Design/developmer	PO4-Conduct investigat	PO5-Modern tool usage	
2	Ankith D R	1sj11cv011	2011 to 2015	slightly	slightly	Moderately	slightly	slightly	
3	K S CHITRITHA	1SJ16CV033	2016 - 2021	Substantially	Substantially	Moderately	Moderately	Substantially	
4	Chirag H N	1SJ17CV086	2021	Moderately	Moderately	Moderately	Moderately	Moderately	
5	ArunKumar T A	1sj18cv402	2018-2021	Substantially	Substantially	Substantially	Substantially	Moderately	
6	Irfan Bashir	1sj18cv434	2017 to 2021	Substantially	Substantially	Substantially	Substantially	Substantially	
7	Shaik Noor Mohammed	1sj18cv099	2021	Substantially	Substantially	Substantially	Substantially	Substantially	
8	Gokarna y j	1sj18cv412	2018 to 2021	Substantially	Moderately	Moderately	Substantially	Substantially	
9	PRAMOD SIDDARTH D	1SJ17CV049	2017-2021	Substantially	slightly	slightly	Moderately	slightly	
10	VARUN GOWDA M	1SJ17CV075	2017 to 2021	Substantially	Moderately	Moderately	Moderately	Moderately	
11	Rakshita K A	1SJ17CV058	2017 to 2021	Moderately	Substantially	Moderately	Moderately	Moderately	
12	RAGHAVENDRA BR	1SJ10CV106	2010 TO 2014	Moderately	Moderately	Moderately	Substantially	slightly	
13	Vinod Kumar	1sj17cv077	2017 to 2021	Moderately	Substantially	Moderately	Substantially	slightly	
14	Shrisha AR	1SJ17CV071	2017-2021	Substantially	Substantially	Substantially	Substantially	slightly	
15	Shravani K P	1SJ17CV068	2020 to 2021	Substantially	Substantially	Substantially	Moderately	slightly	
16	SANJAY HV	1SJ18CV425	2018 to 2021	Moderately	Moderately	Substantially	Substantially	slightly	
17	Naveen A	1sj18cv422	2021	Substantially	Substantially	Substantially	Substantially	Substantially	
18				2.72	2.55	2.62	2.62	2.1	

(c)

Figure 2.6 (a), (b) &(c) Snapshots of sample Alumni survey.

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

B.1 Curricular Gaps and recommended Courses to bridge Academia and Industry:

As a regular practice, before the beginning of the semester, a meeting of faculty is conducted at department level to identify the gaps in each course. For the identified gaps, action plans were prepared and executed during the course to full fill the gaps.

Table B 2.4 shows the Course wise gaps and their relevance to POs.

Course Code/ Course Name	Gap	Resource Person	Steps Taken	Relevance to POs and PSOs
Strength of Materials	- Lack of understanding of behavior of structural components - Application of stress & strain	Dr.T Munikenche Gowda Mr Raghu K	Analysis of shear force and bending moment using modern tool Expert lecture	PO1,PO5,PO9, PSO1,PSO2
Hydraulics &Hydraulic Machines	Francis's turbine	Mr Ravindranath C Mrs Ankitha V	Demonstration on equipment in H&HM lab	PO5,PO9,PO10 PSO1, PSO2
Building Materials & Construction	Practical exposure on building materials	Dr G Narayana Mr Ravikiran B	Market survey	PO9,PO10,PO11 PO12, PSO1,PSO2
Design of RC Structural Elements	- Construction aspects of RCC Structural Elements - Reinforcement estimator	Er Umesh B Rao	- Site visit report and model making & presentation - Expert lecture from industry	PO5,PO9,PO10, PO12, PSO1, PSO2
Highway Engineering	Construction method of Flexible and Rigid pavement	Mr Mohan N Mr Sathish Y A Mr Manjuntha N	Site visit & report submission	PO8,PO9,PO10 PSO1, PSO2
Basic Geotechnical Engineering & Advanced Geotechnical Engineering	- Lack of exposure to the latest technological development - Inadequacy of syllabus to reflect the practical & industry needs	Er. Dinesh	Expert lecture from industry	PO5,PO9,PO10, PO11,PSO1,PSO2
Design of Masonry Structures	Construction aspects of masonry structures	Mr Shashi kumar N V Mr Suhas K B	Site visit & report writing	PO5,PO9,PO10, PSO1,PSO2
Water Supply and Treatment Engineering -	Water testing Practical aspects	Mr Ravindra M V Ms Vathsala M N	Characterization of water in laboratory	PO9,PO10,PO11 PSO1,PSO2

Municipal and Industrial Wastewater Treatment Engineering	Study of waste water treatment technology in industries	Mr Ravindra M V Ms Vathsala M N	Videos are showed to students about current trend in industry, charts and models are prepared	PO11,PO9,PO10, PSO1,PSO2
Design of RCC and Steel Structures	Utilization of modern tool	Mr Shashikuma N V Mr Arunkumar C J	Verify manual design of RCC and steel with STADD Pro and prepare structural drawings using Auto CADD	PO5,PO8,PO9, PO12, PSO1,PSO2
Municipal Wastewater Treatment Engineering	Anaerobic Sludge digestion	Mr Ravindra M V Ms Vathsala M N Mr Kamath G M	Visit to bio gas plant at SJCIT Hostel	PO9,PO10,PO11, PSO1,PSO2
Design of RCC and Steel Structures	Utilization of modern tool	Mr Shashikuma N V Mr Arunkumar C J	Verify manual design of RCC and steel with STADD Pro and prepare structural drawings using Auto CADD	PO5,PO8,PO9, PO12, PSO1,PSO2
Design of Earthquake Resistant Structures	- Case study of previous earthquakes for different places to know the seismic behavior. - Behavior pattern of seismic buildings	Mr Manjunath K A	- Case study report is prepared - Shake table analysis	PO5,PO8,PO9, PO10,PO12, PSO1,PSO2

B.2 Classification of Gaps

Based on the Table 2.4, the identified gaps are classified under four major categories:

1. Fundamental concepts along with practical exposure
2. Modern tools usage in civil engineering
3. Recent Advances in civil engineering
4. General topics

Gaps have been consolidated under above categories and shown in Table 2.5 Consolidation of actions taken and remedial measures

B.3 Consolidation of Gaps and the Actions Taken:**Table B 2.5 Consolidation of actions taken and remedial measures.**

Sl. No.	Categories	Gaps	Actions Taken	Remedial Measures
1.	Fundamental concepts along with practical exposure	Basic concepts of Courses	Extra classes conducted for the Courses which needed more in depth knowledge like SOM, FM and DRCC as basic concepts as pre-requisite	1. As a regular practice, Faculty meeting in the department level will happen once in a week under the guidance of HoD. 2. In the meetings, issues like the gaps in the courses/curriculum are discussed elaborately in the beginning of the semester 3. The identified gaps are listed and remedial measures are planned. 4. Through the Head of the Department, the identified gaps are informed to the Board of Studies of University. 5. Those matters will be discussed in the BOS meeting at university level and suitable action is taken in the next curriculum revision
		- Site visit, treatment plant visit - Reinforcement calculation	- Making students to do Prototypes (Models) - Sending students to do site visit and preparing brief reports - Tech talks are arranged to bring course experts from institutions and industries	
2.	Modern tools usage in civil engineering	- STADD Pro - E tabs - Auto cad - Revit - Total station - NDT - BIM	STTP were conducted for both students as well as faculties to get familiarity with total station	6. The progress as well as the final status will be discussed in the semester-end meeting
3.	Advanced trends in civil engineering	- Smart material in construction - Project management - Procurement and contract engineer course - Primavera project management	Tech talks were arranged to bring course experts from institutions and industries	

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

A. Delivery details of Content beyond syllabus

The students are trained in the areas of modern tool usage, professional ethics and communication skills. Students gain the idea to work as an individual and in team by doing project work, visiting various industries and by undergoing internships. Students actively participate in NCC, NSS and Swacch Bharath Abhiyan programs, organized in the college to serve the society. Students also participate in various Workshops, seminars, symposiums, etc. Students also actively organize and participate in various events conducted as part of the Club activity which will enhance their project management skills in multidisciplinary environment. The department also motivates and encourage students to participate in events organized by other Institutes/Colleges. In summary, the following activities are carried out for the students.

- Assignments/Case Studies/ Mini Projects
- Additional Laboratory Experiments
- Training on Soft skills and Value Added Programs
- Guest Lectures/Technical Talks/Demonstrations
- Workshops/Conferences/Symposium
- Student Chapter/Club Activity
- Industrial Visits and Internships
- Extension Activities- NSS/NCC/Blood Donation/Sports

Mapping of content beyond Syllabus with the POs & PSOs

Table B 2.6 Mapping of Content beyond Syllabus with POs & PSOs

Course with course code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
Pre-placement Training	✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓
Training and Soft skills		✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓
Practicing/Mini/Creative project	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
Guest Lectures/Technical Talks/Demonstrations	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Workshops	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Industrial Visits & Internships		✓	✓	✓		✓	✓			✓	✓	✓	✓	

B. Enhancing the Employability of Civil Engineering Graduates.**Table B 2.7 Plan of action for Enhancing the Employability in civil Engineering Graduates**

Sem	Teaching Learning Process	Software / Add on courses	Communications & Ethics and Values	Skill Development	Quantitative Aptitude Logical Reasoning	Alumni Interaction	Hands-on practices
III	Real Time Assignments	Overview of Civil Software's	Communication Skills Writing Skill	Attitudinal Training	Arithmetical Ability	Confidence building	Total Station Surveying
	Course teachers Weekly 1 hr	In house trainers 2hrs	External professional Trainers -2 hrs	External professional Trainers -2 hrs	External professional Trainers -4 hrs	Alumni 2 hrs	STTP-4days
IV	Assignments Based on Interests	AutoCAD- 2D& 3D, Revit - Arch	Building Bylaws National Building Code	Team Building	Section-II: Data Interpretation	Smart Thinking and Activity Based learning	Masonry ,Plastering Painting
	Course teachers Weekly 1 hr	In house trainers Weekly -3hrs	In house trainers Weekly -1hrs	External professional Trainers -4 hrs	External professional Trainers -4 hrs	Alumni 2 hrs	Site Visits -2 days
V	Model Making	STAAAD-Pro ETABS	Confidence building Interpersonal skills	Problem solving skills	Section-III: • Logic	Corporate activity	Bar Bending &Concreting
	Course teachers 4 hrs	External professional Trainers -4 weeks	External professional Trainers -2 hrs	External professional Trainers -4 hrs	External professional Trainers -4 hrs	Alumni 2 hrs	Site Visits -2 days
VI	Activity Based Assignments –Market survey	Revit Structures Building Information Modelling	Corporate etiquettes	Occupational Health and safety	Section-IV: Non-verbal and verbal reasoning	Interns	MEP
	Course teachers 10 hrs	External professional Trainers -4 weeks	External professional Trainers -2 hrs	External professional Trainers -2 hrs	External professional Trainers -4 hrs	Alumni will train 5 students and make them industry ready-4 weeks	Site Visits -2 days
VII	Seminars Workshops	Primavera MS Projects	Company policies Legal opportunities	Detailed Project Report	Preparation for: Competitive Exams	Mock interviews	Infrastructure Projects
	Seminar /project coordinators Weekly 2 hrs	External professional Trainers -4weeks	External professional Trainers -2 hrs	Project guides Weekly -1 hr	External professional Trainers -4 hrs	Alumni 2 hrs	Site Visits -2 days
VIII	INTERNSHIP			PROJECT			
	Inhouse/External guides -Weekly 8hrs			Inhouse/External guides -Weekly 16 hrs			
		Competitive Exams – • GATE, GRE, TOFEL, • KPSC• UPSC and other State Services Exams • Railway Recruitment Board Exams • Campus Recruitment Tests. Newly Recruited Faculty :onsite Training /internships/STTP/FDP – one per year					

CAY: 2020-21 Gaps and the Actions Taken during 2020 – 2021**Table B 2.8 Gaps and the Actions Taken during 2020 – 2021**

SL. No	Gap	Action taken	Date-Month Year	Resource Person with designation	% of students present	Relevance to POs & PSOs
1.	Environment and sustainability	Webinar on “Opportunities for Civil engineers in Water Sector” under Jal Jeevan Mission	10/06/2021	Mr. Manoj Baraskar, CEO-iNODE Software Company	85	PO6,PO7, PO12, PSO1
2.	Environment and sustainability	Webinar on “Plastic waste management in India”	03/06/2021	Mr. Achu R Sekhar, Manager, Sustainable cities and Transport WRT – India	90	PO6,PO7, PO12, PSO1
3.	Complex problems & Analysis Course-Applied geotechnical engineering	Webinar on “Overview of Geotechnical Investigations with Case Studies”	12/05/2021	Dr. C R Parthasarathy, Founder Chairman and Managing Director, Sarath Geotech Engineering services Pvt Ltd	85	PO7, PO10, PSO1,PS O1
4.	Complex problems & Analysis	Webinar on “Service Life Prediction of Structures”	04/05/2021	Dr. M N Hegde, Retd. Professor and Dean, Department of Civil Engineering Department, Dr. AIT, Bangalore	90	PO4,PO7, PO10, PSO1
5.	Environment and sustainability	Webinar on “Global Pandemic: A Boon for Environment and Planet Myth or Reality”	22/04/2021	Er. Ranjith M, Project Engg, Coliban Water works, Australia	95	PO6,PO7, PO12, PSO1
6.	Modern tool usage	Short Term Training Program on Topographical Survey using “Total Station”	15/03/2021 to 19/03/2021	Mr. Hemanth Reddy, Chief Executive, Sir M V Institute of Engineering Skill Bangalore	100	PO4,PO5, PSO1
7.	Project Management & Finance	One-day workshop on “Entrepreneurship and innovation on career opportunity”	06/11/2020	Mr Abhishek Chandra Shekar, Co-Founder &CEO Royal Brothers bike rentals Bangalore	80	PO11, PSO1
8.	Complex problems & Analysis	Webinar on “Why Structures fail?”	23/10/2020	Dr. M N Hegde, Retd. Professor and Dean Department of Civil Engineering Dr. AIT, Bangalore	95	PO2,PO4, PO7, PSO1,PS O2

9.	Environment and sustainability	Webinar on “Importance of water proofing in buildings”	07/10/2020	Mr. Ajith Kumar SM, MD, Shubam techno building India Pvt. Limited	90	PO6,PO7, PO12, PSO1
10.	Project management & finance	Webinar on “Contracts and tendering”	30/09/2020	Mr Yoganarasimha G N, consulting civil engineer and government registered valuer, general manager contact (Retd), BEL	80	PO4,PO11, PSO1
11.	Environment and sustainability	Webinar on “A Balanced View of Sustainability in Civil Engineering and Construction”	15/09/2020	Dr. JagadishVengala, Head-EDC Innovation & Incubation Centre, Associate Professor, Department of Civil Engineering PVSIT, Vijayawada. AP	95	PO6,PO7, PO12, PSO1
12.	Modern tool usage	A Webinar On “Topographical Survey & Column Marking Work With Live” Example Using Total Station	12/08/2020	Mr. S Hemanth Reddy, Chief Executive, Sir M V Institute of Engineering Skills, Bangalore	90	PO5, PO12,PSO1

Table B 2.9 Gaps and the Actions Taken during 2019 – 2020

Sl. No.	Gap	Action taken	Date-Month Year	Resource Person with designation	% of students present	Relevance to POs& PSOs
1.	Communication, Project Management and Finance	A webinar on “Work breakdown Structures for a project”	07/08/2020	Er.Sivaraman Chartered Civil Engineer, Saudi Arabia Prayojana, CMTI, Bangalore	85	PO6,PO7,PO10, PO11, PO12,PSO1, PSO2
2.	Project management and finance	Expert lecture on “Importance of Quantity survey and costing in construction projects”	01/06/2020	Mr Ravinchandra G, Director Pinnacle Prime Construction Pvt. Ltd., Bangalore	90	PO10,PO11, PSO1,PSO2
3.	Engineering knowledge	Expert lecture on “Recent development in remedial engineering for concrete structures”	14/05/2020	Mr. M N Ramesh, Director, Talrak Construction Chemicals Pvt. Ltd., Bengaluru.	95	PO1,PO2,PO4,PO12, PSO1,PSO2
4.	Communication, Project management and finance	Expert lecture on “QA/QC aspects of ready mix concrete”	28/02/2020	Mr Kowshika V R Director, QCRETE Ready mix India Pvt Ltd	90	PO10, PO11, PSO1,PO2

5.	Communication	Orientation program on “ Career path way and study Aboard opportunities ”	18/02/2020	Mr Joel Noronho head of operation IDP’s Biggest Education Fair	95	PO10,PO12 PSO1
6.	Project Management	“Design thinking, innovation and Ideathan” for new age incubation network (NAIN)	10/02/2020	Dr. T. Munikenche Gowda, Director, R & D SJCIT	90	PO3,PO11,P O12,PSO1
7.	Engineering Knowledge	An expert lecture on “Applied Geo Technical Engineering” – Pile Foundation”	12/11/2019	Mr. Dinesh V P, Technical Director of Civil Material Testing Laboratory, Bangalore	95	PO1,PO2 PO3,PO4,P O6,PO7,PS O1
8.	Problem Analysis	Expert lecture on “Basic Mechanics of Materials”	11/11/2019	Dr. T. Munikenche Gowda, Director R & D SJCIT	95	PO2,PO12 PSO1
9.	Communication	“How to crack GATE”	14/10/2019	Mr. Raghavendra Sarala and Mr. Satish from ACE Engineering Academy	90	PO10, PO12,PSO1
10.	Problem Analysis	Expert lecture on “Design approach towards gantry crane girders”	01/10/2019	Mr. H T Jagadish, Principal consultant, BSD structural consultants, Bangalore	95	PO2,PO3,P O12 PSO1
11.	Communication, Project Management and Finance	“Real estate valuation: An exciting career opportunity”	05/09/2019	Mr. Shiv Prasad Singh, MRICS, Associate Professor, RICS school of built environment, Amity University, Nodia. Organizer Trilok	85	PO11, PSO1
12.	Modern Tool Usage	Awareness on “online software certification courses”	28/08/2019	Mr. Madassar Mansoor Lane, Business Development Manager, Learning division EDS Technologies Pvt. Ltd	90	PO5,PO12 PSO1

CAY m1 :2018-19**Table B 2.10 Gaps and the Actions Taken during 2018 – 2019**

SL. No	Gap	Action taken	Date-Month Year	Resource Person with designation	% of students present	Relevance to POs& PSOs
1.	Engineering Knowledge	Expert lecture on “Advanced surveying”	03/05/2019	Mr. Venugopal T V, CEO, Bharatha bhoomi, Bangalore.	94	PO1, PSO1
2.	Problem Analysis	Expert Lecture on “Analysis of Determinate Structure”	30/04/2019	Prof. K T Sathish Chandra Associate Professor, SJB school of Architecture & Planning, Bangalore.	95	PO2, PSO1
3.	Communication, Lifelong Learning	Talk on “Carrier building”	01/04/2019	Mr. Prakash Babu and Mr. Naveen Kumar Edu Cadd, Jayanagar Branch, Bangalore	80	PO10, PO12 PSO1
4.	Communication	Interaction session with The world’s leading student placement service provider and co-owner of “IELIS examination”	19/03/2019	Ms. Sharmila and Mr. Sai Kiran of IDP Education India Pvt. Ltd.	85	PO10, PSO1
5.	Engineering Knowledge	Technical talk on “Soil investigation and behavior”	19/03/2019	Mr. Dinesh V P, Technical Director Civil material testing Laboratory	85	PO1, PSO1
6.	Problem Analysis	Technical talk on “Compendious on a service aspects of structural design”	19/03/2019	Mr. D S Anjeneya Murthy, Principal structural Designer	85	PO2, PSO1
7.	Engineering Knowledge	Technical talk on “Civil engineering, The past, Present and future”	12/03/2019	Mr. Sachin Amarnath, Director, motion Institute of Management studies, Bangalore	90	PO1, PSO1
8.	Environment And Sustainability	Technical talk on “Sustainability Assessment”	19/02/2019	Mr. Ajit Sabies CMD, InCiCon-AG, President ACCE, Bangalore	80	PO7, PSO1
9.	Problem Analysis	Technical talk on “Analysis of structures for natural loads and load combinations”	19/02/2019	Mr. Anjaneya Murthy, Treasurer ACCE, Bangalore Chapter	80	PO2, PSO1

10.	Modern Tool Usage	Technical talk on “Revit, 3D Max, Etabs”	04/10/2018	Mr. Nitish Kumar Reddy Educadd Jayanagar	90	PO5, PO12, PSO1
11.	Problem Analysis	Interaction session on “Finite element Analysis”	14/11/2018	Prof. Sudhindra Haldadderi, Vice President, Operation, EME	85	PO2, PSO1

CAYm2:2017-18**Table B 2.11 Gaps and the Actions Taken during 2017 – 2018**

SL. No	Gap	Action taken	Date-Month Year	Resource Person with designation	% of students present	Relevance to POs& PSOs
1.	Project Management And Finance	Fundamental concept of “Project Management”	06/09/2018	Mr. B N Sathish Proprietor, H &D Associates	81%	PO11, PSO1
2.	Communication, Problem Analysis	“Bridging the gap between industry and curriculum”	13/04/2018	Mr. N Deepak Kumar, Director, Synergy school of business, Bangalore	80%	PO2, PO10, PSO2
3.	Communication	“Carrier guidance”	11/04/2018	Mr. Nayamath, CEO, Nassco, Bangalore	75%	PO10, PSO2
4.	Problem Analysis	Expert lecture on “Analysis of determinate structures”	03/04/2018	Prof. K T Sathish Chandra Associate Professor, SJB school of Architecture & Planning, Bangalore.	80%	PO2, PSO1
5.	Project Management And Finance	“Techno sales techno marketing and business development”	23/03/2018	Mrs. Sapna Devendra, Regional manager, Alccofine Division South, Ambuja Cement.	90%	PO11, PSO1
6.	Communication	“Carrier Guidance and CV preparation”	06/03/2018	Er. Ashok Kumar, Executive Director Proyojana Construction Management Training Institute	90%	PO11, PSO2
7.	Problem Analysis	Guest lecture on “SOM”	21/11/2017	Prof. K T Sathish Chandra Associate Professor, SJB	94%	PO2, PSO1

				school of Architecture & Planning, Bangalore.		
8.	Modern Tool Usage	Over view about “software’s”	09/11/2017	Mr. RajanishKumar Kumar, EDU CADD	91%	PO5, PO12, PSO1
9.	Communication, Project Management And Finance	Seminar On “Construction Management”	08/09/2017	Mr. Sriraman V Executive director, Prayojana Construction Management Training Institute	80%	PO10, PO11, PSO2

C. On-Campus Skill Development Courses Conducted by External Professional Trainers:

Table B 2.12 On-Campus Skill Development Courses by External Professional Trainers

Skill Development Courses	Trainers
Soft Skills	Corempo, Zest Tech, Hit Bulls Eye, Infosys Springboard
Aptitude -Fundamentals	
Aptitude - Advanced	
Student Mentoring Program	Association of Consulting Civil Engineering
Internship	Prayojana Construction Management Training
Software Training	Edu Cadd, Jayanagar

2.2. Teaching - Learning Processes (100)

2.2.1. Describe Processes followed to improve quality of Teaching & Learning (25)

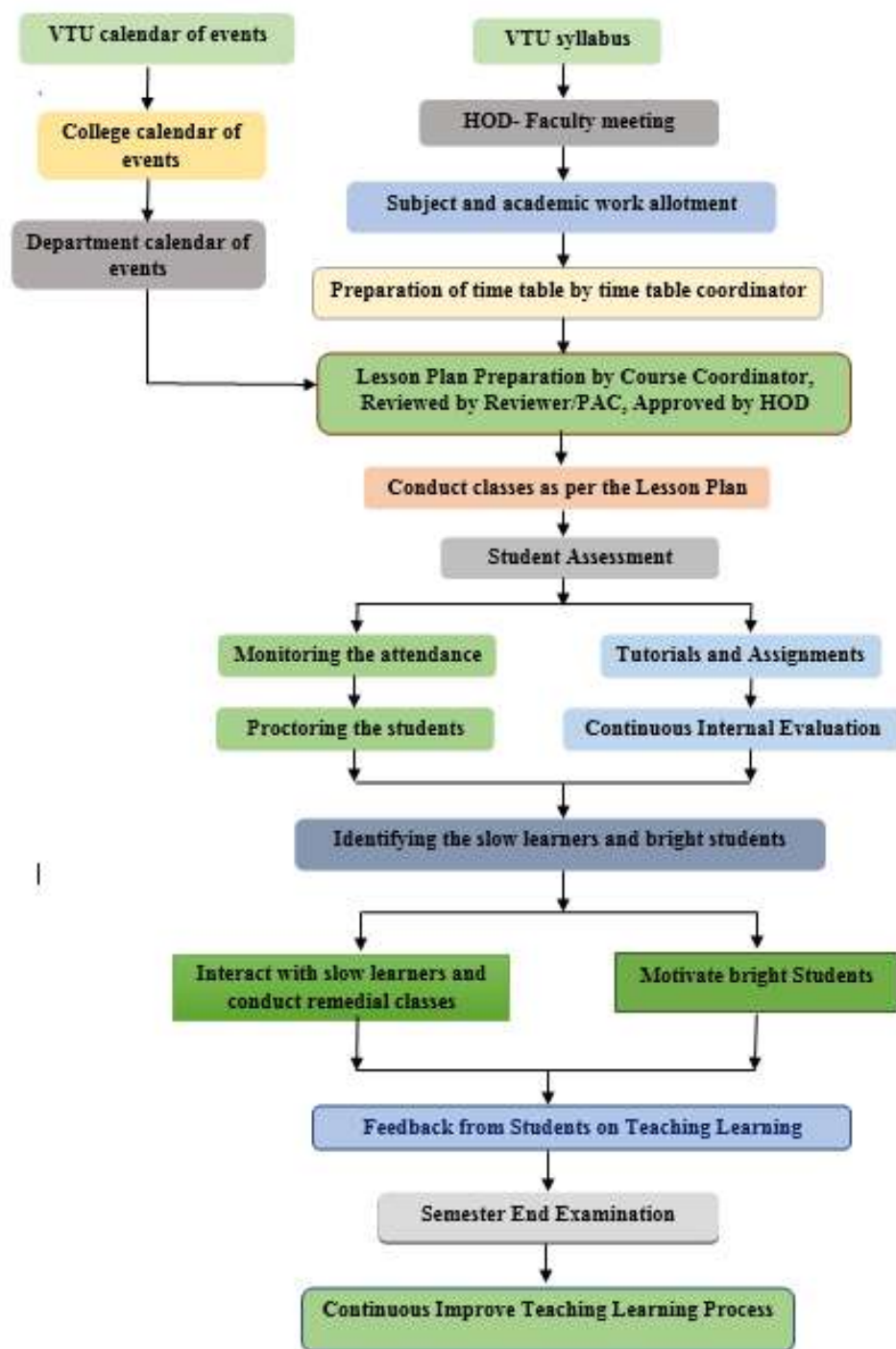


Figure 2.7 Process followed for Teaching and Learning

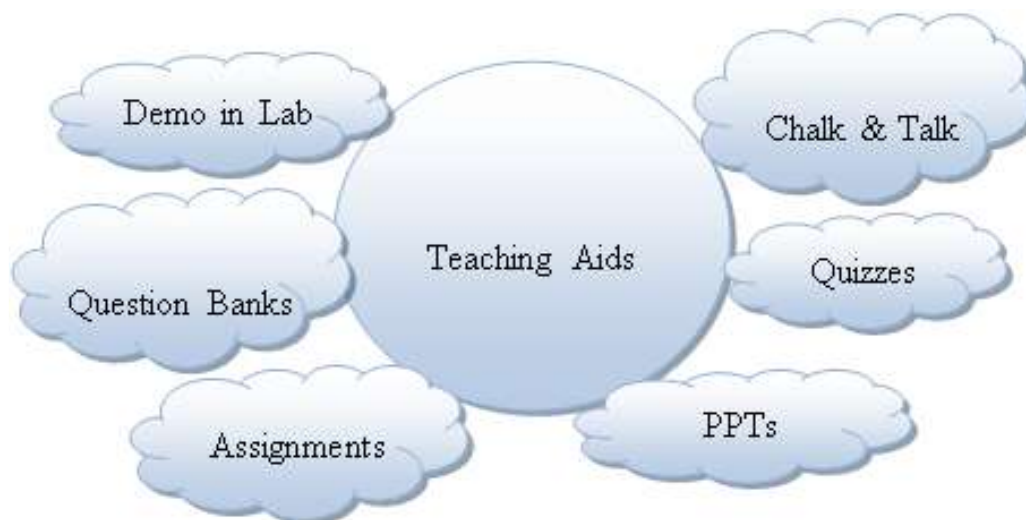


Figure 2.8 Components of Teaching Learning Process

The academic planning begins with university calendar which depicts the semester beginning, last working day, tentative schedule of practical and theory examination.

- Based on the VTU calendar of events, college and department calendar of events are prepared. College calendar of events consists of the activities planned for the semester which includes internal test dates, total number of working days and holidays
- The college calendar of events is prepared and circulated among the faculties and displayed on the notice board
- Department calendar of events contains conduction of events like organizing guest lectures, conferences, industrial visits, workshops, etc.
- The Course option form is circulated among the faculty to give their preferences for the subsequent semester course. In the department meeting, allotment of courses is done by the HOD considering experience and preferences given by the faculty members
- Faculty of the department adopts various Teaching, Learning and Evaluation methods
- Assignments are given to students to enhance their academic performance
- The course instructor/Proctor will identify the bright students and slow learners. Department motivates the slow learners to attend additional classes and help them to

overcome the difficulties. Encouragement is given to the bright students to attend more workshops and technical talks

- Remedial classes are conducted for the slow learners based on their previous academic performance
- Faculties maintain the academic course file.
- Industrial visits and other activities are arranged to reduce the curriculum/course gaps.

The student academic assessment consists of

- For 2018 scheme: Continuous Internal Evaluation (40 Marks) and Semester End Examination (60 Marks)
- For 2017 scheme: Continuous Internal Evaluation (40 Marks) and Semester End Examination (60 Marks)
- For 2015 scheme: Continuous Internal Evaluation (20 Marks) and Semester End Examination (80 Marks)

The CIE consists of three tests, the average of the three test marks and Assignments/Seminars/Quiz will be considered for the award of final CIE marks. The question papers for the Semester end examination are set by VTU. The final marks will be awarded by considering continuous internal evaluation marks and Semester End Examination marks. The process of teaching learning begins with university calendar which mentions the semester beginning and last working day, tentative schedule of practical examination and theory examination.

A. Adherence to calendar

VTU academic calendar:

Academic calendar of VTU is prepared by the University and sent to the Colleges. University calendar mentions the semester beginning and last working day, tentative schedule of practical examination and theory examination is also included. The Figure 2.9 Shows the VTU Calendar of Events.

Academic Calendar for ODD Semester of UG programmes for year 2021-22										
	V semester B.E./B.Tech.	V semester B.Arch./ B.Plan.	VII semester B.E./B.Tech.	VII semester B.Plan./B.Arch.	IX semester B.Arch.	III semester B.E./ B.Tech.	III Semester B.Arch.	III semester B. Plan	I semester B.E./B.Tech.	I semester B.Arch/B.Plan
Commencement of ODD Semester	01.10.2021	01.10.2021	01.10.2021	01.10.2021	01.10.2021	18.10.2021	18.10.2021	18.10.2021	Will be announced later	
Last Working day of ODD Semester	31.01.2022	31.01.2022	31.01.2022	31.01.2022	31.01.2022	19.02.2022	19.02.2022	19.02.2022		
Practical Examination	01.02.2022 To 10.02.2022	01.02.2022 To 10.02.2022	01.02.2022 To 10.02.2022	01.02.2022 To 10.02.2022	---	21.02.2022 To 04.03.2022	21.02.2022 To 04.03.2022	21.02.2022 To 04.03.2022		
Theory Examinations	11.02.2022 To 25.03.2022	11.02.2022 To 25.03.2022	11.02.2022 To 25.03.2022	11.02.2022 To 25.03.2022	---	07.03.2022 To 25.03.2022	07.03.2022 To 25.03.2022	07.03.2022 To 25.03.2022		
Internship	---	---	---	---	---	---	---	---		
Internship Viva Voce/ Project viva	---	---	---	---	---	---	---	---		
Summer Project / Professional training / Organization Study	---	---	---	---	---	---	---	---		
Submission of the report to University	---	---	---	---	---	---	---	---		
Commencement of EVEN Semester	04.04.2022	04.04.2022	04.04.2022	04.04.2022	07.02.2022	11.04.2022	11.04.2022	11.04.2022		

Please Note:

- The academic sessions for ODD semesters should commence from the dates mentioned above.
- The Institute needs to function for six days a week with additional hours (Saturday is a full working day). #if required the college can plan to have extra classes even on Sundays also.
- Faculty should conduct additional tutorial classes ONLINE to solve the doubts of the students.
- The faculty/staff shall be available to undertake any work assigned by the university.
- Notification regarding the Calendar of Events relating to the conduct of University Examinations will be issued by the Registrar (Evaluation) from time to time.
- Academic Calendar may be modified based on guidelines/directions issued in the future by MHRD/UGC/AICTE/State Government.
- Academic Calendar is also applicable for Autonomous Colleges. In case if any changes are to be effected by Autonomous Colleges in the academic terms and examination schedule, they could do so with the approval of the University.
- The offline classes may be conducted either by staggering the timings in 02 sessions in a day with 50% capacity for each session or full day session with 50% capacity on alternative days, following all SOPs.
- The college has to conduct offline classes to cover 80% of the syllabus of the courses; however, 20% of the syllabus can be covered in virtual (Online) mode. Attendance of the students for offline and online classes is mandatory and record should be maintained and submitted to university whenever informed.
- Students joining to VII semester B.E./B.Tech., should complete the Internship before the commencement of the classes.


 REGISTRAR
 27/12/21

Figure 2.9 Sample Copy of VTU Calendar of Events

Institutional Calendar:

Institutional calendar is prepared every semester in line with the University academic calendar. It contains the events of the University and the events of the Institute which are useful in overall planning for the semester. The Figure 2.10 shows the college Academic calendar of events.

Features of Academic Calendar:

The Institution Calendar of Events is prominently displayed on all notice boards and distributed to students at the beginning of the semester. The academic calendar prepared defines the schedule for various activities such as:

- Commencement and Closure of Classes
- Orientation Program schedules
- List of Holidays (as announced by Karnataka State)

- Internal Assessment (IA) Test Schedule
- Project Presentation/Open House/Assignment Submission/Seminars/ PersonalityDevelopment Program
- Techno-cultural / Sports events, etc.
- Final Internal Lab Assessment /Test
- Dispatch of Progress Reports to Parents



॥ Jai Sri Gurudev ॥

Sri Adichunchanagiri Shikshana Trust @

S J C INSTITUTE OF TECHNOLOGY

Chickballapur - 562 101 , Karnataka



CALENDAR OF EVENTS FOR THE ACADEMIC YEAR 2021-22 (ODD SEMESTER) - B.E I SEM											
VISSION					MISSION						
<i>Preparing Competent Engineering and Management Professionals to Serve the Society</i>					▶ Providing Students with a Sound Knowledge in Fundamentals of their branch of Study. ▶ Promoting Excellence in Teaching, Training, Research and Consultancy. ▶ Exposing Students to Emerging Frontiers in various domains enabling Continuous & Learning. ▶ Developing Entrepreneurial acumen to venture into innovative areas of Technological and Managerial Solutions. ▶ Imparting Value based Professional Education with a sense of Social Responsibility.						
Week No.	Month	Week Days							No. of Working Days	Events	
		Mon	Tue	Wed	Thu	Fri	Sat	Sun			
1	December	13	14	15	16	17	18	19	6	13 th Commencement of ODD Sem and Student Induction Programme(SIP)	
2	December	20	21	22	23	24	25	26	5	SIP, 22 nd National Mathematics day, 25 th Christmas	
3	Dec / Jan	27	28	29	30	31	1	2	6	1 st HODs Metting	
4	January	3	4	5	6	7	8	9	6	7 th Student Counselling meeting , 8 th HODs meeting	
5	January	10	11	12	13	14	15	16	5	15 th Makara Sankranti , 14 th Announcement of Attendance	
6	January	17	18	19	20	21	22	23	6	20 th Tutorials-1, 22 nd Class Teacher Meeting,	
7	January	24	25	26	27	28	29	30	5	26 th Republic Day, 27,28 & 29 th - Continuous Internal Evaluation(CIE-I)	
8	February	31	1	2	3	4	5	6	6	5 th Submission of CIE Marks & Attendance	
9	February	7	8	9	10	11	12	13	6	7 th Progress Report Despatch of CIE-I, 10 th Student's counselling	
10	February	14	15	16	17	18	19	20	6	14 th Tutorials-2, 19 th Announcement of Attendance	
11	February	21	22	23	24	25	26	27	6	21 st Class Teachers Meeting, 24,25 & 26 th - CIE-II	
12	Feb/March	28	1	2	3	4	5	6	5	28 th National Science Day, 1 st Maha Shivratri,	
13	March	7	8	9	10	11	12	13	6	7 th Submission of CIE Marks, 10 th Progress Report Despatch of CIE-II	
14	March	14	15	16	17	18	19	20	6	14 th Tutorials-3, 19 th Announcement of Attendance, 14 th to 19 th -Lab Internal	
15	March	21	22	23	24	25	26	27	6	21 st Class Teachers Meeting, 24,25 & 26 th - CIE-III	
16	March	28	29	30	31				4	30 th Submission of CIE Marks, 31 st Last working day of ODD semester	
Practical Examination		No of Working Days							90	Theory Examination	Internship
01.04.2022 to 08.04.2022										11.04.2022 to 23.04.2022	25.04.2022 to 14.05.2022
Commencement of Even Semester : 16.05.2022											

Dr. Sreenivasa Reddy Perla
HOD, Mathematics

Dr. G T Raju
Principal

Figure 2.10 Sample Copy of Institute Academic calendars of events.

Department calendar of events:

Departmental academic calendar of events is prepared by the HOD referring to the college calendar of events. It includes staff meetings, class teacher meetings, Proctor meetings, scheduled dates of seminars, workshops, industrial visits etc. typical calendar is shown in Figure 2.11

Vision
 • Building Competent Civil Engineers with a Societal Perspective

[Jai Sri Gurudev]

S. J. C Institute of Technology, Chickballapur

Civil Engineering Department

Abstract of the Calendar of Events Odd Sem (2021–2022)

Mission
 • Providing Conductive Learning Environment focusing on Planning, Analysis, Design and Detailing of Sustainable Infrastructure
 • Imparting Training, Research and Consultancy in Collaboration with Research Institutes and Industries
 • Equipping Students with Employability Skills through Internships, Industrial Interactions and Field Visits
 • Exploring Comprehensive Environmental Aware Solutions for Various Fields of Civil Engineering with Multidisciplinary Approach
 • Imbibing Lifelong Learning, Professionalism and Ethics among Civil Engineering Students

Sl. No.	Program	Sept. 2021	Oct. 2021	Nov. 2021	Dec. 2021	Jan. 2022	Feb. 2022	Mar. 2022
1.	HODs Meeting			10 th Nov	8 th Dec	5 th Jan		
2.	Staff Council Meeting	30 th Sept						
3.	Dept. Staff Meeting	Every Wednesday meeting will be conducted						
4.	Shortage of attendance announcement		30 th Oct	30 th Nov	30 th Dec			
5.	Tutorials			15 th to 18 th Nov	20 th to 23 rd Dec	17 th to 21 st Jan		
6.	Test			19 th , 20 th & 23 rd Nov	24 th , 27 th & 28 th Dec	22 nd , 24 th & 25 th Jan		
7.	Proctor Meeting			11 th Nov	9 th Dec	6 th Jan		
8.	Class Teachers Meeting			11 th Nov	9 th Dec	6 th Jan		
9.	Seminars / Workshop			18 th Nov Expert lecture on Foundations on Expansive soil and Case study	FDP on "Recent Advances in Civil Engineering" – Dec 3 rd Week		FDP on "Building Information Modelling – BIM"	STTP – On Total Station for 5 th Sem students
10.	Industrial Visits			3 rd , 5 th & 7 th [RCC Structures, Highway construction & Water resource]				
11.	Syllabus Coverage		20% - 5 th & 7 th 10% - 3 rd	25% - 5 th & 7 th 25% - 3 rd	30% - 5 th & 7 th 25% - 3 rd	25% - 5 th & 7 th 20% - 3 rd	10% - 3 rd	
12.	Internal lab assessment					Jan 3 rd Week		
13.	Project review			11 th to 13 th Phase I – Rev. 1	16 th to 18 th Phase I – Rev. 2			

Figure 2.11 Department Calendar of Events

B. Use of various instructional methods and pedagogical initiatives

Department follows Outcome Based Education (OBE) approach. Faculty use innovative teaching methods to cater the needs of OBE. The Pedagogies followed by the Department is as shown in Figure 2.12 (a),(b),(c).

Classroom Teaching:

The lecture delivery by the faculty is through a set of educational technology/tools such as

- Chalk and Talk - Lecturing is done using green/black board
- Power Point Presentation (PPT)
- Demonstration in Lab
- Usage of Charts & Models
- Assignments, Question bank and Quiz



Figure 2.12(a) Class Room Teaching by Showing Models



Figure 2.12(b) Interactive session with projectors and audio system



Figure 2.12(c) Interactive session with Site visit

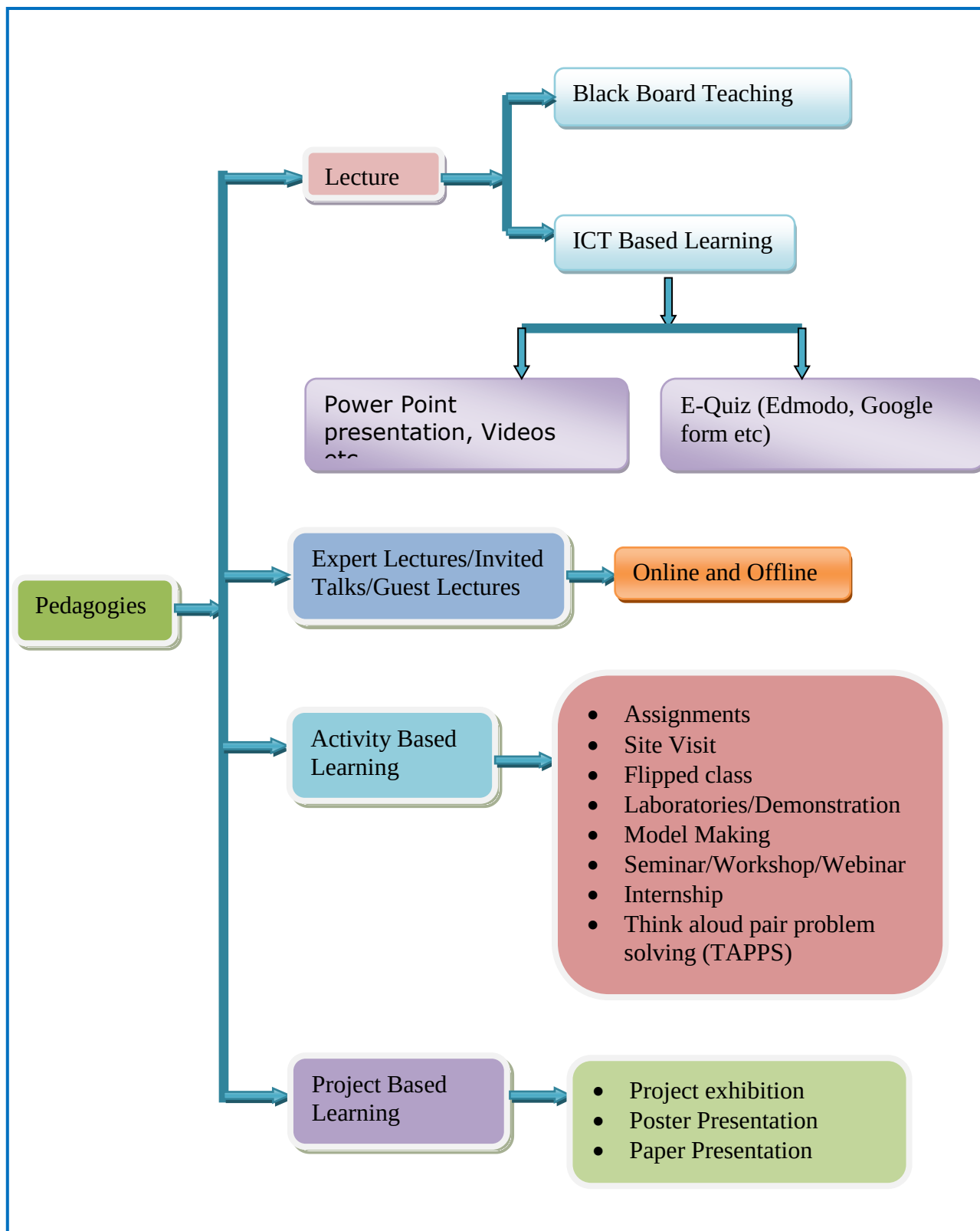


Figure 2.13 Instructional Methods and Pedagogical Initiatives

Table B 2.13 Instructional Methods and Pedagogical Initiatives

Lectures	Black board teaching - Classroom lectures are conducted using basic and conventional method of disseminating information to the students as per the curriculum - Revising the topics covered in the previous class through simple questions and answers at the beginning of each class - Faculty members prepare or update lecture notes for allotted Courses by referring various prescribed text books, Question banks of previous examinations, relevant NPTEL courses and other e-resources. - Students are encouraged to think and analyze the engineering problems Power point Presentations/Videos - Using attractive electronic presentations (PPT) on selected topics for better understanding - Use of e-learning - resources from National Programme on Technology Enhanced Learning (NPTEL) and VTU etc. Presenting videos which show the recent technologies in civil engineering Tutorials - Tutorials help the students in analyzing and solving the engineering problems on the basis of the theory class during lectures. - The tutorial session makes the concepts clear to the students
Expert lectures /Invited talk / Guest Lectures	To provide industrial exposure to the students beyond the class room learning and curriculum, expert Lectures are being organized in the department. The details are provided in Sec. 2.1.2 of the SAR
Activity Based Learning	Assignments Assignments make students self-reliant in the process of finding solutions for given problems by understanding theory and practice Site visit Site visit create an interactive learning environment for students and provide exposure to real world experience of construction Flipped class It is an instructional strategy and a type of blended learning, focused on student active learning Laboratories/Demonstration - Exposes the students on experimental and practical aspects of theory studied in classrooms - Lab-experiments help students in verifying the theory concepts by

	interpretation of results – Laboratory experiments are carried out in teams thus helps in developing the spirit of working together as a team in the minds of young students Model making Students are encouraged to do models in some courses for the better understanding by 3D representations of buildings or objects Seminar Students are made to present a seminar during their academic year. In this, the students give a presentation on a particular topic by referring to various books, Journals of National and International repute. Internship Students are allowed to take an internship as a part of curriculum to get practical exposure in a real time world during their academic year. Think aloud pair problem solving (TAPPS) Students work in pairs to solve the problems. One student (the problem solver) is required to read the problem and think aloud during the problem solving process. Another student (the listener) attends to the problem solver's thinking and reminds him/her to keep saying aloud what he/she is thinking or doing, while also asking for clarifications and pointing out errors being made.
Project Based Learning	Students in groups carry out projects on their topic of interest. After completion of project, they showcase their projects in various platforms like. – Project exhibition – Poster Presentation – Paper Presentation

C. Methodologies to support slow learners and encourage bright students:

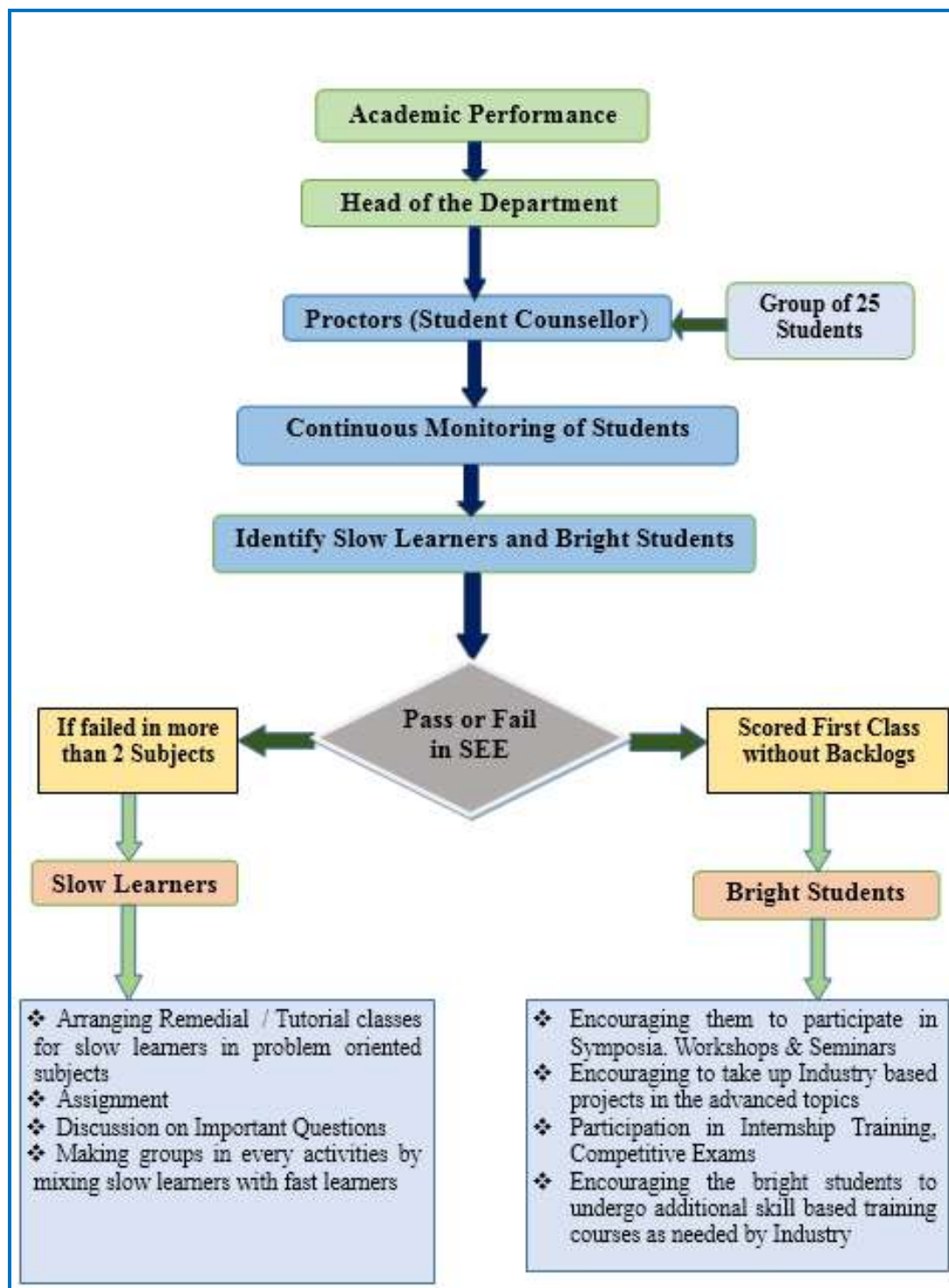


Figure 2.14 Methodologies to Identify Slow Learners and Bright students

Slow Learners

The slow learners are identified through their participation in classroom discussion, academic performance in the CIE and SEE (who fails in more than 2 courses in Semester End Examination).

- Based on the student performance in CIE and SEE, department arranges remedial/tutorial classes for slow learners.
- Parents are informed by the teacher/Proctor regarding the performance of their ward on regular basis through phone calls, SMS and PTM.
- Personal attention to these students is given by proctors and class teachers.
- Making groups in every activity by combining slow learners with fast learners.

Table B 2.14 Slow learner's improvement in Academics after counseling

SI No	NAME	USN	Performance in University Exams – Semester wise							
			1	2	3	4	5	6	7	8
1	ALIASGAR KHOJA	1SJ17CV003	7.08	4.50	6.50	5.14	7.38	8.15	6.42	8.25
2	CHARAN K S	1SJ17CV012	6.58	6.75	4.14	5.07	5.46	7.58	6.38	8.10
3	CHARAN R	1SJ17CV014	5.75	3.67	5.79	5.93	5.31	7.85	7.46	8.75
4	CHETHAN K N	1SJ17CV015	3.08	3.00	4.29	5.79	6.46	8.12	6.13	8.20
5	PRUTHVI CHANDRA K N	1SJ17CV054	5.92	5.25	3.36	5.04	5.35	7.38	6.17	7.25
6	RAVI BILAWAR	1SJ17CV061	2.25	4.67	4.57	4.32	7.12	7.77	6.13	8.35
7	SINDHU M	1SJ17CV070	5	3.42	4.5	6.57	7.31	7.69	7.38	8.2
8	SRISHA A R	1SJ17CV071	5.42	4.00	6.32	4.00	7.15	7.69	6.58	7.35

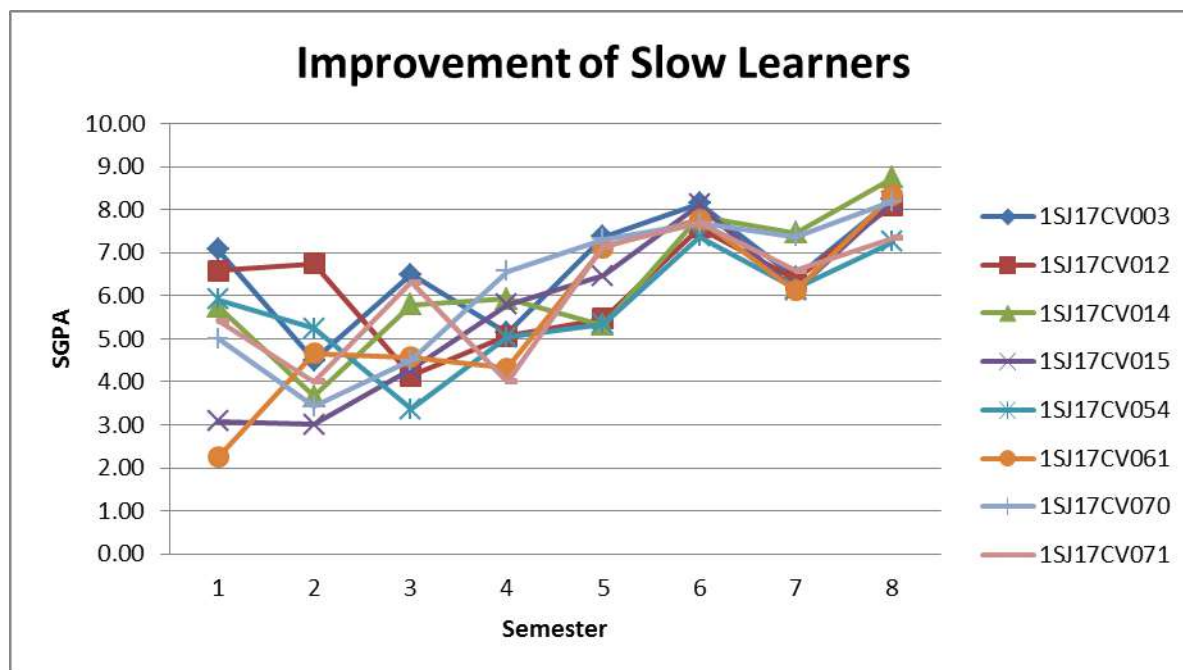


Fig 2.15 Students showing the improvement in Academics after counseling

Bright Students

The bright students are identified based on their participation in classroom discussion, seminars, questioning ability, performance in the CIE and SEE.

- Top three scored students for each semester are appreciated from the department by awarding certificates and additional library cards
- The students are encouraged to participate in symposia, workshops and Seminars to acquire knowledge on the latest developments
- Students are encouraged to lead the student's association team which organizes various activities viz. paper presentation, poster presentation, seminars/workshops, sports, cultural events etc. This helps them to develop leadership qualities along with knowledge.
- Topper of the batch will be named as student of the year in Honor board along with felicitation by gold medal from institution.

Identification Criteria	Actions
Students secured First Class with Distinction (FCD) in their semester exams	1. Encouraging them to take up mini-projects and participate in National/ International/Inter-college events 2. Motivating them to get University ranks
Top 10 students of each class	1. Motivating them to solve more assignments/laboratory problems and previous year University exam question papers. 2. Helping them to get internships 3. Motivate them in preparing and publishing a paper, plan for higher studies with good score in GATE/CAT/GRE/TOEFL etc.,
Students securing ranks at university level	Distribution of Gold medals/Cash prizes



Figure 2.16 University Rank Holders and Gold Medalists

|| JAI SRI GURUDEV ||

DEPARTMENT OF CIVIL ENGINEERING

HONOR BOARD

STUDENT OF THE YEAR				VTU RANK HOLDERS					
YEAR	NAME OF THE STUDENT	USN	%	YEAR	NAME OF THE STUDENT	USN	UG	PG	%
2008-09	KUSUMA .S	1SJ05CV013	76.74	2001-02	MOUMITA DAS	1SJ98CV008	IV		78.26
2009-10	LALITHASHRI .G	1SJ06CV016	76.72	2013-14	AMRUTHA APPACHU	1SJ11CSE14		I	86.83
2010-11	RAVIKIRAN .K V	1SJ07CV045	76.47	2015-16	VINODH A S	1SJ14CIE011		I	85.12
2011-12	PRIYANKA .S	1SJ08CV039	76.87	2015-16	CHARAN N S	1SJ14CIE002		II	83.63
2012-13	KARTHIK .S	1SJ09CV042	83.12	2015-16	BHARATH B V	1SJ14CIE001		III	82.79
2013-14	MEGANA .N	1SJ10CV040	84.82	2016-17	GOMATHI R	1SJ15CIE006		I	83.29
2014-15	PRA S ANNA DHAKAL	1SJ11CV075	84.37	2016-17	SANGEETHA H M	1SJ15CIE011		II	82.62
2015-16	BHARATH .A	1SJ12CV013	83.06	2016-17	NAVEEN KUMAR S	1SJ15CIE008		III	80.33
2016-17	USHA M .R	1SJ13CV115	83.21	2017-18	JEEVAN GOWDA J K	1SJ16CIE005		I	88.10
2017-18	ASRA FATHIMA	1SJ14CV013	82.97	2017-18	VINAMRATHA M V	1SJ16CIE014		II	87.10
2018-19	CHETHAN .M	1SJ15CV126	86.11	2017-18	NIVEDITHA M R	1SJ16CSE08		X	83.00
2019-20	SHARON .P	1SJ16CV100	84.50	2018-19	CHETHAN .M	1SJ15CV126	VII		86.11
				2018-19	LAVANYA C S	1SJ16CIE008		I	83.40
				2019-20	ASRA FATHIMA	1SJ18CSE01		III	85.50
				2019-20	SHAROON P	1SJ16CV100	VIII		84.50

Figure 2.17 Honor Board

D. Quality of classroom teaching

Each classroom is spacious and equipped with black board with ICT tools to create a better ambience for effective teaching learning environment. During the lecture, faculty members put efforts to keep students engaged by reviewing and asking questions on previous lecture and interactively deliver the lecture planned for the day. At the end of the lecture, students are encouraged to ask doubts from the content taught. Pedagogies process followed is as shown in Figure 2.13.

Maintenance of Course files:

Every faculty maintains a course file consisting of following documents:

Calendar of events: It includes university, college and department calendar of events

Time table: Time table includes the clear schedule of the Courses and labs allotted to the faculty

Syllabus copy attested by HOD: After the Course allotment, attested syllabus copy will be issued to the concerned faculties

Previous university question papers: The faculty members will maintain the photocopy of the previous year question papers in their course files

Lesson plan: Lesson plan is prepared for each lecture hour in the teaching plan by the course coordinator before the commencement of the semester and it is reviewed by the reviewer and approved by the HOD. The lesson plan includes pre-requisites for the course, course objectives and course outcomes. Figures 2.18 shows the sample lesson plan with COs and CO-PO matrix, Module wise content coverage, textbooks, references and other important academic records.

SJCIT Lesson Plan

[] Sri Sri Gurudev []
Sri Adichunchanagiri Shikshana Trust *

SJC INSTITUTE OF TECHNOLOGY
Chickballapur – 562 101
Estd: 1986

Department of Civil Engineering
LESSON PLAN

SUBJECT TITLE	Earthquake Engineering		
SUBJECT TYPE	ELECTIVE		
SUBJECT CODE	17CV831	BATCH	2017-2021
ACADEMIC YEAR	2021 (EVEN SEMESTER)	SCHEME	CBCS scheme (Effective from the academic year 2016-2017)
SEMESTER & SECTION	VIII "A" & "B"	EXAM MARKS	60
LEARNERS	40	TOTAL NUMBER OF LECTURE HOURS	40
NUMBER OF LECTURE HOURS/ WEEK	4	NO. OF TIMES HANDLED	5
FACULTY NAME	MANJUNATH K. A		

COURSE LEARNING OBJECTIVES: This course will enable students to

1. Fundamentals of engineering seismology.
2. Irregularities in building which are detrimental to its earthquake performance
3. Different methods of computation seismic lateral forces for framed and masonry structures
4. Earthquake resistant design requirements for RCC and Masonry structures
5. Relevant clauses of IS codes of practice pertinent to earthquake resistant design of structures

Course Outcomes: At the end of this course, students are able to:

CO1 Understand the elements of engineering seismology.

CO2 Apply the structural dynamics to develop response for SDOF system to free and forced vibrations.

CO3 Analyze the building irregularities and lateral load on structures as per IS-1893 code.

CO4 Design & detailing of ductile RC Elements and performance of Masonry structures as per IS-13920 code.

CO-PO MATRIX

COURSE OUTCOMES	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PO13	PO14	PO15	PO16
CO1	2	-	-	-	-	1	-	-	-	-	1	2				
CO2	2	3	-	-	-	-	-	-	-	-	1	2				
CO3	2	3	2	-	-	-	2	-	-	-	1	2				
CO4	2	3	3	-	-	-	2	-	-	-	1	2				

Note: Justification of CO-PO mapping

DELIVERY PLAN WITH DETAILS

MODULE – 1

Lecture #	Topic	Mode of Delivery (P/Tick V)				Date of Delivery	COs Covered
		1	2	3	4		
1	Terminologies (Focus, Focal depth, Epicenter, etc.), Causes of Earthquakes; Theory of plate tectonics		✓			27/4/21	1
2	Types and characteristics faults; Classification of Earthquakes;		✓			30/4	1
3	Major past earthquakes and their consequences; Types and characteristics of seismic waves		✓			30/4	1
4	Magnitude and intensity of earthquakes; local site effects		✓			6/5	1
5	Earthquake ground motion characteristics; Amplitude, frequency and duration;		✓			7/5	1
6	Seismic zoning map of India;		✓			13/5	1
7	Problems on computation of wave velocities, Location of epicenter, Magnitude of earthquake		✓			13/5	1

Textbook : Pankaj Agarwal and chapter : 1

Faculty : Manj Nath K. A

Signatures HoD: [Signature] #HOURS: 8 Allotted: 8 Taken: 8

Remarks

MODULE – 2

Lecture #	Topic	Mode of Delivery (P/Tick V)				Date of Delivery	COs Covered
		1	2	3	4		
1	Basics of structural dynamics; Free and forced vibration of SDOF system			✓		14/5/21	2
2	Effect of frequency of input motion and Resonance			✓		14/5/21	2
3	Numerical evaluation of response of SDOF system			✓		20/5	2
4	Numerical evaluation of response of SDOF system			✓		21/5	2
5	Numerical evaluation of response of SDOF system			✓		21/5	2
6	Earthquake Response spectrum: Definition, construction		✓			21/5	2
7	Characteristics and application, Elastic design spectrum		✓			26/5	2

Textbook : Vinod Hosur and chapter: 2

Faculty : Manj Nath K. A

Signatures HoD: [Signature] #HOURS: 8 Allotted: 8 Taken: 9

Remarks

Figure 2.18 shows the sample lesson plan

Question Bank: Question banks are prepared for every module in the course content based on course objectives and considering the nature of the university question papers. The

previous Question papers of University are also maintained in the course files. The question banks are Shared with the students. Figures 2.19(a) & (b) shows sample question banks.

SJCIT
Question Bank



|| Jai Sri Gurudev ||
Sri Adichunchanagiri Shikshana Trust *

SJC INSTITUTE OF TECHNOLOGY
Chickballapur – 562 101

Department of Civil Engineering

QUESTION BANK

SUBJECT TITLE	MASONRY STRUCTURES		
SUBJECT TYPE	ELECTIVE		
SUBJECT CODE	18CV735		
ACADEMIC YEAR	2021-22 (ODD SEMESTER)	BATCH:	2018-2022
SCHEME	CBCS scheme - 2018		
SEMESTER	7		
FACULTY NAME and DESIGNATION	Shashi Kumar N V Assistant Professor		

Module -I			
Q. No.	Questions	Bloom's LL	COs
1	Mention the properties of masonry cement concrete block	L1	CO1
2	What is mortar? What are the desirable properties of mortar for use of masonry construction?	L1	CO1
3	List the factors affecting compressive strength of masonry	L1	CO1
4	Explain the behaviour of brick work in compression.	L2	CO1
5	Explain the general defects and errors arising in masonry construction	L2	CO1
6	Explain the physical properties of masonry brick unit	L2	CO1
7	Derive an expression for brick prism under compression by elastic theory	L2	CO2
8	Explain the factors which affect compressive strength of masonry	L2	CO1
9	Write a brief note on Strength and stability of axially loaded masonry walls	L2	CO1
10	Enumerate Various empirical formula used in estimating compressive strength of masonry.	L2	CO2
11	Consider the following statements: P. Walls of one brick thick are measured in square meters. Q. Walls of one brick thick are measured in cubic meters. R. NO deduction in the brickwork quantity is made for openings in walls up to 0.1 m ² area. S. For the measurement of excavation from the borrow pit in a fairly	L1	CO1

Page | 1

Figure 2.19(a) Sample Question Bank

SJCIT		Question Bank	
	uniform ground, deaden are left the suitable intervals. For the above statement, the correct option is (A) P-False; Q-True; R-False; S-True (B) P-False; Q-True; R-False; S-False (C) P-True; Q-False; R-True; S-False (D) P-True; Q-False; R-True; S-True (Gate-2017)		
12	Bull's trench kiln is used in the manufacturing of (A) Lime (B) Bricks (C) Cement (D) None of These (Gate-2017)	L1	CO1

Module -2			
Q. No.	Questions	Bloom's LI	COs
1	What are the effects of slenderness ratio, eccentricity on compressive strength of masonry?	L1	CO1
2	What are the effects of rate of water absorption, curing and workmanship on compressive strength of masonry?	L1	CO1
3	Write a short note on permissible compressive stress, stress reduction factor and stress modifying factor in masonry.	L1	CO1
4	Explain the effect of eccentricity, load dispersion and arching action in masonry.	L2	CO1
5	Explain the effect of effective length, effective thickness and effective height in strength of masonry.	L2	CO1
6	Write a note on load dispersion and arching action in lintels	L2	CO1
7	Write a note on eccentricity in a masonry wall	L2	CO1
8	A solid wall of a two storey building is 150 mm thick with a ceiling height of 3.5 m, it is constructed with bricks of 10 N/mm ² and M1 type mortar, the wall is partially restrained at top and fully restrained at bottom. Solve for permissible compressive stress.	L2	CO3
9	An interior solid wall of a two storey building is 100 mm thick with a ceiling height of 3m, it is constructed with bricks of 7.5 N/mm ² and M1 type mortar, the wall is fully restrained at top and bottom. Solve for permissible compressive stress.	L3	CO3
10	An interior cavity wall of a two storey building has 100mm thick leaves with a ceiling height of 3m supported with piers at a spacing of 3600mm c/c with width 200mm. it is constructed with bricks of 10 N/mm ² and H1 type mortar, the wall is fully restrained at top and partially restrained at top bottom. Solve for permissible compressive stress.	L3	CO3

Figure 2.19(b) Sample Question Bank

Tutorial: Tutorial contains module wise questions which will be discussed before the Internal Assessment.

Internal question papers with scheme: Test question papers with scheme prepared by the course coordinator, reviewed by the reviewer and approved by HOD.

S.J.C.I.T 06/FORM/03 - Rev. No. 00 Page: 1/1

Internal Test Question paper

Name of the staff: Sharada S A
Date: 27.05.2021
Reviewer's Signature: *[Signature]* Signature: *[Signature]*

NOTE: Only the following information's to be given to the students.
[JAI SRI GURUDEVI]
S.J.C. Institute of Technology
Department: Civil Engineering

Test: I Semester: VIII Section: A & B
Subject Name & Code: Design of Prestressed Concrete Elements-17CV82
Duration: 100 minutes Max Marks: 50

i) Answer the following questions.
ii) Use of IS code: 1343-1980 is permitted.

Question Number	Marks	CO	Levels
1	10	CO1	L2
2	10	CO2	L3
3	10	CO1	L2

a) With neat sketches explain Pre-tensioning and Post-tensioning. State the advantages of these methods.
OR
b) Explain clearly the concept of load balancing and pressure line in pre-stressed concrete design

a) A PSC beam of 230mm wide and 450mm deep is used over a span of 4m is prestressed by a cable carrying a force of 650kN & located at an eccentricity of 75mm. The beam supports three concentrated loads of 25kN at each quarter span points. Determine the location of the pressure line in beam at centre, quarter & support sections. Neglect the moment due to self weight of the beam.
OR
b) A pre-stressed concrete beam, 200 mm wide and 300 mm deep, is used over an effective span of 6m to support an imposed load of 4 KN/m. The density of concrete is 24 KN/m³. Find the magnitude of the eccentric pre-stressing force located at 100 mm from the bottom of the beam which would nullify the bottom fibre stress due to loading.

a) Explain the necessity of using high strength concrete and high tensile steel in prestressed concrete structures.
OR
a) Explain with neat sketches, Freyssinet's system of pre-stressing

(a)

S.J.C.I.T 06/FORM/03 - Rev. No. 00 Page: 1/1

Department of Civil Engineering

Scheme & Solutions

Semester: 8 Subject Title: Design of Prestressed Concrete Subject Code: HCVS2
Benefits

26/05/21

Question Number	Test - I Solution	Marks Allocated
1.	a) Advantages of Pre-tensioning method - (4m) Post-tensioning method - (4m) Sketches - (2m) OR b) Explanation of load balancing concept with typical example - (5m) Pressure line concept with sketch - (5m)	10m
2.	a) Given data: $l = 4m$, $P = 650kN$, $e = 75mm$, $W_{DL} = 25kN$ $A = 230 \times 450 = 103.5 \times 10^3 mm^2$ $I = 2.095 \times 10^8 mm^4$, $Z = 93.15 \times 10^3 mm^3$ } (2m) $D.L = 2.588 kN/m$ D.L moment @ support = 0 @ quarter = $3.89 kN.m$ } (1 1/2) @ centre = $5.18 kN.m$ I.L moment @ support = 0 @ quarter = $39.5 kN.m$ } (1 1/2) @ centre = $50 kN.m$ Stress distribution @: support : $f_{sup} = f_{inj} = 6.28 N/mm^2$ @ quarter = $f_{sup} = 6.33 N/mm^2$, $f_{inj} = 6.23 N/mm^2$ } (1 1/2) @ centre = $f_{sup} = 6.35 N/mm^2$, $f_{inj} = 6.21 N/mm^2$	10m

[Signature]

(b)

Figure 2.20(a) & (b) snapshots of Sample Question paper and scheme of evaluation

E. Conduction of experiments

- All laboratories are equipped with necessary infrastructure to facilitate effective conduction of the experiments in the laboratory.
- Lab In charges of respective Labs will prepare the manuals, material requirements, conduction of experiments and cycle of experiments before commencement of semester
- In Laboratory session the faculty explains the procedure, theory, calculations and applications of the experiment
- The students will write the necessary details in the observation book and then conduct the experiment, tabulate the readings, calculate and evaluate the results
- The calculated results are represented in the form of graphs and documented in the record book by the students, later it is evaluated by concerned faculty
- The Experiments are evaluated by the faculties according to lab rubrics

The experiments are conducted in each laboratory as per the flow chart shown in Figure 2.21

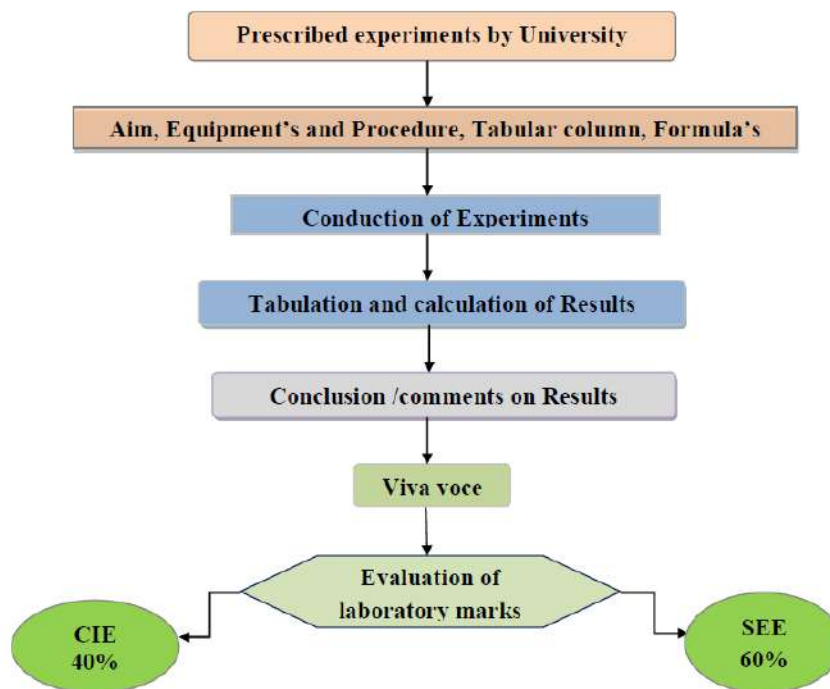


Figure 2.21 Laboratory Evaluation

F. Continuous Assessment in laboratory

Continuous assessment system is also implemented for assessment of laboratory work. The evaluation is done on the basis of submission of laboratory observations, records, conduction, viva and punctuality of the student. Internal test is conducted at the end of semester and evaluated as per Laboratory Rubrics.

Laboratory Rubrics

Table B 2.15 Continuous Assessment in laboratory rubrics

Rubric	Methodology / Process Steps			2015	2017	2018
a	Observation, Write up and Punctuality			2	4	4
b	Conduction of experiment and Output			4	8	8
c	Viva – Voce (Questions & Answers on relevant Experiment /Topic)			4	8	8
d	Record write-up	2015	2017/2018	2	4	4
IA	Internal Test					
	(i)Write-up of Procedure	2	4			
	(ii)Conduction	4	8			
	(iii)Viva-Voce	2	4	8	16	16
	Total Marks			20	40	40

Continuous Assessment of Student's Performance in the Laboratory:

|| Jai Sri Gurudev ||
S JC Institute of Technology
Department of Civil Engineering
Lab Evaluation Rubrics- 2017 Scheme

Title	Exemplary	Accomplished	Developing
Observation write up & punctuality (4)	Good evidence of in-depth observations and submits in time (4)	Good evidence of observations (2)	Reasonable evidence of observations (1)
Conduction of experiment and output (8)	Demonstrates very good knowledge of the lab procedures, thoroughly and carefully follows each step before moving on to next step and all the calculations are accurate (8)	Demonstrates sound knowledge of lab procedures, will discuss with peers to solve problems in procedures, carefully follows each step and most of the calculations are accurate (6)	Demonstrates general knowledge of lab procedures, requires help from teacher with some steps in procedures and calculations are partly accurate (4)
Viva voce (4)	Answers 100 % of Questions (4)	Answers more than 50 % of Questions (2)	Answers Less than 50 % of Questions (1)
Record write-up (8)	All the experimental details are well addressed. All figures graphs, tables, are correctly drawn and all the calculations are accurate with valid conclusions (8)	All important experimental details are addressed but some minor details are missing and most of the calculations are accurate with conclusions (6)	Written in acceptable level but some important experimental details are not addressed properly and calculations are partly accurate with conclusions (4)

Observation writes up & punctuality-4
Conduction of experiment and output-8
Viva voce -4
Record writeup-8

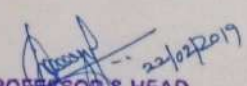

PROFESSOR & HEAD
 Dept. of Civil Engineering
 SJC Institute of Technology
 CHICKBALLAPUR-562101

Figure 2.22 Laboratory Continuous Evaluation Rubrics

- Continuous evaluation is done by the faculty in every lab session based on the lab rubrics. The average marks of all the session will be considered for awarding final internal assessment
- All the students must write the procedure and calculation of the experiment in the observation book
- Students should get signature for their observation books from the concerned faculty after conduction of experiment
- All the students must write the record and submit in the immediate next class along with observation book for evaluation

The faculty member allocates the marks for each experiment as per the rubrics mentioned above.

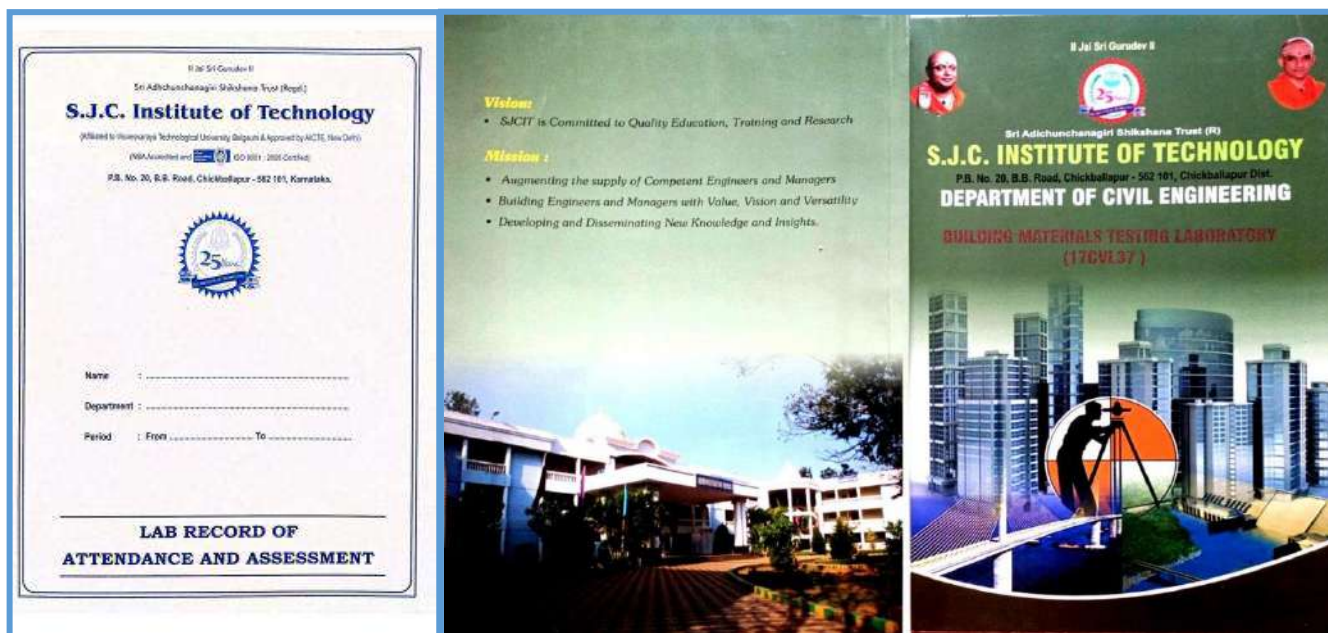


Figure 2.23(a) Laboratory Attendance

Figure 2.23(b) Laboratory Manual

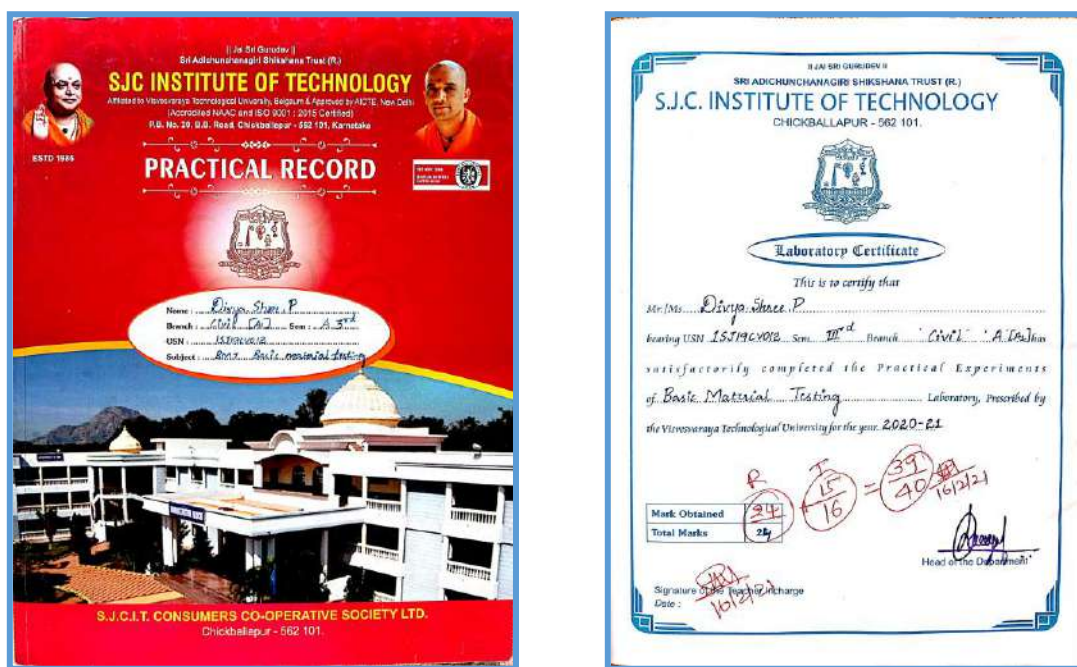


Figure 2.23(c) Practical record book with Certificate

INDEX SHEET

Name of the Student: Divya Shree D Class: 3rd Sem Sec: A [A]

Exp. No.	Date	Title of the Experiment	Page No.	Marked	Obtained	Total	Sign. of Staff
01	20/10/21	Tension test	1-3	14	9	14	24
02	21/10/21	Specific gravity of fine aggregate	4-5	14	9	14	24
03	21/10/21	Brinell Hardness Test of Brass Sample	6-7	14	9	14	24
04	20/10/21	Water absorption test on Bricks	8-9	14	9	14	24
05	20/10/21	Plasticity index and Shrinkage of concrete	10-11	14	9	14	24
06	20/10/21	Factorial Modulus of Elasticity	12-13	14	9	14	24
07	20/10/21	Building of Road	14-15	14	9	14	24
08	20/10/21	Compression test on Bricks	16-17	14	9	14	24
09	21/10/21	Impact test	18-19	14	9	14	24
10	21/10/21	Specific gravity and water absorption of coarse aggregate	20-21	14	9	14	24
11	21/10/21	Brinell's hardness Test	22-23	14	9	14	24
12	21/10/21	Brinell's hardness Test	24-25	14	9	14	24
13	21/10/21	Shrinkage test on mild steel	26-27	14	9	14	24
14	21/10/21	Compression test	28-29	14	9	14	24
15	21/10/21	Tension test	30-31	14	9	14	24
16	21/10/21	Bending test on mild steel	32-33	14	9	14	24
17	21/10/21	Modulus of elasticity and water absorption test on fine aggregate	34-35	14	9	14	24

FOR 40 MARKS:

S.No.	DESCRIPTION	MARKS
1.	CONTINUOUS EVALUATION	20
	a. Observation writing up & presentation	5.0
	b. Conducting of Experiment & output	8.0
	c. Viva Voce	4.0
	d. Record writing up	3.0
2.	1 st Internal Test	20

SJ CIT

Page 1 of 2

Department: Civil Engineering
Student Lab Evaluation Report
Lab: Environmental Engineering
Faculty: VATHSALA. M. N.
Code: 15CVL7G
Batch: A
Class: VII A Sec: A

SL NO	USN NO	NAME	Details	E1/P1	E2/P2	E3/P3	E4/P4	E5/P5	E6/P6	E7/P7	E8/P8	E9/P9	E10/P10	E11/P11	E12/P12	E13/P13
1	15J16V004	ACHYUTHA C.A		2	2	2	2	2	2	2	2	2	2	2	2	2
2	15J16V005	HARITHA		2	2	2	2	2	2	2	2	2	2	2	2	2
3	15J16V003	ABHISHEK G S		2	2	2	2	2	2	2	2	2	2	2	2	2
4	15J16V008	Anil Kumar		2	2	2	2	2	2	2	2	2	2	2	2	2
5	15J16V009	Ankita B S		2	2	2	2	2	2	2	2	2	2	2	2	2
6	15J16V012	Basudhanth Kumar Madh		2	2	2	2	2	2	2	2	2	2	2	2	2

Note: E1 – Experiment P1 – Program

Signature of Faculty Coordinator: V. N. V. Signature of MOD: V. N. V.

Figure 2.23(d) Practical record book with particulars of the experiments performed along with rubrics

G. Student feedback on teaching learning process and actions taken

At the mid of the semester, students will give an online feedback appraising the teaching faculty.

- Lecture classes are monitored by senior Professors and Head of the Department. They give constructive comments to improve the teaching- learning process. This motivates them to improve their skills and abilities
- Training / orientation programs are conducted by professional experts to improve the skills of the faculty members. Figure 2.24 shows sample snapshot .of Students Feedback on teaching learning process

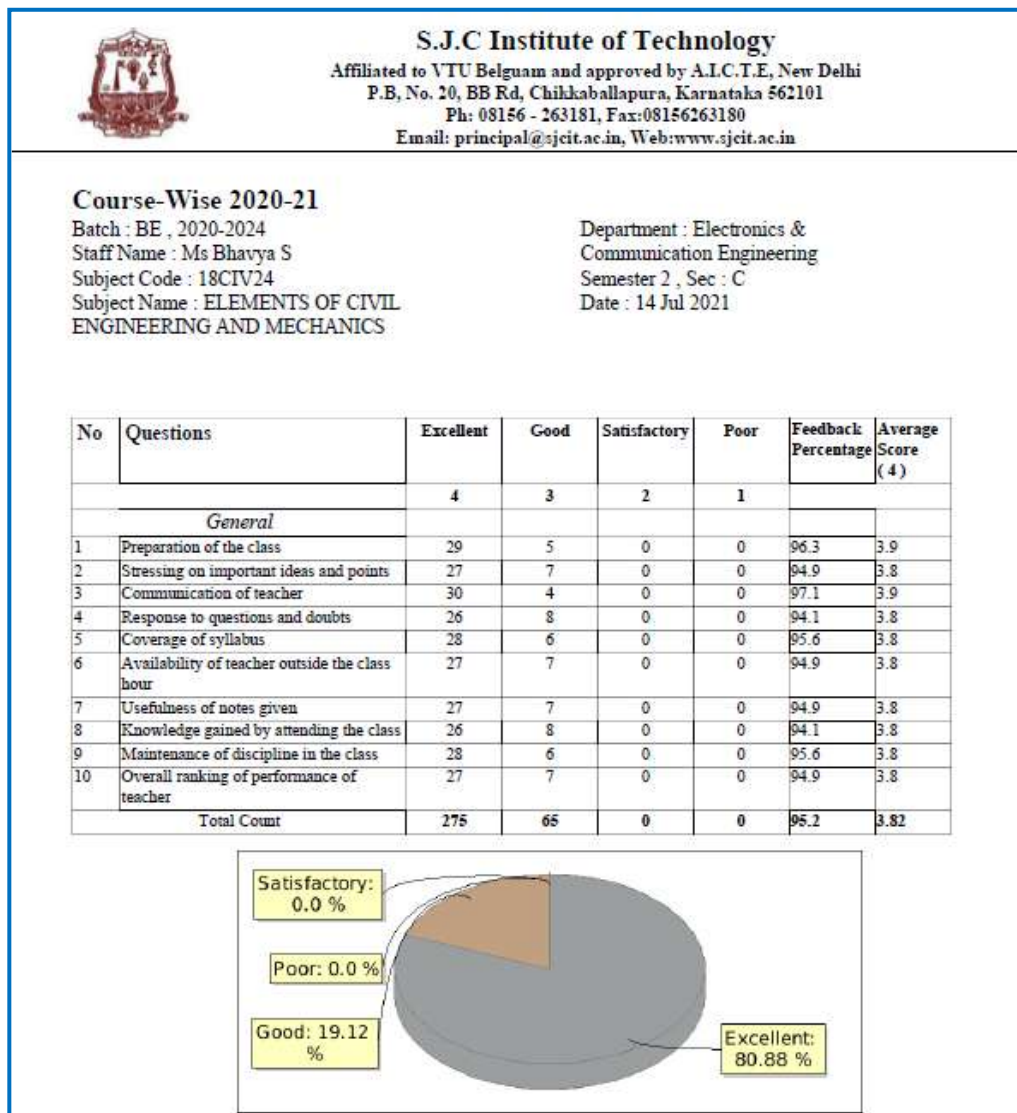


Figure 2.24 Snapshot of Students Feedback on teaching learning process

2.2.2. Quality of internal semester Question papers, Assignments and Evaluation (20)

Internal Assessment marks are set as per the University regulations for theory, laboratory courses, seminar, internship and project. The internal assessment marks for theory courses is based on average marks of two tests for 2015 Scheme syllabus and average marks of three tests for 2017 and 2018 Scheme syllabus as prescribed by University. The internal assessment is conducted as per the calendar of events. The Program Coordinator along with test coordinator is responsible for the conduction of the test. The time table for the same is announced in notice board one week prior to the commencement of the test.

The question paper is prepared as per prescribed syllabus considering revised blooms

taxonomy (RBT) at different levels to test the knowledge level of students and also to meet the requirements of course outcome and program outcomes. The department has a review committee, comprising of Programme Coordinator and senior faculty members (i.e. Program Assessment Committee (PAC)) to check the quality of the question paper.

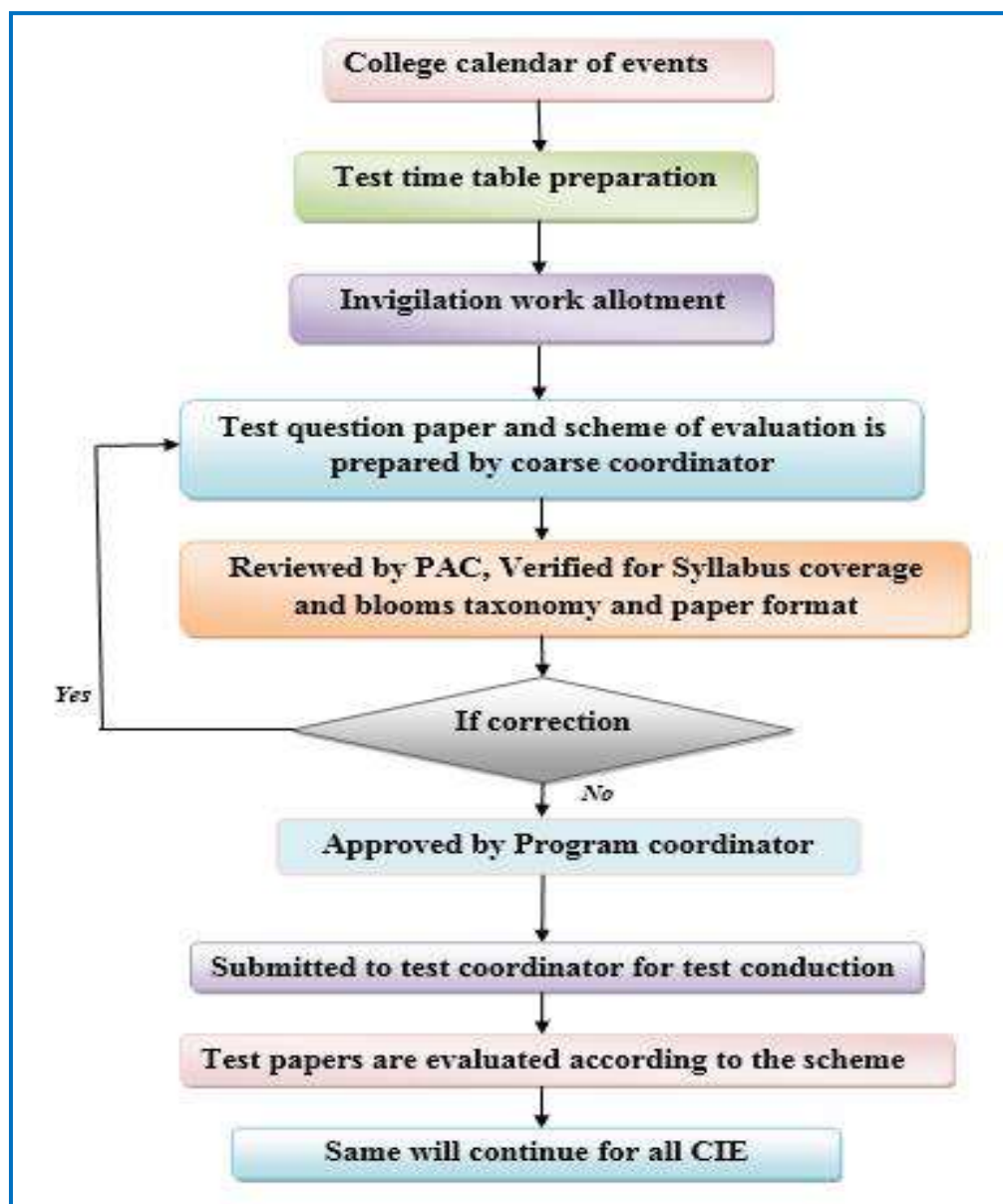


Figure 2.25 Process for conduction of Internal Assessment

A. Process for internal Semester Question paper setting and evaluation and effective process implementation

- The time table for the Internal Assessment is announced in the notice board, shared in class groups one week prior to the commencement of the test.
- Department provides answer booklets which is almost in the form of VTU booklet for writing the internal assessment and will be stored by the Department for the period of five years.
- The students write the test in their allotted seats as per their USNs in the test hall, under the supervision of an invigilator.
- The department conducts three internal assessments as per the institute academic calendar.
- The prepared question paper and scheme of evaluation are reviewed by PAC (Program Assessment Committee). If they are not meeting the standard, the same will be referred for modification to the respective course coordinator.
- Approved question papers are submitted to the test coordinator for internal test conduction.
- Evaluation is carried out by the course coordinator according to scheme of evaluation. The CO-PO attainment calculation will be done after every CIE
- The CIE marks of students are finalized as per the University guidelines.

B. Process to ensure questions from course outcomes/learning levels

- The course co-coordinator ensures that the internal assessment questions are framed based on various RBT levels and are mapped to the COs
- A question paper template is shown in Figure 2.26(a) & (b).
- The course coordinator decides the number of questions and marks allotted for each question
- The course coordinator submits the question paper to the scrutinizing committee and the committee checks the quality and RBT level and CO compliance and suggests any changes, if required.

C. Evidence of COs coverage in class test / mid-term tests (5)

Internal Test Question paper

Name of the staff: MANJUNATH K A & BHAVYA S
Date: 12/10/2020

Reviewer's Signature: _____

SJC INSTITUTE OF TECHNOLOGY, CHICKBALLAPUR
DEPARTMENT OF CIVIL ENGINEERING

Subject: Design of RC Structural Elements
Sem & Section: 5th A&B
NOTE: 1. Answer all Questions from the following.
2. Use of IS 456-2000 permitted.
3. Missing Data if any, may be assumed suitably.

Question Number	Questions	Marks	Course Outcome	Levels
1	Explain (a) Assumptions, philosophy and principles of limit state method of design. OR (b) Partial safety factor; (c) Characteristic strength (Rk) Characteristic load; (d) Design Strength (Fd) Design load.	10.0	CO1	L1
2	Obtain an expression for limiting depth of neutral axis, limiting percentage of steel and M_{lim} for rectangular section with M20 and Fe415 and also M25 and Fe500.	10.0	CO1	L1
3	Explain (a) Balanced RC section; (b) Under reinforced RC section; (c) Over reinforced section; (d) Limit state of Collapse; (e) Limit state of Serviceability.	10.0	CO1	L1
4	Explain (a) Singly reinforced beam and doubly reinforced beam with neat sketches. OR (b) Derive formula for effective depth of beam.	10.0	CO1	L1
5	Explain the types of cracks in reinforced concrete members with neat sketches.	10.0	CO1	L1
6	A rectangular beam 300mm wide and 500mm deep is reinforced with 4 bars of 16mm diameter. It is simply supported on an effective span of 6m. Determine the maximum permissible imposed service load. Assume concrete grade M20 and Fe500 steel.	10.0	CO2	L2
7	Find the moment of resistance for singly reinforced beam of section 200mm X 300mm with an effective cover of 30mm. It is reinforced with 400mm dia of mild steel and M15 concrete is used. If 3 bars are used, what would be the moment of resistance of beam.	10.0	CO2	L2
8	A rectangular reinforced beam 300mm X 500mm is reinforced with 60mm dia bars at tension side with a cover of 20mm and 140mm dia bar at compression side with a cover of 20mm. If M20 & Fe415 are used. Calculate the moment of resistance of the beam.	10.0	CO2	L2
9	A rectangular beam of cross section 250mm X 300mm and simply supported span 5m carries a UDL of 40kN/m in tension zone and shear reinforcement 21.8mm dia @200mm/c. use M20 concrete and Fe15 steel. Determine the shear resistance of section and also determine central point load the can carry.	10.0	CO2	L2

CO1=10.0 | CO2=20.0 | CO3=0.0 | L1=10 | L2=20 | L3=0 | L4=0 | L5=0 | L6=0

Recommended for Correction
Shanley 12/10/2020

Internal Test Question paper

Name of the staff: MANJUNATH K A & BHAVYA S
Date: 09/12/2020

Reviewer's Signature: _____

SJC INSTITUTE OF TECHNOLOGY, CHICKBALLAPUR
DEPARTMENT OF CIVIL ENGINEERING

Subject: Design of RC Structural Elements
Sem & Section: 5th A&B
NOTE: 1. Answer all Questions from the following.
2. Use of IS 456-2000 permitted.
3. Missing Data if any, may be assumed suitably.

Q. No.	Questions	Marks	CO's	Levels
1	An isolated T-beam has a following details width of flange 400mm, thickness of flange 75mm, width of web 275mm, overall depth 300mm. bottom reinforcement is ϕ 25mm dia. Use Fe415 and M20. Assume severe exposure conditions and its slabs as beam. Determine the strength of the T-section and also determine the safe superimposed load the beam can take. Effective span of beam is 6m. Adopt limit state design.	12.5	CO2	L3
2	A T-beam has following data. Determine the ultimate moment of resistance. If the width of flange 2000mm, thickness of slab 100mm, width of web 300mm, effective depth 160mm, use M20 and Fe415. It is provided with an area of steel 700mm ² . Effective span is 6m.	12.5	CO2	L3
3	Design a singly reinforced rectangular simply supported beam of clear span 5m supported on 230mm brick wall. The beam is subjected to an imposed live load 20kN/m along with self weight. Use M20 and Fe415.	12.5	CO3	L4
4	Design a cantilever beam of clear span 3m and supported on 300mm wide column. It is subjected to an off the end live load 10kN in along with point load 75kN at free end. Use M20 and Fe415.	12.5	CO3	L4
5	Design simply supported rectangular beam of size 250mm X 450mm overall subjected to an UDL of 25kN/m along with self weight the span of the beam is 5m effective use M20 and Fe415.	12.5	CO3	L4
6	Design a cantilever beam of size 300mm X 600mm span 4m subjected to UDL. 60kN/m. Use M20 & Fe415.	12.5	CO3	L4
7	A T-beam slab floor system has a slab of 125mm thick spanning between T-beams which are spaced at 3.0m apart, the beams have a clear span of 8.15m and the end bearing are 300mm wide. The live load on the floor is 24kN/m ² and take floor finish as 0.6kN/m ² . Design one of the intermediate T-beams for bending and shear. Check the reinforcement comply use M20 & Fe415.	12.5	CO3	L4
8	Design a T-beam for an effective span of 6m spacing of T-beams, for slab thickness 150mm. Live load 20kN/m ² , floor finish 0.6kN/m ² , width of web 250mm. Use M20 & Fe415.	12.5	CO3	L4

CO1=0 | CO2=12.5 | CO3=37.5 | L1=0 | L2=0 | L3=12.5 | L4=37.5 | L5=0 | L6=0

L1=Remembering, L2=Understanding, L3=Applying, L4=Analyzing, L5=Evaluating, L6=Creating

CO1 Explain the behavior and Principles of RC Structural elements relevant to IS codes
CO2 Analyze the singly reinforced, doubly reinforced and T-beams for design relevant to IS codes
CO3 Design the Structural elements such as beams, slabs, column and footings relevant to IS codes

Figure 2.26 (a) Sample question paper, got scrutinized Figure 2.26 (b) Question paper

D. Quality of Assignment and its relevance to COs

- The course coordinator announces assignment topic, submission dates and the same are communicated in the class
- Assignment questions are set as per blooms level to test the understanding knowledge level of each course
- Assignments are evaluated and feedback is given to the students to improve their learning and appreciate their efforts
- Class seminars are given to the students to improve their communication skills
- Quiz is conducted in online mode by the respective course faculty

SJCIT
Assignment

|| Jai Sri Gurudev ||

Sri Adichunchanagiri Shikshana Trust *



SJC INSTITUTE OF TECHNOLOGY

Chickballapur – 562 101

Department of Civil Engineering

ASSIGNMENT

SUBJECT TITLE	DESIGN OF PRESTRESSED CONCRETE ELEMENTS		
SUBJECT TYPE	CORE		
SUBJECT CODE	17CV82		
ACADEMIC YEAR	2020-21 EVEN	BATCH	2017
SCHEME	2017		
SEMESTER	8 th		
FACULTY NAME and DESIGNATION	Mrs. SHARADA S A / ASSISTANT PROFESSOR		

Module -1			
Q. No.	Questions	Bloom's LL	COs
1	What are the properties of high strength concrete and steel used in Prestressing?	L3	Co1
2	A rectangular prestressed beam 150mm wide and 300mm deep is used over an effective span of 10m. The cable with Zero eccentricity at the supports and linearly varying to 50mm at the centre carries an effective prestressing force of 500kN. Find the magnitude of the concentrated load located at the centre of the span for the following conditions at the centre of the span: 1) If the load counteracts the bending effect of the prestressing force (neglecting self weight of the beam) and 2) If the pressure line passes through the upper kern of the section under the section of the external load, self weight and prestress	L3	Co2
3	A pre-stressed concrete beam, 200 mm wide and 300 mm deep, is used over an effective span of 6m to support an imposed load of 4 kN/m. The density of concrete is 24 kN/m ³ . Find the magnitude of the eccentric pre-stressing force located at 100 mm from the bottom of the beam which would nullify the bottom fibre stress due to loading.	L3	Co2
4	(i) Explain why high strength concrete and high strength steel are needed for PSC construction	L4&L5	Co1

Page | 1

Figure 2.27 Sample copy of Assignment

2.2.3. Quality of Student Projects (25)

The students carry out their project work in the final year as per University guidelines. The Department follows standard procedures to ensure that students do a quality project. The students select a project in line with their area of interest. Students are encouraged to do project works related to Environment, Industry and Society. The department has systematic procedure to monitor the project work continuously from beginning to end of the project. Students are encouraged to publish paper in journals and conferences at the end of the project. The figure 2.28 shows flow chart for project completion process.

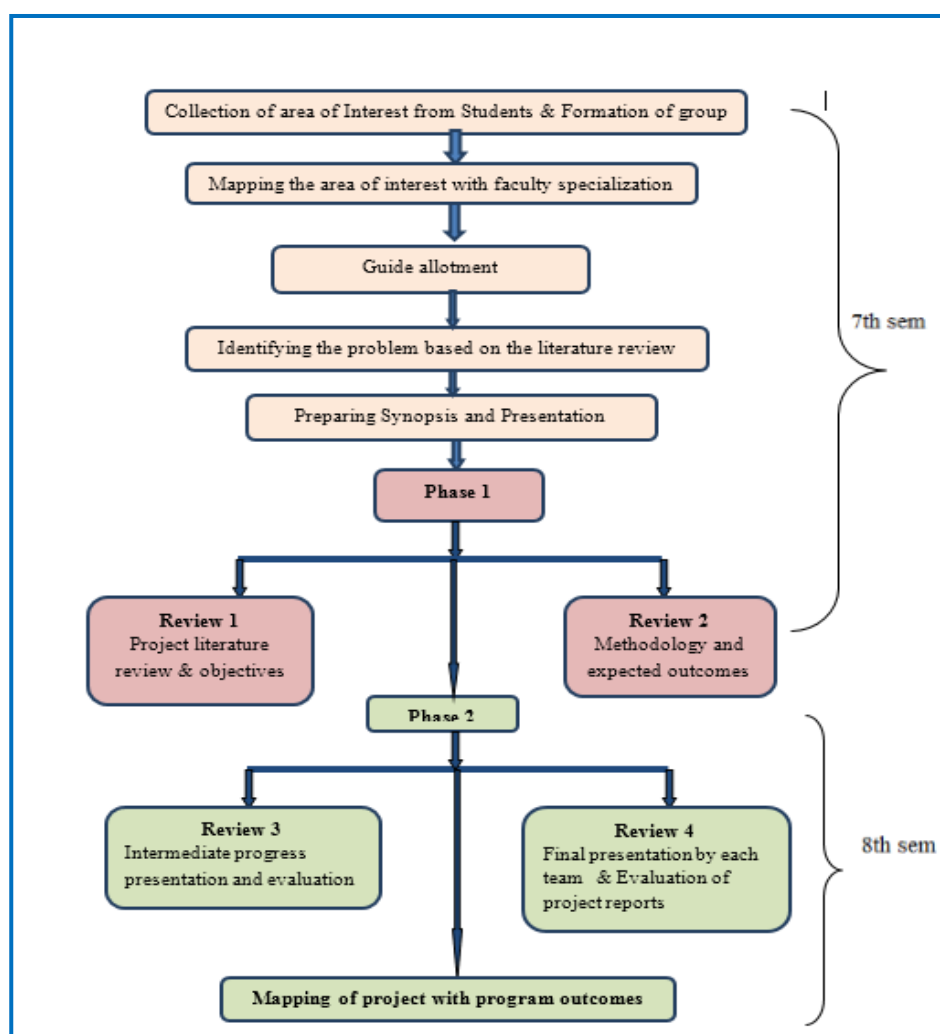


Figure 2.28 Flow Chart of Project completion process

A. Identification of projects and allocation methodology to Faculty Member

Task	Particulars
Final Year Project work	
Collection of area of interest from students & formation of group	- Project coordinator is responsible for planning, scheduling and execution of all the activities related to the student project work - Students are invited to prepare their batch and submit their area of interest to project coordinator - Project coordinator finalizes project groups consisting minimum two and maximum of four members as per the University guidelines
Mapping the area of interest with faculty specialization	Project coordinator will map the area of interest of students with faculty specialization
Guide allotment	Based on the student's interested area, faculty specialization, a project guide is allotted by Program coordinator in mutual consent with students and guide
Identifying the problem based on the literature review	Students are instructed to do the literature survey to identify the problem for project
Preparing synopsis and presentation	- The student submitting project synopsis is pre-evaluated by project guide - Final Synopsis is submitted to project coordinator
Phase 1	
Review 1	Project literature review & objective
Review 2	Methodology and expected outcomes
Phase 2	
Review 3	Intermediate progress presentation and evaluation as per rubrics
Review 4	Final presentation by each team and evaluation of project reports as per rubrics
Final Evaluation	Internal and External Examiners as per the university Guideline Final Viva voce is conducted for 100 marks

B. Types and relevance of the projects and their contribution towards attainment of POs and PSOs

Table B 2.16 Student Project works carried out in various Domains

Sl. No.	SPECIALIZATION	YEAR			
		2017-18	2018-19	2019-20	2020-21
1	Structural Engineering	4	3	4	1
2	Concrete Technology	13	14	7	10
3	Environmental Engineering	4	3	8	7
4	Geotechnical Engineering	5	2	2	2
5	Water Resource Engineering	1	2	1	0
6	Transportation Engineering	4	4	9	9
7	Remote Sensing and GIS	1	1	1	1

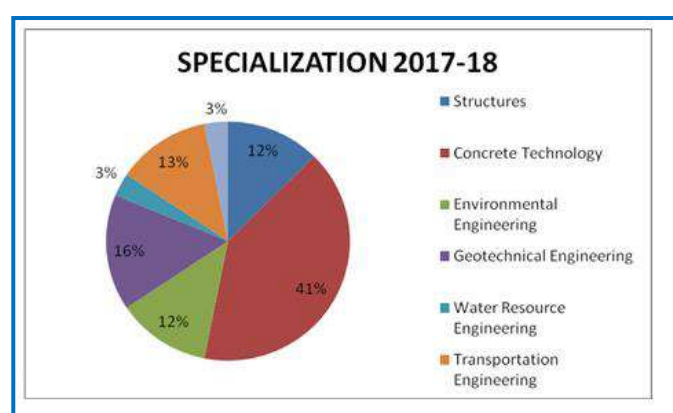
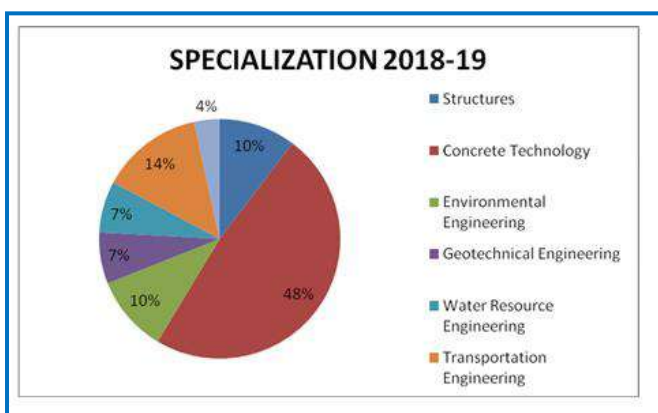
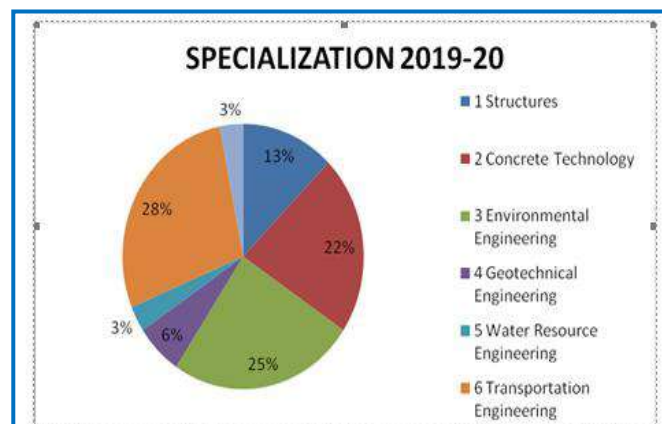
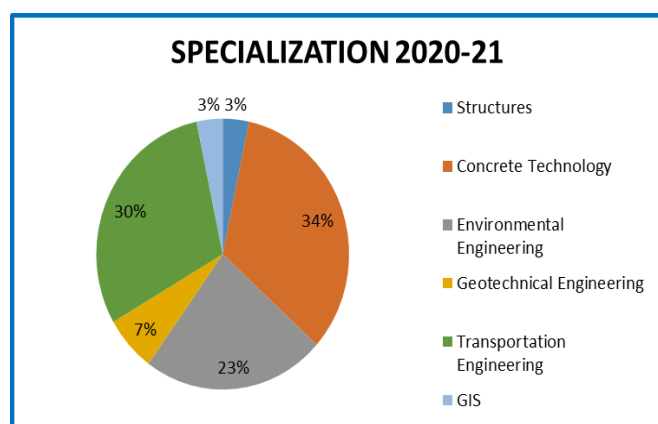


Figure 2.29 Projects categorized on various domains

Table B 2.17: List of Projects 2017-2021 Batch

Sl. No.	Project Title	Name	USN	Guide	Area of work Carried out	POs/PSOs attainment
1	Experimental Study on Geopolymer Concrete by Using GGBS and Alkaline Solution	Arpitha M	1SJ15CV012	Mrs. Bhavya S	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Abilash K R	1SJ17CV001			
		Manoranjana Gowda K P	1SJ17CV040			
		Kushal N	1SJ18CV418			
2	Removal of Heavy Metals From The Industrial Waste Water Using Low Cost Adsorbents	Nischal S	1SJ15CV063	Ms.Vathsala M N	Environmental Engineering	PO1,PO2,PO3, PO4,PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Akshay N Hadimani	1SJ17CV002			
		Arun M	1SJ17CV006			
		Harsha T G	1SJ18CV413			
3	Partial Replacement of Cement by Cardboard Ash In Concrete	Bharath Reddy V	1SJ17CV008	Mr. Kamath G M	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Ali Asgar Khoja	1SJ17CV003			
		Dilip G K	1SJ18CV408			
4	Mechanical And Permeability Properties of Porous Asphalt	Sumukh	1SJ15CV105	Mr. Chethan G N	Highway Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Archana B C	1SJ17CV005			
		Bhavana T N	1SJ17CV009			
		Dharmanna	1SJ18CV407			
5	Evaluation of Natural & Artificial Fibers Reinforced Concrete By Using Waste Materials	Altaf Hussain H	1SJ16CV006	Mrs.Chandrakala S	Concrete Technology	PO1,PO2,PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Basavaraj Singry	1SJ17CV007			
		Meghana G M	1SJ17CV041			
		Bhavani Shankara G	1SJ18CV404			
6	Experimental Study On SCC With Partial Replacement Of Cement By GGBS, Fly Ash With The Use Of Glass Fibres	Kavya Shree G	1SJ16CV037	Mr. Manjunatha K A	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Chaithanya K R	1SJ17CV010			
		Chethan Kumar K J	1SJ17CV016			
		Anil Kumar D V	1SJ18CV401			
7	Removal Of Heavy Metals From Industrial Waste Water By Electro Coagulation	Mahendra N	1SJ16CV055	Ms.Vathsala M N	Environmental Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10,
		Chandana K M	1SJ17CV011			
		Charan K S	1SJ17CV012			

		Deviyani G S	1SJ17CV018			PO11, PO12, PSO1, PSO2
8	Accident Analysis From Damaged Vehicle In Police Station-Case Study Of Chickabalapura Taluk	Rashmi M J	1SJ16CV086	Dr. Sidde Gowda	Transportatio n Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Suhas S M	1SJ16CV108			
		Chethan K N	1SJ17CV015			
		Gowthami J	1SJ17CV021			
9	An Experimental Study On LITRACON	Mohammed Sayeed	1SJ15CV128	Mr.Arun Kumar C J	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		H Lingareddy	1SJ17CV022			
		Hemanth K	1SJ17CV023			
		Hemavathi R	1SJ17CV024			
10	Experimental Study On Autoclaved Aerated Concrete	Rajesh R A	1SJ16CV085	Mr.Shashi Kumar A	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Ismail Pinjar	1SJ17CV025			
		Kanthraj B N	1SJ17CV027			
		Navyashree V A	1SJ17CV044			
11	Identification And Improvement of Accident Black Spots	Yashavanth R	1SJ16CV122	Mr. Mohan N	Transportatio n Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Jeevan Kumar G S	1SJ17CV026			
		Kavya K	1SJ17CV028			
		Kavyashree B V	1SJ17CV029			
12	Experimental Investigation On Black Cotton Soil Using Admixtures For Road Construction	Krithi C N	1SJ17CV034	Mr. Kiran K M	Geotechnical Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Kunal Kumar	1SJ17CV035			
		Lokesh Aradhya K S	1SJ17CV036			
		Charan Gowda H L	1SJ18CV406			
13	Experimental Investigation On High Performance Concrete By Partial Replacement of Cement By Fly Ash And Fine Aggregate By Rice Husk Ash	Sushmitha K	1SJ16CV109	Mr. Ravikiran B	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Kiran Kumar M A	1SJ17CV032			
		Kowshik D	1SJ17CV033			
		Mallika B S	1SJ17CV038			
14	Experimental Investigation On Use of Recycled Aggregate And Reclaimed Asphalt Pavement In Pavement Construction	Yogesh K R	1SJ16CV123	Ms. Sushma M	Highway Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Monika N	1SJ17CV042			
		Monish Kumar D N	1SJ17CV043			
		Makun Shah	1SJ17CV037			
15	Development And Experimental Analysis of Mortar less Interlock	Ankitha Reddy R	1SJ17CV004	Mr. Rajeeva S J	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6,
		Charan M	1SJ17CV013			

	Bricks	Charan R	1SJ17CV014			PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		R Chandana	1SJ17CV056			
16	Study The Behavior of Watermelon Seeds And Ferric Chloride As A Coagulant To Treat The Domestic Effluent	K S Chitritha	1SJ16CV033	Mr. Kamath G M	Environmental Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Padmaraj	1SJ17CV046			
		Adarsha J	1SJ18CV400			
		Divya V	1SJ18CV410			
17	Subgrade Strengthening Of Roads On Clay Soil Using Quarry Dust And Lime	Praveen M	1SJ17CV416	Mr. Mohan N	Transportation Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Pallavi J	1SJ17CV047			
		Arun Kumar T A	1SJ18CV402			
		Monica A L	1SJ18CV420			
18	Copper Slag As Fine Aggregate Replacement For High Performance Concrete	Ruchitha B R	1SJ16CV088	Dr. G Narayana	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Pavithra R	1SJ17CV048			
		Gokarna Y J	1SJ18CV412			
		Harshavardhana C M	1SJ18CV414			
19	Suitability Of Hebbal-Nagawara Valley waste water For Irrigation In Chickballapur District	Shaik Noor Mohammed	1SJ16CV099	Mr. Ravindra M V	Environmental Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Pravalika A	1SJ17CV052			
		Priyanka S B	1SJ17CV053			
		K Devaraj Gowd	1SJ18CV416			
20	Road Safety Audit-Case Study Of NH 44	Yogesh N	1SJ16CV124	Mr. Manjunath N	Transportation Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Pramod Siddarth D	1SJ17CV049			
		Rakesh S	1SJ17CV057			
		Bhoomika H O	1SJ18CV405			
21	GIS Application In Visualization Of Ongoing And Upcoming Highway Projects In Karnataka	Pruthvi Chandra K N	1SJ17CV054	Ms. Sushma M	GIS & Highway Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Purushotham S	1SJ17CV055			
		Suvek M	1SJ17CV072			
		Bhoomika K R	1SJ17CV084			
22	An Experimental Investigation On The Mechanical Properties Of Bacterial Concrete	Darshan A N	1SJ17CV405	Mr. Shashi Kumar N V	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Pratibha Patil	1SJ17CV051			
		Rakshita K A	1SJ17CV058			
		Keshava Murthy	1SJ18CV417			

23	Deficient Shoulder Width And Its Influence On Road Crash Frequency On Highways	Ranjith P	1SJ17CV059	Mr. Ravindranath C	Highway Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Ranjitha R	1SJ17CV060			
		Ravi Bilawar	1SJ17CV061			
		Madhusudhan S	1SJ18CV419			
24	Experimental Study On Transparent Concrete	Roopa T S	1SJ17CV062	Mr. Arun Kumar C J	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		S Prajwal	1SJ17CV063			
		Shravanthi T N	1SJ17CV069			
		Naveen A	1SJ18CV422			
25	System For Assessing Suitability Of Water For Irrigation	Shashikala M	1SJ17CV067	Mr. Ravindra M V	Environmental Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Shravani K P	1SJ17CV068			
		Vinod Kumar	1SJ17CV077			
		Pavan Kumar B O	1SJ18CV423			
26	Factors Affecting The Congestion And Encroachments Of Urban Roads-Case Study Of Chickballapur City	Sindhu M	1SJ17CV070	Mr. Manjunath N	Transportation And Highway Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Srisha A R	1SJ17CV071			
		Jayarama M	1SJ18CV415			
		Pavan Kumar N V	1SJ18CV424			
27	Experimental Investigation On Clayey Soil Using Admixtures For Road Construction	Timmareddy	1SJ17CV073	Mr. Kiran K M	Geotechnical Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Varun Gowda M	1SJ17CV075			
		Venkatesh S	1SJ17CV076			
		Thriveni R	1SJ18CV430			
28	Experimental Study Of Plastic Bricks Made From Waste Plastic	Sachin Jaiswal	1SJ17CV064	Mrs. Sharada S A	Environmental Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Viresh	1SJ17CV079			
		Vinayakumari T	1SJ18CV433			
		Irfan Bashir	1SJ18CV434			
29	Accident Analysis Based On Spot Speed Study	Yashaswini C	1SJ17CV080	Mr. Ravindranath C	Transportation And Highway Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Chirag H N	1SJ17CV086			
		Syeda Saba Kounain	1SJ18CV427			
		Tayappa	1SJ18CV428			
30	Analysis And Design Of Residential Building With Sustainable	Deepak C S	1SJ15CV027	Mr. Raghu K	Structural Engineering	PO1, PO2, PO3, PO4, PO5, PO6,
		Amulya R	1SJ17CV083			

	Materials	Sanjay H V	1SJ18CV425			PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Vasudeva Bayari R	1SJ18CV432			

Table B 2.18 List of Projects 2016-2020 Batch

Sl. No.	Project Title	Name	USN	Guide	Area of work Carried out	POs/PSOs attainment
1	Reutilization of Plastic Waste in Bituminous Road Construction	Vishvas Ranjan T N	1SJ5CV123	Mr. Mohan N	Transportation Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Charan Raj A D	1SJ16CV017			
		Akshay H C	1SJ17CV403			
		Arun Kumar C K	1SJ17CV404			
2	Analysis and Impact of Spot Speed & Traffic Volume at Black Spot Area	Harsha K C	1SJ16CV031	Dr. Sidde Gowda	Transportation Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Kushal C M	1SJ16CV043			
		Kushal Kumar R	1SJ16CV044			
		Madhan Kumar G N	1SJ16CV049			
3	Treatment of Sullage by Using Natural Laterite & Chitosan as an Adsorbent	Hema Y B	1SJ16CV032	Ms. Vathsala M N	Environmental Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Kalava Uthej Kumar	1SJ16CV035			
		Kiran N	1SJ16CV039			
		Maale Hareesa	1SJ16CV048			
4	Feasibility Study On Moringa Oleifera & Alum As A Coagulant For Treating Municipal Effluent & Quality Of Water For Agriculture	Faizan Asif N	1SJ16CV023	Mr. Kamath G M	Environmental Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Mahanth Kumar V	1SJ16CV054			
		Madhu T N	1SJ16CV053			
		Manoj Kumar T S	1SJ16CV058			
5	Analysis of Road Safety Accidental Survey at Black Spot Areas At Kolar District	Madhan Kumar G	1SJ17CV412	Mr. Rajeev S J	Transportation Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Manjunatha K	1SJ17CV414			
		Nethrabhinandan Kumar T	1SJ17CV415			
		Sagar V	1SJ17CV417			
6	Management of Agricultural Waste and Soil Neutrification by Vermin Compositing with Earth Worms	Abhishek G S	1SJ6CV003	Mrs. Ankitha V	Environmental Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Gayithri	1SJ17CV406			
		Karthik M N	1SJ17CV411			
		Swathi H V	1SJ17CV420			

7	Morphometric Analysis of Vrishabhavathi River Basin	Harshitha T	1SJ17CV408	Mr. Kamath G M	Environmental Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Bipin	1SJ16CV014			
		Charan	1SJ16CV016			
		Girija	1SJ16CV025			
8	Eco Friendly Concrete with Ferro, M Sand and Recycled Aggregates	Baidyanath Kumar Mandar	1SJ16CV012	Mr. Raghu K	Structural Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Dhirendra Kumar Sah	1SJ16CV019			
		Dilip Kumar Shah	1SJ16CV020			
		Harish	1SJ16CV029			
9	Experimental Investigation On CBR For Nebulizing Clay Soil With Fly Ash And Waste Poly Propylene In Pavement Design	Ankitha M S	1SJ6CV009	Mr. Mohan N	Transportation Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Goutham B N	1SJ16CV026			
		Kavana M	1SJ16CV036			
		Karava Sai Kesava Reddy	1SJ17CV410			
10	Experimental Study On Concrete By Partial Replacement Of Cement By Fly Ash And Rice Husk By Fine Aggregates	Nandini B	1SJ15CV061	Dr. G Narayana	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Anusha B K	1SJ16CV011			
		Geethajali S	1SJ16CV024			
		Gowthmi D K	1SJ16CV027			
11	Improvement Of Engineering Properties Of Silty Sand Soil By Adding Admixtures	Divyashree B	1SJ16CV021	Mr. Kiran K M	Geotechnical Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Lavanya T	1SJ16CV047			
		Meghana M	1SJ16CV061			
		Monika M	1SJ16CV063			
12	VISSIM – Based Simulation Analysis On Road Network Of CBD In Chickballapur	Harini C Shekar	1SJ14CV033	Mr. Manjunath N	Transportation Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Shree Lakshmi	1SJ15CV100			
		Haritha G V	1SJ16CV030			
		Lavanya B L	1SJ16CV046			
13	Improvement Of Geotechnical Properties Of Silty Sand Soil Using Natural Pozzolona And Lime	Praveen Kumar	1SJ15CV074	Mr. Kiran K M	Geotechnical Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Manoj M	1SJ16CV059			
		Manoj S	1SJ16CV060			
		Mohammed Tanveer	1SJ16CV062			
14	Experimental Study On Light Weight Concrete Using Pumice Stone	Anil Kumar R	1SJ16CV008	Mr. Chethan G N	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12,
		Madhana K B	1SJ16CV050			
		Madhu Sudhan H M	1SJ16CV052			
		Ramesha T	1SJ15CV077			

						PSO1, PSO2
15	Hydro Logical Drought Analysis Of Chickballapur	Achyutha C A	1SJ16CV004	Mr. Ravindranath C	Water Recourse Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Keerthi K M	1SJ16CV038			
		Kothamedha Girivarshini	1SJ16CV042			
		Manasa K V	1SJ16CV056			
16	Estimation Of Evaporation And Evapotranspiration Using Software Application Tool.	Shashank Pm	1SJ13CV101	Mr.Arun kumar C J	Environmental Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Kishor N	1SJ16CV041			
17	Road Safety And Analysis Of Accidents At The Black Spot Areas	Priyanka T L	1SJ16CV080	Mr. Chethan G N	Transportation Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Shirisha K R	1SJ16CV102			
		Varun Dev K	1SJ17CV423			
18	Analysis, Design And Detailing Of Educational Building (G+7) At Bengaluru Using E – Tabs And Auto Cad	Niharika Nayana	1SJ16CV067	Mr.Arun kumar C J	Structural Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Niharika S	1SJ16CV068			
		Pinky V	1SJ16CV075			
		Vinod C	1SJ16CV118			
19	Experimental Studies On SCC With Partial Replacement Of Cement by GGBS And Fly Ash Using Glass Fibres	Sagar L P	1SJ16CV090	Mr. Manjunath K A	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Sharon P	1SJ16CV100			
		Vinay Kumar V	1SJ16CV117			
		Vipina M	1SJ16CV120			
20	Preparation Of Bricks Using Construction Demolition Waste And Sludge	Roopa B	1SJ16CV087	Ms. Vathsala M N	Environmental Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Sandhya S A	1SJ16CV094			
		Harshith M	1SJ16CV410			
		Abhilash A	1SJ17CV401			
21	Analysis And Design Of G + 5 Residential Building Using E Tabs	Niveditha P M	1SJ16CV072	Mrs.Chandrakala S	Structural Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Pravallika B S	1SJ16CV077			
		Devarinti Mokshith	1SJ16CV125			
		Darshan A N	1SJ17CV405			
22	Desalination And Removal Of	P Swetha	1SJ16CV073	Mr. Ravindra M V	Environmental Engineering	PO1, PO2, PO3, PO4,
		Sarugu Manjunath	1SJ16CV097			

	Organic Pollutants Using Electro Bio Chemical Reactor	Soumya A	1SJ16CV105			PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Tejeshwar H	1SJ16CV112			
23	Influence Of Metakaloin And Basalt Fibres On Strength Of Concrete – An Experimental Approach.	Nataraj G N	1SJ16CV066	Mr.Shashi kumar A	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Pavan Reddy S	1SJ16CV074			
		Santosh Kumar K S	1SJ17CV418			
24	Laboratory Characteristics Of Self Consolidating Concrete By Using Partially Replaced HDPE Aggregates	Geetha K S	1SJ17CV407	Mr. Rajeev S J	Transportation Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Madhu L	1SJ17CV413			
		Vaibhav S	1SJ17CV422			
		Vinod Kumar B L	1SJ17CV425			
25	Identification Of Urban Traffic Accident Hot Spot – A Case Study Of Chickballapur City	Sankeeth Gowda	1SJ16CV095	Mr. Manjunath N	Transportation Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Shabanam Taj	1SJ16CV098			
		Vasu A	1SJ16CV114			
		Vidya J V	1SJ16CV115			
26	Comprehensive/ Geospatial Study Of College Transportation Service	Rahatul Bashir	1SJ16CV082	Ms. Sushma M	GIS Application based	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Vishnu U K	1SJ16CV121			
		Ajaz Ahmad Sheikh	1SJ17CV402			
		Sarfaraz Ahmad Reshi	1SJ17CV419			
27	Experimental Study On HPC By Using Rice Husk, Silica Flume And Flyash	Haritha G V	1SJ16CV030	Mr. Ravi kiran B	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Sindhu R	1SJ16CV103			
		Sahera Khanum A	1SJ16CV091			
28	Suitability Of Koramangala And Challagatta Sewage Effluents For Irrigation	Niketh Chaudhary	1SJ16CV069	Mr. Ravindra M V	Environmental Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Sandeep Wagle	1SJ16CV093			
		Priyaka Aimaje	1SJ16CV079			
		Rabin Kumar Kushwa	1SJ16CV081			
29	Synchronization Of Traffic Studies With Revamp Of Signal Design At B B Road Chickballapur	Rahul M	1SJ16CV083	Dr. Sidde gowda	Transportation Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		S Puneeth	1SJ16CV089			
		Suhas S M	1SJ16CV108			
		Indresh C H	1SJ17CV409			

30	Experimental Investigation On Use Of Sisal Fibre And Replacement Of Cement By Flyash In Concrete	Soundarya S	1SJ16CV106	Mrs. Sharada S A	Structural Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		T G Bindu	1SJ17CV421			
		Venkatesh Anant Achari	1SJ17CV424			
31	Experimental Study On Pervious Concrete With Polypropylene Fibres And Partial Replacement Of Cement By Flyash And Coarse Aggregates By Pebbles	Srinath P V	1SJ14CV094	Dr. G Narayana	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Madhusudhan M	1SJ15CV048			
		Syed Husen Sha	1SJ15CV093			
32	Experimental Investigation of Smart Dynamic Concrete Replacement Of Fine Aggregate With Foundry Sand	Niranjan M	1SJ15CV062	Mr. Shashi kumar N V	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Santosh Yadav	1SJ16CV096			
		Thanush Vijay Babu	1SJ16CV113			
		Vinoth T	1SJ16CV119			

Table B 2.19 List of Projects 2015-2019 Batch

Sl. No.	Project Title	Name	USN	Guide	Area of work Carried out	POs/PSOs attainment
1	Identification And Analysis Of Accident Black Spots Using GIS-Case Study Of National Highway	Mukesh Kumar Mandal	1SJ15CV020	Ms. Sushma M	GIS	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Madan Aryal	1SJ15CV047			
		Akshay Gundagi	1SJ15CV005			
		Harshitha M	1SJ15CV038			
2	Experimental Study On Behavior Of Papercrete Concrete	Vinod Kumar H	1SJ16CV436	Mr. Chethan G N	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Srikantha K Y	1SJ16CV434			
		Yashodha N B	1SJ16CV437			
		Chethan M	1SJ15CV126			
3	Experimental Study On Geo Polymer Concrete By Using GGBS, Flyash And Alkaline Solution	Gowtham G	1SJ15CV033	Mr. Ravi Kiran B	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Mohammed Jaffer Sadiq K A	1SJ15CV057			
		Prashanth	1SJ16CV419			
		Rakesh B K	1SJ16CV424			
4	Road Safety Audit – Case Study Of A National Highway	Akshay Kumar	1SJ15CV006	Dr. Sidde gowda	Transportation Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Guruprasad Hugar	1SJ16CV408			
		Amrin Taj	1SJ15CV007			
		Arnab Chaudhuri	1SJ15CV011			

5	Improvement of Mechanical Properties Laterites Soil Treated With Admixtures	Kusuma M	1SJ14CV039	Mr. Kiran K M	Geotechnical Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Anitha B R	1SJ16CV401			
		Anushree R S	1SJ16CV402			
		Sindhu P M	1SJ16CV432			
6	Analysis And Management Of Waste Water In SJC Boys Hostel	Chakravarthi R	1SJ15CV023	Mr. Ravindrana th C	Water resource	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Ganesh K N	1SJ15CV032			
		Soshil H M	1SJ15CV034			
		Chandrashekar B Biradhar	1SJ16CV406			
7	Generation Of Rainfall Intensity Duration Frequency Curve	Anusha G R	1SJ15CV008	Mr. Ankitha V	Water resource	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Manoj V	1SJ15CV053			
		Namratha K	1SJ15CV060			
8	Flexural Study On M30 Grade RC Beam Replacing Fine Aggregate With Foundry Sand For Under Reinforced Section	Arun Kumar S	1SJ15CV015	Mr. Shashikumar A	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Bhavan G P	1SJ15CV019			
		Lakshmi K R	1SJ15CV045			
		Manoj Nayaka P	1SJ15CV052			
9	Experimental Study On Geopolymer Concrete By Using Bagasse Ash, Fly Ash, Alkaline Solution	Bramhini A N	1SJ15CV021	Mr. Ravi kiran B	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Chaithra B	1SJ15CV022			
		Malathi N	1SJ15CV049			
		Meghana A	1SJ15CV054			
10	Road Safety Audit For Existing Road – Case Study For National Highway	Meghana K S	1SJ15CV055	Mr. Mohan N	Transportation Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Keerthi Kumar N	1SJ16CV412			
		Manoranjan G P	1SJ16CV416			
		Madan Kumar V S	1SJ16CV414			
11	Comparative Studies On Cement By Partial Replacement Of Fly Ash And Metakaolin In Self Compacting Concrete	Arun Kumar K	1SJ15CV014	Mrs. Sharada S A	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Ranjith D M	1SJ16CV425			
		Ragavendra V	1SJ16CV422			
		Harish S R	1SJ15CV037			
12	Condition Survey For RC Building Using Non Destructive Testing Methods	Deepika L	1SJ15CV028	Mr. Rajeeva S J	Construction Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Divya S A	1SJ15CV031			
		Imran Khan K	1SJ15CV039			
		Harsha K	1SJ15CV036			
13	Experiment Investigation On	Dhanushree H G	1SJ15CV029	Mr. Manjunath N	Transportation Engineering	PO1, PO2, PO3, PO4, PO5, PO6,
		Architha	1SJ15CV010			

	Study Effect Of Low Density Polythene On Marshall Stability Of Bituminous Mix	Bhaskar Reddy	1SJ15CV018			PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Revanasiddappa D	1SJ16CV426			
14	Comparative Study On Self Compacting Concrete Using Industrial Byproducts And Glass Fibres	Lingam Karthik Reddy	1SJ15CV046	Mr. Manjunath K A	Concrete Technology	PO1,PO2,PO3, PO4,PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Manikappa	1SJ15CV050			
		Girish Babu	1SJ16CV407			
		Sangeetha	1SJ16CV428			
15	Seismic Analysis And Design Of Multistoried Building Using Etabs	Ram Lakhan Sah	1SJ15CV078	Mr. Raghu K	Structural Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Sanjip Shah	1SJ15CV091			
		Santosh Kumar Sah	1SJ15CV092			
		Sushma D R	1SJ15CV112			
16	Seismic Analysis And Design Of Goodwill Complex In Pokhara, Nepal Using Indian Standards	Rupesh Poudel	1SJ15CV085	Mr. Raghu K	Structural Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Ravi Sah	1SJ15CV080			
		Swapnil Sigdel	1SJ15CV114			
17	Partial Replacement Of Coarse Aggregates With Waste Glass Pieces And Fine Aggregates With Quarry Dust	Nyamath Pasha	1SJ15CV064	Dr. G Narayana	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Prajwal K S	1SJ15CV071			
		Prashanth P	1SJ15CV073			
18	Analysis Of Flexural Behavior Of RC Beams For M20 Concrete	Rudresh Yadav B	1SJ15CV084	Mr. Shashikumar A	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Devaraja M	1SJ13CV035			
		Sachin M Kumbar	1SJ15CV086			
		Pooja E	1SJ15CV069			
19	Analysis, Design And Detailing Of G+6 Commercial Building Using E-Tabs	Pooja H S	1SJ15CV070	Mr. Arun kumar C J	Structural Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Tejashree K R	1SJ15CV118			
		Hemanth Kumar N	1SJ16CV411			
		Nagesh Babu N	1SJ16CV417			
20	Experimental Study On Cellular Lightweight Foam Concrete Blocks	Naveen G	1SJ16CV418	Dr. G Narayana	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Supriya N	1SJ15CV108			
		Swetha N B	1SJ15CV115			
		Manjunatha V	1SJ16CV415			
21	Removal Of Heavy Metals From Industrial Waste Water Adsorbent Using			Ms.Vathsala M N	Environmental Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Pulikeshi M N	1SJ16CV421			
		Punithkumar S D	1SJ15CV075			
		Sanjay B R	1SJ15CV090			
		Suryakant C Talawar	1SJ15CV111			
		Syed Suhail	1SJ15CV117			

22	Experimental Study On Behavior Of Steel Fibre Reinforced Concrete By Partial Replacement Of Cement With Fly Ash	Pankaj J	1SJ15CV066	Mr. Suhas K B	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Vijay Kumar G P	1SJ15CV120			
		Rajesha R	1SJ16CV423			
		S Venkatesh Reddy	1SJ16CV427			
23	Experimental Investigation On Foam Concrete	Ranjeeth E	1SJ15CV079	Mrs. Bhavya S	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Riyakath M R	1SJ15CV082			
		Pavan Kumar K	1SJ15CV068			
		Yamuna R	1SJ15CV124			
24	Evaluations Of Pavement Distress Of Rural Roads	Srinidhi G	1SJ15CV101	Mr. Sachin H R	Transportation Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Suresh N	1SJ15CV109			
		Ajay Kumar V	1SJ16CV400			
		Ashok Babu S	1SJ16CV404			
25	Experimental Investigation On Partial Replacement Of Cement By Lime And Rha, Coarse Aggregates By Recycled Aggregates	Harish Gowda H B	1SJ16CV409	Mrs.Chandrakala S	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Srikanth S	1SJ16CV433			
		Swapna	1SJ15CV113			
		Vinayak Babu	1SJ16CV435			
26	An Experimental Study On Mechanical And Durability Properties Of SFRC By Replacing Cement With Copper Slag And Sand With Iron Ore Tailing	Ragavendra Reddy C R	1SJ15CV127	Mr. Shashi kumar N V	Concrete Technology	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Arshiya Firdose H M	1SJ16CV403			
		Lathashree N	1SJ16CV413			
		Shobhana N K	1SJ16CV431			
27	Experimental Study Of Moringa Oleifera And Alum In The Treatment Of Domestic Waste Water	Sahana A	1SJ15CV087	Mr. Kamath G M	Environmental Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Pallavi S N	1SJ15CV065			
		Surya G	1SJ15CV110			
		Shiva Reddy N V	1SJ15CV095			
28	Effect Of Glass Fibre Reinforcement On Shear And Compression Test Of Black Cotton Soil	Yatheesh K S	1SJ14CV116	Mrs. Ramya B G	Geotechnical Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Sai Ashik A R	1SJ15CV088			
		Shravan Kumar K N	1SJ15CV096			
		Syed Owais Sultan	1SJ15CV116			

29	Treatment Of Dairy Waste Water Using Low-Cost Adsorbents	Roopa Pattar	1SJ15CV083	Mr. Ravindra M V	Environmental Engineering	PO1,PO2,PO3, PO4,PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
		Shirisha B	1SJ15CV094			
		Shwetha N	1SJ15CV097			
		Yashasvini B A	1SJ15CV125			

C. Process for monitoring and evaluation

The department has systematic procedure to monitor and review the progress of project work continuously. Project reviews are conducted in two phases as per the schedule displayed in the calendar of events. The phase I project review is conducted in seventh semester and phase II project review is conducted in eight semesters as per University curriculum. During review, all students must present the progress of their project work. The review will be conducted by the project coordinators along with panel members appointed by the Program coordinator. The project work will be evaluated as per the rubrics decided. During the review, students have to present their objectives, literature review, methodology and project outcomes.

The project report prepared by the students is as per the specified guidelines of university. Department encourage students to participate and present their completed project in various conferences and project exhibition both inside and outside college.

The Internal Project Evaluation is carried out in 2 Phases i.e. Phase-1 & 2. The details are shown below

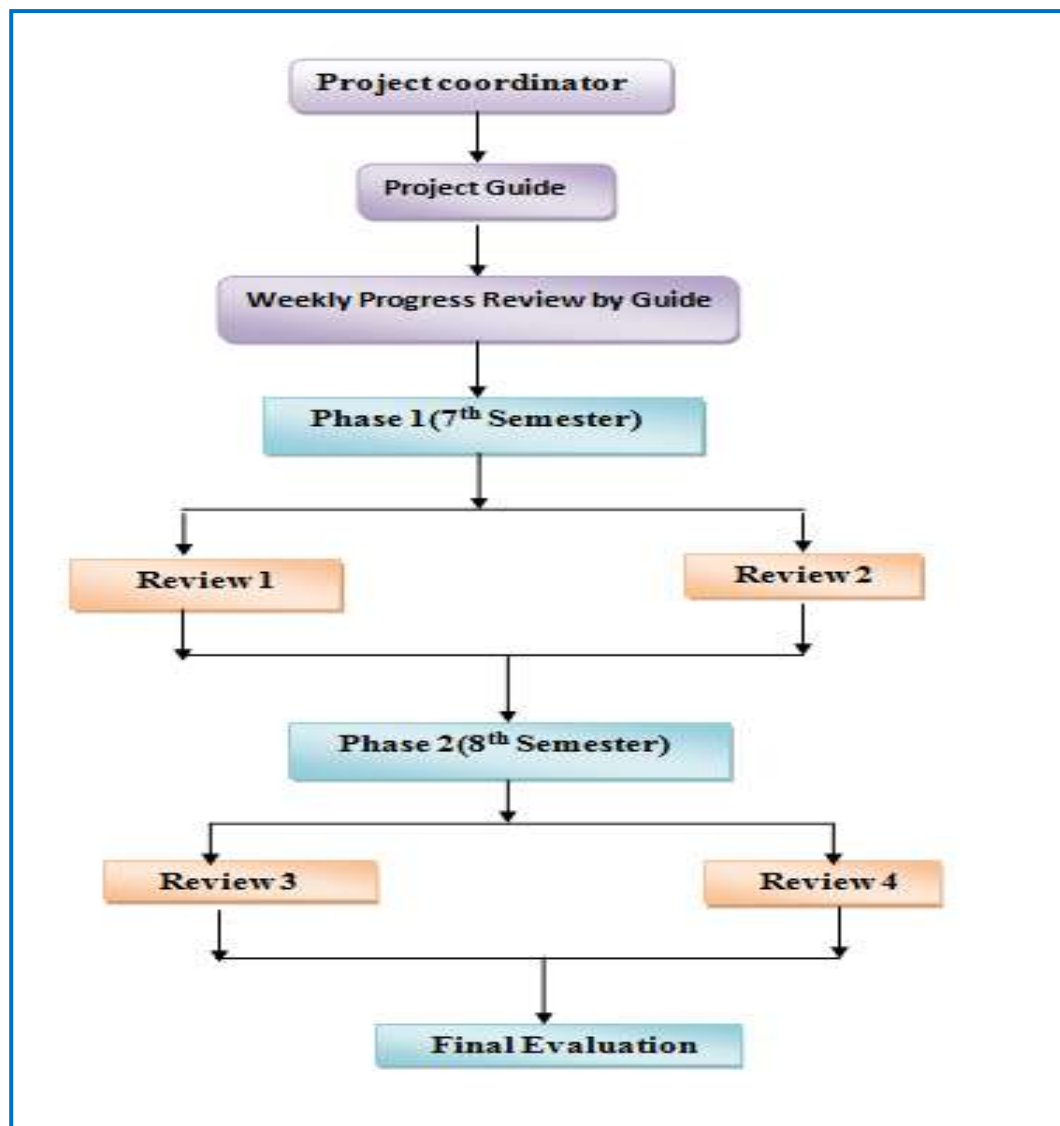


Figure 2.30(a) Process for project monitoring and evaluation

Table B 2.20 Rubrics for Project Internal Evaluation

Phase – I (Review – I): Preliminary Project Evaluation					Marks: 40
1	Literature Review	10 Marks	3	Significance and relevance of work	5 Marks
2	Problem identification and definition	10 Marks	4	Presentation and Report	15 Marks

Phase – I (Review – II): Project Synopsis and Project Seminar Evaluation Marks: 60

1	Objectives and methodology of project	10 Marks	3	Project Seminar	20 Marks
2	Plan of execution	05 Marks	4	Project Synopsis report	25 Marks

Phase – II (Review –I): Project Intermediate Evaluation Marks: 40

1	Plan of execution	05Marks	3	Implementation/Results	05 Marks
2	Progress of work	10 Marks	4	Presentation and Report	20 Marks

Project Phase – II Rubrics**Phase – II (Review – II): Project Intermediate Evaluation_ Marks: 60**

1	Demonstration	10 Marks	3	Results, discussions and conclusion	15 Marks
2	Presentation	10 Marks	4	Final project report	25Marks

D. Process for individual and team performance

The project coordinator, guides and the reviewers will scrutinize the process of project work in the following way

Internal Evaluation: The project work and the report will be evaluated by internal committee Phase-1 and Phase-2

External Evaluation: The project work and the report will be evaluated by internal and external examiners appointed by the University. The external examiner will be from other VTU affiliated Institutions.

The examination consists of presentation and demonstration followed by Viva-Voce on the project work carried out by students.

The students individually need to defend their work and effective answers for their queries will be awarded marks for the students.

The following rubrics are used to do assess individual and team work is tabulated in the Table B.2.21.

Table B 2.21 Rubrics for Project Internal Evaluation

Sl. No.	Title	Level of Achievement			
		Excellent	Good	Average	Average
1	Literature Review (10)	- Information is gathered from multiple, research-based sources. - Detailed conclusions are reached from the evidence offered. - Information is cited properly and in standard format. (10)	- Information is gathered from multiple sources. - Conclusions are reached from the evidence offered. - Information is cited properly. (8)	- Information is gathered from a limited number of sources. - There is some indication of conclusions from the evidence offered. - Information is cited, but has errors. (5)	- Information is gathered from a single source. - No conclusions are made from the evidence offered - Information is not cited or is cited incorrectly. (3)
2	Problem identification and definition (10)	- Detailed and extensive explanation of the purpose and need of the project - Detailed and extensive explanation of the specifications and the limitations of the existing systems (10)	- Good explanation of the purpose and need of the project - Collects a great deal of information and good study of the existing systems. (8)	- Average explanation of the purpose and need of the project - Moderate study of the existing systems; collects some basic information. (5)	- Moderate explanation of the purpose and need of the project - Explanation of the specifications and the limitations of the existing systems not very satisfactory; limited information. (3)
3	Significance and relevance of work (5)	- Selected work is researchable and could potentially resolve a clearly identified problem or issue - Selected work is relevant timely and grounded in practice (5)	- Description of the context for the question is clear - Selected work is timely and relevant to the issue or problem (4)	- Context is mentioned but not well described - Selected work is timely or relevant to the issue or problem, but not both (3)	No description for the context of the new or revised question (2)
4	Presentation (10)	- Contents of presentations are appropriate and well arranged - Proper eye contact with audience and clear voice with good spoken language (10)	- Contents of presentations are appropriate but not well arranged - Satisfactory demonstration, clear voice with good spoken language but eye contact not proper (8)	- Contents of presentations are appropriate but not well arranged - Eye contact with few people and unclear voice (5)	- Contents of presentations are not appropriate - Demonstration not satisfactory (2)
	Report (5)	Project preliminary report is according to the specified format and submitted in time (5)	Project preliminary report is according to the specified format but not submitted in time (4)	Project preliminary report is according to the specified format but some mistakes (3)	Project preliminary report not prepared according to the specified format (2)

|| JAI SRI GURUDEV ||
S J C Institute of Technology, Chikkaballapur
 Department of Civil Engineering
 Staff allotment for Project Phase-4 Marks Evaluation

Subject: Project Work
Semester: 8

Code: 17CVP85
Section: B

Batch	USN	Name	Evaluator Details	Components / Criteria of Evaluation				Total (50M)
				1 (5M)	2 (20M)	3 (10M)	4 (15M)	
B1	1SJ16CV033	K S CHITRITHA	Mr. Kamath G M	5	17	10	16	48
	1SJ17CV046	PADMARAJ		5	19	10	16	49
	1SJ18CV400	ADARSHA J		4	16	9	11	40
	1SJ18CV410	DIVYA V		4	16	9	11	40
B2	1SJ17CV416	PRAVEEN M	Mr. Mohan N	5	19	6	14	44
	1SJ17CV047	PALLAVIJ		5	20	10	14	49
	1SJ18CV402	ARUN KUMAR T A		3	17	8	13	41
	1SJ18CV420	MONICA A L		4	19	6	14	43
B3	1SJ16CV088	RUCHITHA B R	Dr. G Narayana	4	17	8	13	42
	1SJ17CV048	PAVITHRA R		4	19	10	15	48
	1SJ18CV412	GOKARNA Y J		5	19	6	14	44
	1SJ18CV414	HARSHAVARDHANA C M		5	18	8	14	45
B4	1SJ16CV099	SHAIK NOOR MOHAMMED	Mr. Ravindra M V	2	17	8	13	40
	1SJ17CV052	PRAVALIKA A		5	19	9	15	48
	1SJ17CV053	PRIYANKA S B		5	20	10	14	49
	1SJ18CV416	K DEVARAJ GOWD		4	18	8	14	44
B5	1SJ16CV124	YOGESH N	Mr. Manjunath N	04	18	8	14	44
	1SJ17CV049	PRAMOD SIDDARTH D		05	19	9	14	47
	1SJ17CV057	RAKESH S		02	19	8	14	43
	1SJ18CV405	BHOOMIKA H O		05	18	8	14	45
B6	1SJ17CV054	PRUTHVI CHANDRA K N	Ms. Sushma M	4	18	06	14	42
	1SJ17CV055	PURUSHOTHAM S		4	18	06	14	42
	1SJ17CV072	SUVEK M		4	18	10	15	47
	1SJ17CV084	BHOOMIKA K R		5	17	10	15	47
B7	1SJ17CV405	Darshan A N	Mr. Shashi Kumar N V	05	18	10	12	45
	1SJ17CV051	PRATIBHA PATIL		05	16	10	12	43
	1SJ17CV058	RAKSHITA K A		05	20	10	14	49
	1SJ18CV417	KESHAVA MURTHY		05	16	10	10	41
B8	1SJ17CV059	RANJITH P	Mr. Ravindranath C	5	17	7	15	44
	1SJ17CV060	RANJITHA R		5	18	7	15	45
	1SJ17CV061	RAVI BILAWAR		5	15	5	14	39
	1SJ18CV419	MADHUSUDHAN S		5	18	6	15	44
B9	1SJ17CV062	ROOPA T S	Mr. Arun Kumar C J	5	18	9	14	46
	1SJ17CV063	S PRAJWAL		4	18	8	13	43
	1SJ17CV069	SHRAVANTHI T N		5	19	7	14	45
	1SJ18CV422	NAVEEN A		4	19	8	13	44

Figure 2.30(b) Rubrics R1: Project Screening & Phase -1 Evaluation

E. Quality of project and working Prototypes

Working Prototypes and Enhancing the Relevance of Projects:

- The best projects identified will be sent to different colleges/institute for participation in exhibition
- The internal guide will help the students to publish their work in National/ International Conference and Journal.
- The Evidences of papers published /Awards received by projects are shown in Table B 2.22 & Table B 2.23
- Projects are applied for KSCST Student Project Proposal for funding agencies and granted funding details are shown in the Table B 2.24 Details of funded projects.

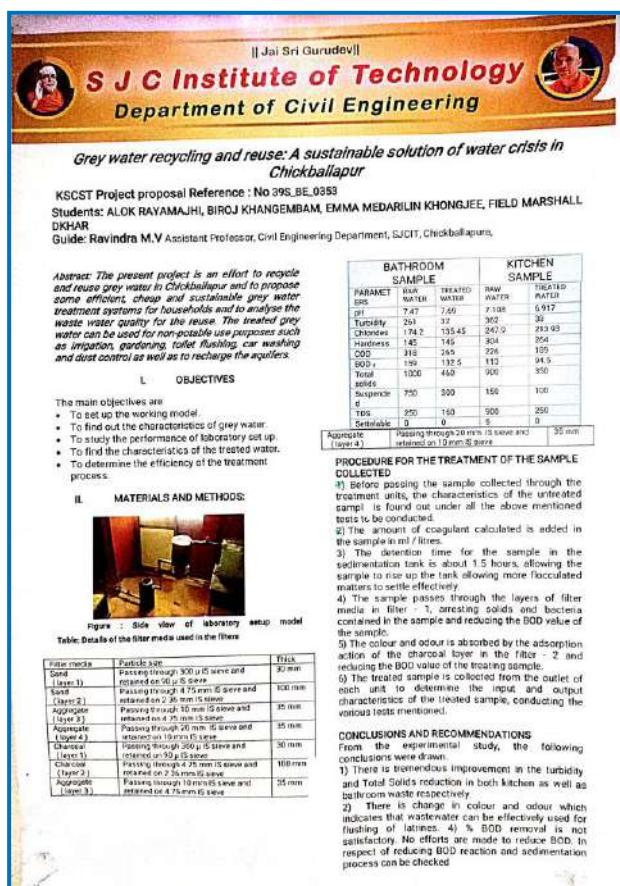


Figure 2.31 Projects exhibited by the students

F. Evidences of papers published /Awards received by projects etc. (2)

Table B 2.22 Publications by the students for their Project Work

Sl. No.	Project Title	Name	USN	Guide	Publication Details
1.	“Soft Application for assessing suitability of water for irrigation”	Shashikala M	1SJ16CV099	Mr. Ravindra M V	“Two day national conference on innovations & recent trends in civil engineering” by SVCE Bangalore on 09.06.2021 & 10.06.2021
		Shravani K P	1SJ17CV052		
		Vinod Kumar	1SJ17CV053		
		Pavan Kumar B O	1SJ18CV416		
2.	“Experimental Investigation on properties of Self Compacting Concrete by	Chethan Kumar K J	1SJ17CV016	Mr. Manjunath K A	National Conference “MANTHANA” 2021 on 28/08/2021 at SJCIT
		Chaithanya K R	1SJ17CV010		
		Kavya Shree G	1SJ16CV037		

	partial replacement of Cement by Fly ash, GGBS with the use of Glass fibres”	Anilkumar D V	1SJ18CV401		
3.	“An experimental investigation on the mechanical properties of bacterial concrete”	Rakshita K A	1SJ17CV058	Mr. Shashi Kumar N V	National Conference “MANTHANA” 2021 on 28/08/2021 at SJCIT
		Pratibha Patil	1SJ17CV051		
		Darshan A N	1SJ17CV051		
		Keshava Murthy	1SJ18CV417		
4.	“Experimental investigation on black cotton soil using admixtures for road construction”	Krithi C N	1SJ17CV034	Mr. Kiran K M	National Conference “MANTHANA” 2021 on 28/08/2021 at SJCIT
		Kunal Kumar	1SJ17CV035		
		Lokesh Aradhya K S	1SJ17CV036		
		Charan Gowda H L	1SJ18CV406		
5.	“Development and experimental analysis of mortar less interlock bricks”	Ankitha Reddy R	1SJ17CV004	Mr. Rajeeva S J	National Conference “MANTHANA” 2021 on 28/08/2021 at SJCIT
		Charan M	1SJ17CV013		
		Charan R	1SJ17CV014		
		R Chandana	1SJ17CV056		
6.	“Road Safety Audit-Case Study Of NH44”	Yogesh N	1SJ16CV124	Mr. Manjunath N	National Conference “MANTHANA” 2021 on 28/08/2021 at SJCIT
		Pramod Siddarth D	1SJ17CV049		
		Rakesh S	1SJ17CV057		
		Bhoomika H O	1SJ18CV405		
7.	“Experimental Investigation On Clayey Soil Using Admixtures For Road Construction”	Timmareddy	1SJ17CV073	Mr. Kiran K M	National Conference “MANTHANA” 2021 on 28/08/2021 at SJCIT
		Varun Gowda M	1SJ17CV075		
		Venkatesh S	1SJ17CV076		
		Thriveni R	1SJ18CV430		
8.	“Experimental Study On Autoclaved Aerated Concrete”	Rajesh R A	1SJ16CV085	Mr. Shashi Kumar N V	National Conference “MANTHANA” 2021 on 28/08/2021 at SJCIT
		Ismail Pinjar	1SJ17CV025		
		Kanthraj B N	1SJ17CV027		
		Navyashree V A	1SJ17CV044		
9.	“Study The Behaviour Of Watermelon Seeds And Ferric Chloride as A Coagulant To Treat The Domestic Effluent”	K S Chitritha	1SJ16CV033	Mr. Kamath G M	National Conference “MANTHANA” 2021 on 28/08/2021 at SJCIT
		Padmaraj	1SJ17CV046		
		Adarsha J	1SJ18CV400		
		Divya V	1SJ18CV410		
10.	“Copper slag as fine aggregate replacement for high performance concrete”	Ruchitha B R	1SJ16CV088	Dr. G Narayana	National Conference “MANTHANA” 2021 on 28/08/2021 at SJCIT
		Pavithra R	1SJ17CV048		
		Gokarna Y J	1SJ18CV412		

		Harshavardhana C M	1SJ18CV414		
11.	“Factors affecting the congestion and encroachments of urban roads-case study of Chickballapur city”	Sindhu M	1SJ17CV070	Mr. Manjunath N	National Conference “MANTHANA” 2021 on 28/08/2021 at SJCIT
		Srisha A R	1SJ17CV071		
		Jayarama M	1SJ18CV415		
		Pavan Kumar N V	1SJ18CV424		
12.	“Accident analysis from damaged vehicle in police station-case study of Chickballapur taluk”	Rashmi M J	1SJ16CV086	Dr. Sidde Gowda	National Conference “MANTHANA” 2021 on 28/08/2021 at SJCIT
		Suhas S M	1SJ16CV108		
		Chethan K N	1SJ17CV015		
		Gowthami J	1SJ17CV021		
13.	“Mechanical and permeability properties of porous asphalt”	Sumukh	1SJ15CV105	Mr. Chethan G N	National Conference “MANTHANA” 2021 on 28/08/2021 at SJCIT
		Archana B C	1SJ17CV005		
		Bhavana T N	1SJ17CV009		
		Dharmanna	1SJ18CV407		
14.	“GIS application in visualization of ongoing and upcoming highway projects in Karnataka”	Pruthvi Chandra K N	1SJ17CV054	Ms. Sushma M	National Conference “MANTHANA” 2021 on 28/08/2021 at SJCIT
		Purushotham S	1SJ17CV055		
		Suvek M	1SJ17CV072		
		Bhoomika K R	1SJ17CV084		
15.	“Deficient shoulder width and its influence on road crash frequency on highways”	Ranjith P	1SJ17CV059	Mr. Ravindranath C	National Conference “MANTHANA” 2021 on 28/08/2021 at SJCIT
		Ranjitha R	1SJ17CV060		
		Ravi Bilawar	1SJ17CV061		
		Madhusudhan S	1SJ18CV419		
16.	“Experimental investigation on use of recycled aggregate and reclaimed asphalt pavement in pavement construction”	Yogesh K R	1SJ16CV123	Ms. Sushma M	National Conference “MANTHANA” 2021 on 28/08/2021 at SJCIT
		Monika N	1SJ17CV042		
		Monish Kumar D N	1SJ17CV043		
		Makun Shah	1SJ17CV037		
17.	“Experimental investigation on high performance concrete by partial replacement of cement by fly ash and fine aggregate by rice husk ash”	Sushmitha K	1SJ16CV109	Mr. Ravikiran B	National Conference “MANTHANA” 2021 on 28/08/2021 at SJCIT
		Kiran Kumar M A	1SJ17CV032		
		Kowshik D	1SJ17CV033		
		Mallika B S	1SJ17CV038		
18.	“Partial replacement of cement by cardboard ash in concrete”	Bharathreddy V	1SJ17CV008	Mr. Kamath G M	National Conference “MANTHANA” 2021 on 28/08/2021 at
		Aliasgar Khoja	1SJ17CV003		

		Dilip G K	1SJ18CV408		SJCIT
19.	“Removal of heavy metals from the industrial waste water using low cost adsorbents”	Nischal S	1SJ15CV063	Ms. Vathsala M N	National Conference “MANTHANA” 2021 on 28/08/2021 at SJCIT
		Akshay N Hadimani	1SJ17CV002		
		Arun M	1SJ17CV006		
		Harsha T G	1SJ18CV413		
20.	“Identification and improvement of accident black spots”	Yashavanth R	1SJ16CV122	Mr. Mohan N	National Conference “MANTHANA” 2021 on 28/08/2021 at SJCIT
		Jeevan Kumar G S	1SJ17CV026		
		Kavya K	1SJ17CV028		
		Kavyashree B V	1SJ17CV029		
21.	“Experimental study of plastic bricks made from waste plastic”	Sachin Jaiswal	1SJ17CV064	Mrs. Sharada S A	National Conference “MANTHANA” 2021 on 28/08/2021 at SJCIT
		Viresh	1SJ17CV079		
		Vinayakumari T	1SJ18CV433		
		Irfan Bashir	1SJ18CV434		
22.	Subgrade strengthening of roads on clay soil using quarry dust and lime	Praveen M	1SJ17CV416	Mr. Mohan N	National Conference “MANTHANA” 2021 on 28/08/2021 at SJCIT
		Pallavi J	1SJ17CV047		
		Arun Kumar T A	1SJ18CV402		
		Monica A L	1SJ18CV420		
23.	Removal of heavy metals from industrial waste water by electrocoagulation	Mahendra N	1SJ16CV055	Ms. Vathsala M N	National Conference “MANTHANA” 2021 on 28/08/2021 at SJCIT
		Chandana K M	1SJ17CV011		
		Charan K S	1SJ17CV012		
		Deviyani G S	1SJ17CV018		

Table B 2.23 Prizes/Awards won by the students for their Project Work

Sl. No.	Participants	Project Title	Presented At	Event Name	Date	Awards
1.	Shravani K P	System For Assessing Suitability Of Water For Irrigation	Dr. TTIT, KGF	DR. T Thimmaiah Research & Innovation Council in association with IIC, Dr. TTIT, KGF	04/08/2021	1 st prize
2.	Charan M	Development And Experimental Analysis Of Mortar Less Interlock Bricks	SJCIT	National Conference MANTHANA '21	28/08/2021	Best paper

3.	Chethan Kumar K J	Experimental Study On SCC With Partial Replacement Of Cement By GGBS, Fly Ash With The Use Of Glass Fibres	SJCIT	National Conference MANTHANA '21	28/08/2021	Best paper
4.	Bhoomika K R	GIS Application In Visualization Of Ongoing And Upcoming Highway Projects In Karnataka	SJCIT	National Conference MANTHANA '21	28/08/2021	Best paper
5.	Varun Gowda M	Experimental Investigation On Clayey Soil By Using Admixture For Road Construction	SJCIT	National Conference MANTHANA '21	28/08/2021	Best paper
6.	Nithin Gowda	Traffic Woes In Bangalore	Nimhans convention centre, Bangalore	Inter college green fest 2017 organized by ACCE (Bangalore) and Ramco Cement limited	18/09/2017	1 st prize
7.	Akshay A	Solar Powered Water Desalination	SRISHTI-2017	State Level Project Exhibition and Competition, R.V. College of Engineering	25/05/17	2 nd prize
8.	Akshay A	Solar Powered Water Desalination	Alpha College of Engineering Bangalore in association with AICTE	Second National Students Project Exhibition-2017	7/05/17	2 nd prize
9.	Akshay A, Lavanya V And Amruth M N	Solar Powered Water Desalination	Sri Kshetra Adichunchana giri	JVTM	20/02/17 & 21/02/17	1 st prize

Table B 2.24 Details of funded projects

Sl. No	Name of the Students	Guide Name	Project Title	Year	Name of the Sponsor/ Sectors	Sponsored Amount Rs
1.	Deepika G R	Dr. G Narayana	Experimental Study On Environmental Effects Of Concrete Produced Form Partial Replacement Of Cement And Sand With Ceramic Waste Powder And Alkali Activated Sand	2020-21	KSCST 44 th series program 2020-21	7000/-
2.	Shaik Noor Md Pravalika A Priyanka S B K Devarajgowda	Mr. Ravindra M V	Suitability Of Hebbal Nagavara Valley Treated Wastewater	2020-21	KSCST 44 th series program 2020-21	6000/-

			For Irrigation In Chickballapur District			
3.	Shashikala M Shravani K P Vinod Kumar Pavan Kumar B O	Mr. Ravindra M V	Soft Application For Assessing Suitability Of Water For Irrigation”	2020-21	KSCST 44 th series program 2020-21	6000/-
4.	Kiran N Kalavauthej K Maale Harish Hema Y B	Ms. Vathasala M N	Treatment Of Sullage By Using Natural Laterite And Chitosan As An Adsorbent	2019-20	KSCST 43 th series program 2019-20	4000/-
5.	Priyanka A Niketh C Tharu, Rabin Kumar K Sandeep Wagie	Mr. Ravindra M V	Geospatial Analysis Of Appropriateness Of Treated Kormangala & Challaghatta (K & C), Valley Waste Water For Irrigation In Kolar	2019-20	KSCST 43 th series program 2019-20	4000/-
6.	Mahanth Kumar Faizan Asif N Madhu T N Manoj Kumar T S	Mr. Kamath G M	Feasibility Studies On Morning Olifera And Alum As An Coagulant To Treat The Domestic Effluent And Quality Of Water For Agriculture	2019-20	KSCST 43 th series program 2019-20	4000/-
7.	Praful B S	Dr. G Narayana	Experimental Study On Nano Silica Modified Geo Polymer Concrete For Early Damage Reduction In Bridge Deck Pavement	2019-20	KSCST 43 th series program 2019-20	5000/-
8.	Gunasheela R	Dr. G Narayana	Experimental Study On Development Of Geo Polymer Sand As Replacement To Natural Sand In Cement Mortar	2019-20	KSCST 43 th series program 2019-20	5000/-
9.	Latha Shree Arshiya Firdose Uttej	Ms. Vathasala M N	Air Condition By Geo Thermal Heat Pump	2018-19	New Age Incubation Network	188000/-
10.	Hamsa H S	Mr. Ravindra M V	Design And Treatability Studies Of Low Cost Biofilters In Grey Water Treatment With Respect To Recycle And Reuse In Rural Areas	2017-18	KSCST 41 th series program 2017-28	5000/-
11.	Harshitha Hr	Mr. Ravindra M V	Design And Treatability Studies Of Low Cost Grey Water Treatment With Respect To Recycle And Reuse In Rural Areas	2016-17	KSCST 40 th series program 2016-17	5000/-
12.	Keerthi N Kumar	Mr. Ravindra M V	Waste Water Treatment Technology	2015-16	KSCST 39 th series program 2019-20	6000/-

13.	Swathi D	Mr. Ravindra M V	Water Quality Index For Ground Water Of Chickballapur Town	2014-15	KSCST 38 th series program 2019-20	5000/-
14.	Venkat Shiva Reddy A	Mr.Kiran K M	Stabilization Of Expensive Soil Reinforced With Short Propylene Fiber Treated With Admixtures	2014-15	KSCST 38 th series program 2019-20	8000/-
15.	N Sharath	Mr.Rajeev S J	Laboratory Characterization Of M-30 Grade Concrete By Using Recycled Aggregates	2014-15	Sri Sharadamma Chandrappa Foundation	40000/-

2.2.4. Initiatives related to industry interaction (15)

The department always strives to impart quality education and research to meet the needs of growing industry, society and environment.

Following are the initiatives taken to improve industry interaction.

- MOUs are signed between industries and institute for establishing Centre of Excellence and Line of Career.
- Industry experts will be invited for technical talks on the required Courses/topics, for enriching the knowledge of students for better placement.
- Students will be sent to industries to carry out the project.
- Internship program at college level by industry experts/academic experts are arranged.
- Industrial visits are arranged.
- To keep both students and faculty updated with the latest developments in civil engineering and also to strengthen the interaction with industries, the department has conducted guest lectures, seminars, symposiums, workshops and conferences.

MOUs with industry

The MOUs with industry are shown in Table 2.25

Table B 2.25 MOU'S with industry

Sl. No.	Name of the company with address	Date of signing MOUs	Activity conducted
1.	CIDC, New Delhi	04/12/2021	Intenship,FDP
2.	Edu CADD Learning Solution	02/11/2021	Modern Tool Usage
3.	Indian Green Building Council (IGBC) Student Chapter	05/09/2018	To enable a sustainable built environment
4.	Prayojana construction Management Training Institute, Bangalore	06/03/2018	Internship for UG
5.	EDUCAD, Jayanagar Branch	12/03/2018	Software training (Modern tool usage)
6.	Association of Consulting Civil Engineers (India)	12/08/2016	Student mentoring program
7.	Bhabha Atomic Research Centre Mumbai	28/06/2016	Technology Transfer
8.	Bright Infotech	02/04/2016	Software Training
9.	ICI Student Chapter	Feb /2014	Technical talks & Construction site visits

Organization Membership with Professional Bodies:

- 1) Indian Concrete Institute (ICI)
- 2) The Institute of Engineers, India (IEI)
- 3) Association of Consulting Civil Engineers (ACCE)

Consultancy Projects: Department is well equipped with state of art laboratories and experienced faculty members to take up consultancy works in different areas of Civil Engineering. The department generated revenue from consultancy works in both private and public sectors.

A. Industry supported laboratories

Sl. No.	Laboratory	Apparatus	Industry Supported	Approximate Cost of Apparatus in Rs
1.	Survey Lab	Total station	Sir M V Institute of Engineering Skills, Bangalore	400000/-

B. Industry involvement in the program design and partial delivery of any regular courses for students

Department is having a MOU with ACCE, committee will design the curriculum beyond syllabus and deliver.

Table B 2.26 Details of partial delivery by industry persons

Sl. No	Name of experts/ resource person	Position held by the resource person	Date	Content delivered by the expert
1.	Mr. Manoj Baraskar	CEO- INODE software company	10/06/2021	Opportunities for Civil engineers in Water Sector under Jal Jeevan Mission
2.	Mr. Achu R Sekhar	Manager, Sustainable cities and Transport WRT – India	03/06/2021	Plastic waste management in India
3.	Dr. C R Parthasarathy	Founder Chairman and Managing Director Sarath Geotech Engineering services Pvt Ltd.	12/05/2021	Overview of Geotechnical Investigations With Case Studies
4.	Er. Ranjith M	Project Engg, Coliban Water works Australia.	22/04/2021	Global Pandemic: A Boon for Environment and Planet Myth or Reality”
5.	Er. Sivaraman	Engineer at Prayojana CMTI	07/08/2020	Work Breakdown Structures for a Project
6.	Mr. M N Ramesh	Director, Talrak Construction Chemicals Pvt. Ltd., Bengaluru.	14/05/2020	Recent development in remedial engineering for concrete structures
7.	Mr. Dinesh V P	Technical Director of Civil Material Testing Laboratory, Bangalore	12/11/2019	Applied Geo Technical Engineering – Pile Foundation
8.	Mr. Shiv Prasad Singh	MRICS Associate Professor, RICS school of built environment, Amity University, Nodia. Organizer Trilok	05/09/2019	Real estate valuation: An exciting career opportunity
9.	Mr. Madassar	Mansoor Lane, Business Development Manager, Learning division EDS Technologies Pvt. Ltd	28/08/2019	Awareness on online software certification courses
10.	Mr. Dinesh V P	Technical Director Civil material testing Laboratory	19/03/2019	Soil investigation and behavior
11.	Mr. Nitish Kumar Reddy	Educadd Jayanagar	04/10/2018	Technical talk on Revit, 3D Max, Etabs

12.	Prof. Sudhindra Haldadderi,	Vice President, Operation, EME	14/11/2018	Finite element Analysis
13.	Mrs. Sapna Devendra	Regional Manager, Alcofine Division(South), Ambuja Cements	27/03/2017	Microfine Materials in concrete
14.	Mr. B N Sathish	Fellow member of Association of Consulting Civil Engineers India	08/03/2017	PMC- Planning & Execution
15.	Mr. Umesh B Rao	All India Secretary, ACCE	08/03/2017	Importance of the Drawing
16.	Mr. Ajit Sabnis	President, ACCE	08/03/2017	Construction methodologies/workmanship/ standards for various works/ tools/plants / construction machinery
17.	Mr. K S Jagadish	Ex-Professor Department, of Civil Engineering, RVCE, Bangalore	08/03/2017	Masonry Structures
18.	Mr. N Nagendra kumar	Technical Director, M/S Civil-Aid Techno clinic Pvt. Ltd.	04/11/2016	Basic structural components
19.	Mr. Nagendra R	Ultra Tech Cements	04/11/2016	Building materials
20.	Mr. Sudarshan M S	Mg. Director. Civil-Aid Technoclinic Pvt. Ltd.	04/11/2016	Roles & responsibilities of Civil Engineer
21.	Mr. Manjunath L R	ACCE, Treasurer	04/11/2016	Concrete applications in civil engineering
22.	Mr. Nagendra R	Ultra Tech Cements	02/11/2016	Building materials
23.	Mr. N Nagendra Kumar	Technical Director, M/S Civil-Aid Technoclinic Pvt. Ltd.	02/11/2016	Basic structural components
24.	Mr. Sudarshan M S	Mg. Director. Civil-Aid Technoclinic Pvt. Ltd.	02/11/2016	Roles & responsibilities of Civil Engineer
25.	Mr. Manjunath L R	ACCE, Treasurer	02/11/2016	Concrete applications in civil engineering
26.	Mr. Ajit Sabnis	President, ACCE	28/10/2016	Overview of Civil Engineering
27.	Mr. Manamohan R Kalgal	Ultra Tech Cements Technical Head, All India	28/10/2016	Attributes of Good Civil Engineer
28.	Mr. Umesh B Rao	All India Secretary, ACCE	28/10/2016	Scope of Civil Engineer
29.	Mr. Samuel A T	Director, STUP Consultant Pvt. Ltd.	28/10/2016	Different types of loads structures and their impact on structural elements
30.	Mr. Manamohan R Kalgal	Ultra Tech Cements Technical Head, All India	19/10/2016	Overview of Civil Engineering

31.	Mr. Ajit Sabnis	President, ACCE	19/10/2016	Attributes of Good Civil Engineer
32.	Mr. Umesh B Rao	All India Secretary, ACCE	19/10/2016	Scope of Civil Engineer
33.	Mr. Samuel A T	Director, STUP Consultant Pvt. Ltd.	19/10/2016	different types of loads structures and their impact on structural elements
34.	Prof. Yogendra B E	Professor, Dept. of Civil Engg., Malnad College of Engg., Hassan	27/08/2016	Advance in Hydrology and Water Resources
35.	Mr. Koushik Hajra and Ajit Sabnis	President, ACCE(I)	26/07/2016	Construction Quality and Equipments and Methods
36.	Mr. B L Ravi	International Tutor, BVC India Pvt. Ltd	21/03/2016 to 22/03/2016	awareness program on “Quality System Procedure (ISO Standards)” for new faculties
37.	Mr. Tandaveshwara H S	Sr. Vice President Of Prestige Group, Bangalore	05/03/2016	“Construction Management”,
38.	Prof. SuhasRamchandra	Managing Committee,	18/10/2015	Concrete & its Mix Design
39.	Mr. Manoj Kumar	Senior Cadd Engineer Educadd Learning Solutions, Bangalore	07/10/2015	Trained, Get Certified, Get Ahead
40.	Prof. K V N Rao	Advisor BGS Institutions	29/09/2015	The Importance of Soil Classification and Soil Testing in Geotechnical Engineering Practice
41.	Dr. N Shivaram Reddy	Chief Administrative Officer	03/09/2015	Motivation Talk to 3 rd Semester Student
42.	Prof. Raghuoatham Rao	Professor	10/08/2015	Dr. A P J Abdul Kalam “What I Have Seen”

C. Impact analysis of industry institute interaction and actions taken thereof

- It will provide an Industry-Institute Interaction.
- Students will gain exposure to incorporate an entrepreneurial spirit and project based thinking.
- Students will be able to implement their ideas in their final year projects.
- Students will get practical knowledge related to their theory Courses.
- Students will acquire skill to write report on industrial visit and final year projects.
- Students will get an idea about the recent developments in the Civil industry.

2.2.5. Initiatives related to industry internship/summer training (15)

2.2.5 A. Industrial training/tours for students (3)

Department is regularly arranging industrial visit to our students once in a year/semester to different Construction sites to improve the practical knowledge of students and also to get better Knowledge about the latest technologies.

Table B 2.27 Industrial visit in the year 2019

Sl. No.	Industrial visit	Semester	Date	Purpose
1	Ananth Technologies at Bangalore organized by Prayojana Construction Management Training Institute	8 th A & B sem	23.01.2019	To see and study the working Environment and to get practical exposure from industries.
2	Brigade Opus at Bangalore organized by Prayojana Construction Management Training Institute	8 th A & B sem	25.01.2019	
3	Beary global Triangle at Bangalore organized by Prayojana Construction Management Training Institute	8 th A & B sem	04.02.2019	
4	Students visited the BMRCL, Metro construction, Near K R Puram, Bangalore and also casting yard (Reach-1A)	8 th A & B sem	27.03.2019 & 28.03.2019	
5	RMC Plant visit , Bangalore	4 th A & B sem	26.04.2019 & 29.04.2019	



Figure 2.32 Industrial visits Photos

Visit Conducted to: RMC Plant visit, Bangalore

Report: The Department of Civil Engineering, S. J. C. Institute of Technology organized an industrial visit to RMC Plant, Bangalore on 26/04/2019 & 29/04/2019 for the under graduate students of Semester IV A&B sec along with Prof.Kiran K M &Prof. Chetan G N

Outcomes: Students have learnt Process of concrete, Material used in concrete mix, Test conducted over Concrete Blocks, Curing process for Concrete Blocks etc. With this kind of industrial visit, students gained more knowledge on Concrete Technology application aside from the theoretical aspect learned from the classrooms and laboratory.

B. Industrial /internship /summer training of more than two weeks and post training Assessment

The students are encouraged to take internship program during their semester break for a period of four weeks. Faculty members give their guidelines, suggestions 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 graduating students internship. University has made student internship as mandatory.

Table B 2.28 Industrial Training/Internship of more than 2 weeks for CAY (2020-21)

Sl. No	Name of students	Details of internship	Date	POs and PSOs achieved
1	Arun M	Construction of Box Culvert and Road Repairing	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Bharath Reddy V			
	Charan Ks			
	Mounish Kumar D N			
2	Arpitha M	Quantity Surveying of Commercial Building	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Archana B			
3	Chandhana K M	Quantity & Estimation of Residential Building	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Deviyani G S			
	Monika N			
	Meghana G M			
4	Abhilash K R	Construction of Two Story Duplex Building	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Charan M			
	Chethan Kumar K J			
	Jeevan Kumar G S			

	Akshay Hadimani			
5	Aliasagar Khoja	Analysis of Residential Building	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Bhavana T N			
	Krithi C N			
	Rashmi M J			
6	Kushal N	Analysis of Road Construction	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Dharmanna Chavan			
7	Yashwant R	Analysis of Residential Building	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Yogiesh K R			
8	Chethan K N	Construction of Apartment Building	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Charan R			
	Hemanth K			
	Kowshik D			
	Lokesh Aradhya			
	Sumukh V J			
9	Kavyashree G	Analysis of Residential Building	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Sushmitha K			
	Harsha T G			
10	Charangowda H L	Residential Building Construction	01/03/2021 to 30/04/2021	PO1, PO2 ,PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Kiran Kumar M A			
11	Ankitha Reddy R	Construction of College Building Using Alternate Building Material	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Kavyashree B V			
	Navyashree V A			
12	Gowathami J	Construction of College Building	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Hemavathi R			
	Kavya K			
	Mallika B S			
13	Basvaraj Singry	Analysis of Building Plan and Construction	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Linga Reddy			
14	Chaitanya K R	Construction of college Building	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Ismail Pinjar			
	Kunal Kumar			
	Suhas S M			
	Rajesh R A			
	Makun Shah			
15	Manoranjan Gowda K P	Lift irrigation and CC road	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12,PSO1, PSO2
	Bhavani Shankar			
	Dilip G K	Analysis of residential building		
	Altaf Hussain H			
	Mahendra N			
	Mohammed Sayeed			

16	K S C Ranjitha R	Construction of Drainage	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Yashaswini C			
	Amulya R			
	K Devraj Gowd			
	Madhusudhan S			
	Pavan Kumar			
	Chitriitha			
17	Ranjith P	Construction of Residential Building	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
18	Pallavi J	Professional practice	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Shashikala M			
	Shravanthi T N			
	Sindhu M			
19	Srisha A R	Professional practice	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Sheik Noor Mohammad			
	Irfan Bhashir			
	Darshan			
20	Shravani K P	Professional practice	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Roopa S			
21	Suvek M	Construction of commercial building	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Gokarna Y J			
	Prajwal			
	Venkatesh			
22	Vinod Kumar	Construction of commercial building	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Pavan Kumar B O			
	Viresh			
	Naveen A			
23	Purushotham S	Construction of commercial building	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
24	Bhoomika H O	Commercial building construction	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Bhoomika K R			
	Monica A L			
	Sanjay H V			
25	Pravalika A	Construction of commercial building	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Prathibha Patil			
	Rakshitha K			
26	R Chandana	Construction of commercial building	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
27	Yogesh N	Construction of commercial building	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Prithivi Chandra K N			
	Varun Gowda M			

	Chirag H N			
28	Vasudeva Bayari	Construction of commercial building	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Rakesh S			
	Jayarama M			
29	Adarsha J	Analysis of Residential building	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Arun Kumar T A			
	Harshavardhana			
30	Praveen M	Construction of Residential building	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
31	Vinayakumari T	Analysis of safety in Building construction	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
32	Thriveni R	Construction of new roads and drainage work	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Syeda Saba Kounain			
	Divya			
33	Priyanka S B	Construction of residential building	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
34	Timmareddy	Road construction management, Quantity survey and Bar bending schedule	01/03/2021 to 30/04/2021	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Ravi Bilwar			
	Keshva Murty			
	Sachin Jaiswal			

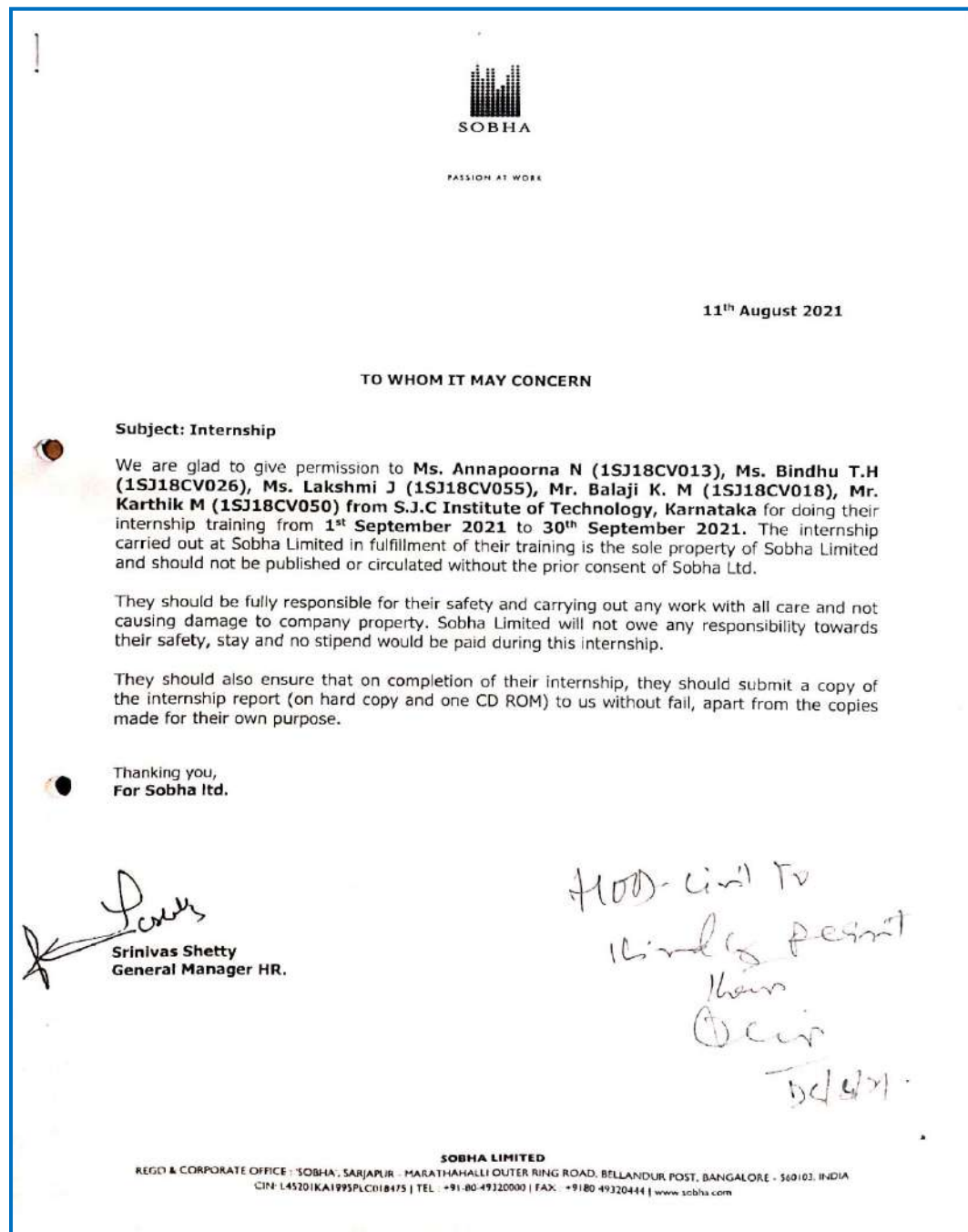


Figure 2.33 Internship Permission letter from Industry

Table B 2.29 Industrial Training/Internship of more than 2 weeks for CAY (2019-20)

Sl. No	Name of students	Details of internship	Date	POs and PSOs achieved
1.	Vishvasranjan T N	Project Planning using Primavera Software	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Charan Raj A D			
	Akshay H C			
	Arun Kumar C K			
2.	Harsha K C	Project Programming & PEB Structures	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Kushal C M			
	Kushal Kumar R			
	Madhan Kumar G N			
3.	Hema Y B	Plumbing, QAS Plastering of Structures	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Kalava Uttej Kumar			
	Kiran N			
	Melle Hareesa			
4.	Faizan Asif N	Project Site Learning	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Mahanth Kumar V			
	Madhu T N			
	Manoj Kumar T S			
5.	Madhan Kumar G	Project Interior Design & Execution	01/07/2019 to 26/09/2019	PO1, PO2 ,PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Manjunatha K			
	Nethrabhinandan Kumar T			
	Sagar V			
6.	Abhishek G S	Green Building	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Gayithri			
	Karthik M N			
	Swathi H V			
7.	Harshitha T	Project Planning using Primavera Software	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Bipin			
	Charan			
	Girija			
8.	Baidyanath Kumar Mandar	Rate Analysis	01/07/2019 to 26/09/2019	PO1, PO2 ,PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Dhirendra Kumar Sah			
	Dilip Kumar Shah			
	Harish			
9.	Ankitha M S	Project Planning using Primavera Software	01/07/2019 to 26/09/2019	PO1, PO2, PO3 ,PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Goutham B N			
	Kavana M			
	Karava Sai Kesava Reddy			
10.	Nandini B	Project Programming	01/07/2019	PO1, PO2, PO3, PO5,

	Anusha B K	&PEB Structures	to 26/09/2019 to 31/01/19	PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Geethajali S			
	Gowthmi D K			
11.	Divyashree B	Plumbing ,QAS Plastering of Structures	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Lavanya T			
	Meghana M			
	Monika M			
12.	Harini C Shekar	Project Site Learning	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Shree Lakshmi			
	Lavanya B L			
13.	Praveen Kumar	Project Interior Design & Execution	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Manoj M			
	Manoj S			
	Mohammed Tanveer			
14.	Anil Kumar R	Green Building	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Madhana K B			
	Madhu Sudhan H M			
	Ramesha T			
15.	Achyutha C A	Project Planning using Primavera Software	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Keerthi K M			
	Kothamedha Girivarshini			
	Manasa K V			
16.	Shashank Pm	Rate Analysis	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Kishor N			
17.	Priyanka T L	Project Planning using Primavera Software	01/07/2019 to 26/09/2019	PO1, PO2 , PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Shirisha K R			
	Varun Dev K			
18.	Niharika Nayana	Project Programming &PEB Structures	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Niharika S			
	Pinky V			
	Vinod C			
19.	Sagar L P	Plumbing, QAS Plastering of Structures	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Sharon P			
	Vinay Kumar V			
	Vipina M			
20.	Roopa B	Site Learning	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Sandhya S A			
	Harshith M			
	Abhilash A			
21.	Nisarga D	Project Interior Design &	01/07/2019	PO1, PO2, PO3, PO5,

	Niveditha P M	Execution	to 26/09/2019	PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Pravallika B S			
	Devarinti Mokshith			
22.	P Swetha	Green Building	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Sarugu Manjunath			
	Soumya A			
	Tejeshwar H			
23.	Nataraj G N	Project Planning using Primavera Software	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Pavan Reddy S			
	Santosh Kumar K S			
24.	Geetha K S	Rate Analysis	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Madhu L			
	Vaibhav S			
	Vinod Kumar B L			
25.	Sankeeth Gowda	Project Planning using Primavera Software	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Shabanam Taj			
	Vasu A			
	Vidya J V			
26.	Rahatul Bashir	Project Programming &PEB Structures	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Vishnu U K			
	Ajaz Ahmad Sheikh			
	Sarfaraz Ahmad Reshi			
27.	Haritha G V	Plumbing ,QAS Plastering &Structures	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Sindhu R			
	Sahera Khanum A			
28.	Niketh Chaudhary	Project Site Learning	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Sandeep Wagle			
	Priyaka Aimaje			
	Rabin Kumar Kushwa			
29.	Rahul M	Project Interior Design & Execution	01/07/2019 to 26/09/2019	PO1, PO2 ,PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	S Puneeth			
	Suhas S M			
	Indresh C H			
30.	Soundarya S	Green Building	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	T G Bindu			
	Venkatesh Anant Achari			
31.	Srinath P V	Project Planning using Primavera Software	01/07/2019 to 26/09/2019	PO1, PO2 , PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Madhusudhan M			
	Syed Husen Sha			

32.	Niranjan M	Rate Analysis	01/07/2019 to 26/09/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Santosh Yadav			
	Thanush Vijay Babu			
	Vinoth T			

Table B 2.30. Industrial Training/Internship of more than 2 weeks for CAY (2018-19)

Sl. No	Name of students	Details of internship	Date	POs and PSOs achieved
1	Mukesh Kumar Mandal	Project Planning	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Madan Aryal			
	Akshay Gundagi			
	Harshitha M			
2	Vinod Kumar H	Project Programming & PEB Structures	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Srikantha K Y			
	Yashodha N B			
	Chethan M			
3	Gowtham G	Plumbing, QAS Plastering of Structures	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Mohammed Jaffer Sadiq K A			
	Prashanth			
	Rakesh B K			
4	Akshay Kumar	Project Site Learning	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Guruprasad Hugar			
	Amrin Taj			
	Arnab Chaudhuri			
5	Kusuma M	Project Interior Design & Execution	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Anitha B R			
	Anushree R S			
	Sindhu P M			
6	Chakravarthi R	Green Building	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Ganesh K N			
	Soshil H M			
	Chandrashekar B Biradhar			
7	Anusha G R	Project Planning	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/19	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Manoj V			
	Namratha K			
8	Arun Kumar S	Rate Analysis	24/07/2018 to	PO1, PO2, PO3,

	Bhavan G P		03/08/18 & 18/01/2019 to 31/01/2019	PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Lakshmi K R			
	Manoj Nayaka P			
9	Bramhini A N	Project Planning	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Chaithra B			
	Malathi N			
	Meghana A			
10	Meghana K S	Project Programming &PEB Structures	24/07/201 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Keerthi Kumar N			
	Manoranjana G P			
	Madan Kumar V S			
11	Arun Kumar K	Plumbing ,QAS Plastering of Structures	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Ranjith D M			
	Ragavendra V			
	Harish S R			
12	Deepika L	Project Site Learning	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Divya S A			
	Imran Khan K			
	Harsha K			
13	Dhanushree H G	Project Interior Design & Execution	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Architha			
	Bhaskar Reddy			
	Revanasiddappa D			
14	Lingamkarthik Reddy	Green Building	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Manikappa			
	Girish Babu			
	Sangeetha			
15	Ram Lakhan Sah	Project Site Learning	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Sanjip Shah			
	Santosh Kumar Sah			
	Sushma D R			
16	Rupesh Poudel	Rate Analysis	24/07/2018 to	PO1, PO2, PO3,

	Ravi Sah		03/08/2018 & 18/01/2019 to 31/01/2019	PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Swapnil Sigdel			
17	Nyamath Pasha	Project Planning	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Prajwal K S			
	Prashanth P			
	Rudresh Yadav B			
18	Devaraja M	Project Programming &PEB Structures	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Sachin M Kumbar			
	Pooja E			
	Pooja H S			
19	Tejashree K R	Plumbing ,QAS Plastering of Structures	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Hemanth Kumar N			
	Nagesh Babu N			
	Naveen G			
20	Supriya N	Project Site Learning	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Swetha N B			
	Manjunatha V			
	Pulikeshi M N			
21	Punithkumar S D	Project Interior Design & Execution	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Sanjay B R			
	Suryakant C Talawar			
	Syed Suhail			
22	Pankaj J	Green Building	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Vijay Kumar G P			
	Rajesh R			
	S Venkatesh Reddy			
23	Ranjeeth E	Project Planning	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Riyakath M R			
	Pavan Kumar K			
	Yamuna R			
24	Srinidhi G	Rate Analysis	24/07/2018 to	PO1, PO2, PO3,

	Suresh N		03/08/2018 & 18/01/2019 to 31/01/2019	PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Ajay Kumar V			
	Ashok Babu S			
25	Harish Gowda H B	Project Planning	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2 ,PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Srikanth S			
	Swapna			
	Vinayak Babu			
26	Ragavendra Reddy C R	Project Programming &PEB Structures	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Arshiya Firdose H M			
	Lathashree N			
	Shobhana N K			
27	Sahana A	Plumbing ,QAS Plastering of Structures	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Pallavi S N			
	Surya G			
	Shiva Reddy N V			
28	Yatheesh K S	Project Site Learning	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Sai Ashik A R			
	Shravan Kumar K N			
	Syed Owais Sultan			
29	Roopa Pattar	Project Interior Design & Execution	24/07/2018 to 03/08/2018 & 18/01/2019 to 31/01/2019	PO1, PO2, PO3, PO5, PO6, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
	Shirisha B			
	Shwetha N			
	Yashasvini B A			

Table B 2.31 Industrial Training/Internship of more than 2 weeks for CAY (2017-18)

Sl. No	Name of students	Details of internship	Date	POs and PSOs achieved
1	Pooja M G	Construction of building and civil works, Prayojana construction management training institute, Bangalore.	11/01/2018 to 28/01/2018	PO1, PO2, PO9, PO10, PO11, PSO1, PSO2
2	S Vinay	Construction of building and civil works, Prayojana construction management training institute, Bangalore.	11/01/2018 to 28/01/2018	PO1, PO2, PO9, PO10, PO11, PSO1, PSO2
3	Priyanka B	Construction of building and civil works, Prayojana construction management training institute, Bangalore.	11/01/2018 to 28/01/2018	PO1, PO2, PO9, PO10, PO11, PSO1, PSO2
4	Nisarga K	Construction of building and civil works, Prayojana construction management training institute, Bangalore.	11/01/2018 to 28/01/2018	PO1, PO2, PO9, PO10, PO11, PSO1, PSO2
5	Sreeleha P	Construction of building and civil works, Prayojana construction management training institute, Bangalore.	11/01/2018 to 28/01/2018	PO1, PO2, PO9, PO10, PO11, PSO1, PSO2
6	S Hidayathulla	Construction of building and civil works, Prayojana construction management training institute, Bangalore.	11/01/2018 to 28/01/2018	PO1, PO2, PO9, PO10, PO11, PSO1, PSO2
7	Akshatha G N	Construction of building and civil works, Prayojana construction management training institute, Bangalore.	11/01/2018 to 28/01/2018	PO1, PO2, PO9, PO10, PO11, PSO1, PSO2
8	Md Ziaul Mustafa Khan	Construction of building and civil works, Prayojana construction management training institute, Bangalore.	11/01/2018 to 28/01/2018	PO1, PO2, PO9, PO10, PO11, PSO1, PSO2
9	Noor Mohammed	Construction of building and civil works, Prayojana construction management training institute, Bangalore.	11/01/2018 to 28/01/2018	PO1, PO2, PO9, PO10, PO11, PSO1, PSO2
10	M N Rahul	Prayojana construction management training institute, Bangalore	11/01/2018 to 28/01/2018	PO1, PO2, PO9, PO10, PO11, PSO1, PSO2
11	Sadanand Singh	Prayojana construction management training institute, Bangalore	11/01/2018 to 28/01/2018	PO1, PO2, PO9, PO10, PO11, PSO1, PSO2
12	Thanushree	Prayojana construction management training institute, Bangalore	11/01/2018 to 28/01/2018	PO1, PO2, PO9, PO10, PO11, PSO1, PSO2
13	Vennela K S	Prayojana construction management training institute, Bangalore	11/01/2018 to 28/01/2018	PO1, PO2, PO9, PO10, PO11, PSO1, PSO2
14	Shanthala H R	Prayojana construction management training institute, Bangalore	11/01/2018 to 28/01/2018	PO1, PO2, PO9, PO10, PO11, PSO1, PSO2

Post Training Assessment (4)

After completion of the internship / industrial visits / industrial tours students will submit the report covering the following items

- a. Objectives
- b. Outcomes

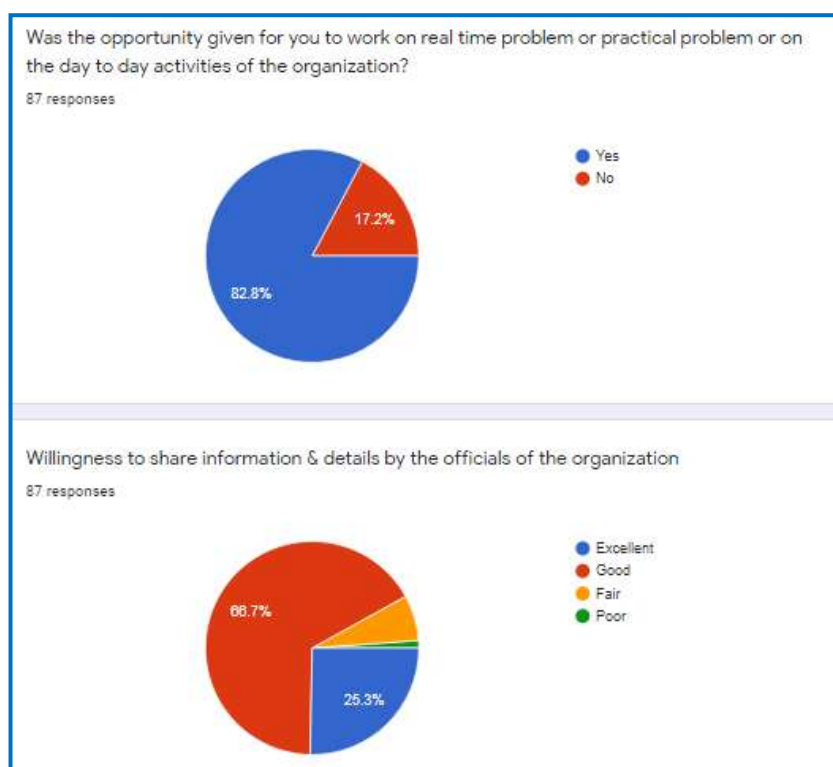
Also students submit the internship certificates.

C. Impact Analysis of industrial training

- Students gain exposure to spirit of entrepreneurship
- Students will be able to implement their ideas in their final year projects
- Students will get practical knowledge related to their theory courses.
- Students will get an idea about the recent developments in the industries
- Students will improve their communication skills and gain knowledge about industry requirements and modern tools usage

D. Student feedback on initiative

The internship coordinator prepares a questionnaire and takes feedback from students after completion of Industrial visit/internship/industrial training /industrial tours



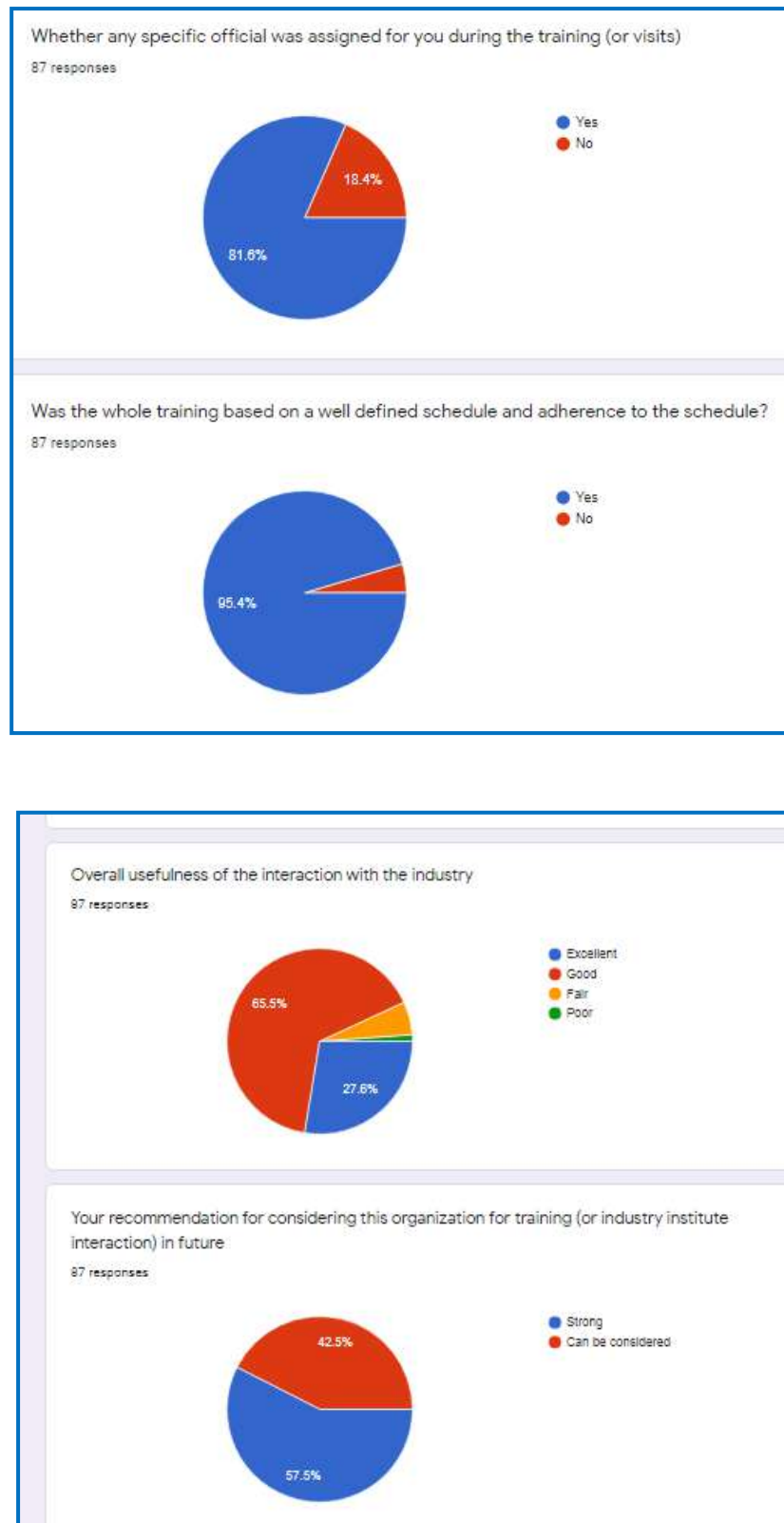


Figure 2.34 Internship feedback form

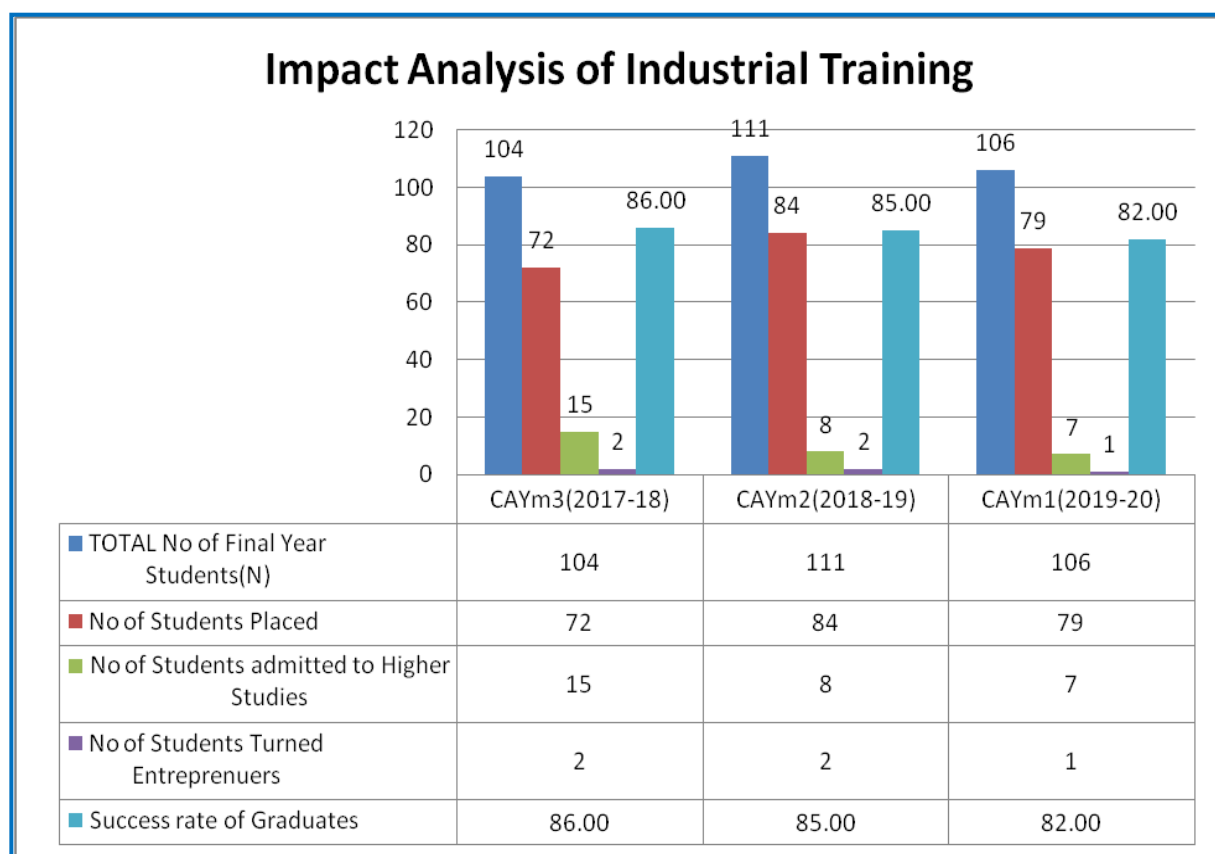


Figure 2.35 Impact Analysis of Industrial Training

The Department has incurred good number of opportunities in placement, Higher Studies and Entrepreneurship to students for an academic period of 2017 – 18, 2018-19 and 2019 – 20 with increase in success rate of outgoing graduates. This was possible due to outside world contact of students through internship, industrial visits and training courses during program.

CRITERIA 3

**Course Outcomes and Program
Outcomes**

CRITERION 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 and Program Specific Outcomes as mentioned in Annexure-I

The program outcomes are achieved through curriculum that offers a number of mandatory courses as well as elective courses. For every course, outcomes are defined and are mapped to program specific outcomes. The correlation between the courses and program outcomes as well as program specific outcomes is shown in Table B.3.1.

TableB.3.1: Correlation between courses, POs and PSOs (2017-21 Batch) (CAY)

Sl. No.	Course Code	Course Name	CO – PO Correlation	CO – PSO Correlation
I SEMESTER				
1.	C101	Engineering Mathematics-I	PO1, PO2, PO3, PO4, PO5	PSO1, PSO2
2.	C102	Engineering Chemistry	PO1, PO2, PO3, PO5, PO8, PO9, PO10, PO12	PSO1, PSO2
3.	C103	Computer Concepts And C Programming	PO1, PO2, PO3, PO4,	PSO1, PSO2
4.	C104	Computer Aided Engineering Drawing	PO5, PO12	PSO1, PSO2
5.	C105	Basic Electronics	PO1, PO2, PO3, PO12	-
6.	C106	CCP Lab	PO1, PO2, PO3, PO4, PO5	PSO1, PSO2
7.	C107	Engineering Chemistry Lab	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO1, PSO2
8.	C108	Environmental Studies	PO1, PO2, PO3, PO4, PO6, PO7	-
II SEMESTER				
9.	C109	Engineering Mathematics-II	PO1, PO2, PO3, PO4, PO5	PSO1, PSO2
10.	C110	Engineering Physics	PO1, PO2, PO3	PSO1, PSO2
11.	C111	Elements of Civil Engineering and Mechanics	PO1, PO2, PO3, PO12	PSO1, PSO2
12.	C112	Elements of Mechanical Engineering	PO1, PO2, PO3, PO12	PSO1, PSO2
13.	C113	Basic Electrical Engg.	PO1, PO2, PO3, PO4,	-
14.	C114	Workshop Practice	PO5, PO12	PSO1, PSO2
15.	C115	Physics Lab	PO1, PO2, PO3, PO4,	PSO1, PSO2

III SEMESTER				
16.	C201	Engineering Mathematics – III	PO1, PO2 PO3, PO4, PO5	PSO1, PSO2
17.	C202	Strength of Materials	PO1, PO2,PO3,PO5, PO6,PO8, PO12	PSO1, PSO2
18.	C203	Fluid Mechanics	PO1, PO2, PO3, PO7,PO8,PO12	PSO1, PSO2
19.	C204	Basic Surveying	PO1, PO2, PO3, PO5, PO8, PO12	PSO1, PSO2
20.	C205	Engineering Geology	PO1, PO2, PO6, PO7, PO8,PO12	PSO1, PSO2
21.	C206	Building Materials and Construction	PO1, PO2, PO6, PO8, PO12	PSO1, PSO2
22.	C207	Building Materials Testing Laboratory	PO1, PO2 ,PO6, PO7, PO8,PO9,PO10,PO12	PSO1, PSO2
23.	C208	Basic Surveying Practice	PO1,PO2,PO3,PO5,PO6, PO8,PO9,PO10, PO12	PSO1, PSO2
IV SEMESTER				
24.	C209	Engineering Mathematics - IV	PO1, PO2 PO3, PO4, PO5	-
25.	C210	Analysis of Determinate Structures	PO1,PO2,PO3 ,PO8, PO12	PSO1, PSO2
26.	C211	Applied Hydraulics	PO1, PO2, PO3, PO8, PO12	PSO1, PSO2
27.	C212	Concrete Technology	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO12	PSO1,PSO2
28.	C213	Basic Geotechnical Engineering	PO1,PO2,PO3,PO4,PO6, PO7,PO8,PO12	PSO1, PSO2
29.	C214	Advanced Surveying	PO1, PO2, PO3, PO5, PO8, PO12	PSO1, PSO2
30.	C215	Fluid Mechanics Laboratory	PO1,PO2,PO3,PO8,PO9, PO10,PO12	PSO1
31.	C216	Engineering Geology Laboratory	PO1, PO2, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO12	PSO1,PSO2
V SEMESTER				
32.	C301	Design of RC Structural Elements	PO1,PO2,PO3,PO4,PO6, PO8,PO12	PSO1, PSO2
33.	C302	Analysis of Indeterminate Structures	PO1, PO2,PO3,PO12	PSO1
34.	C303	Applied Geotechnical Engineering	PO1,PO2,PO3,PO4,PO6, PO7,PO8,PO12	PSO1, PSO2
35.	C304	Computer Aided Building Planning and Drawing	PO1,PO5,PO8,PO9,PO10, PO12	PSO1,PSO2
36.	C305	Air pollution and Control	PO1, PO2, PO3, PO8, PO12	PSO1, PSO2
37.	C306	Masonry Structures	PO1,PO2,PO3,PO8, PO12	PSO1, PSO2

38.	C307	Traffic Engineering	PO1, PO2, PO3, PO4, PO8, PO12	PSO1, PSO2
39.	C308	Geotechnical Engineering Laboratory	PO1, PO2, PO4, PO7, PO8, PO9, PO10, PO12	PSO1, PSO2
40.	C309	Concrete and Highway Materials Laboratory	PO1, PO2, PO3, PO5, PO7, PO8, PO9, PO10, PO12	PSO1, PSO2
VI SEMESTER				
41.	C310	Construction Management and entrepreneurship	PO1,PO2, PO8, PO11, PO12	PSO1,PSO2
42.	C311	Design of Steel Structure Elements	PO1,PO2,PO3,PO4,PO6, PO8,PO12	PSO1, PSO2
43.	C312	Highway engineering	PO1,PO2,PO3,PO6, PO8,PO11, PO12	PSO1, PSO2
44.	C313	Water Supply And Treatment Engineering	PO1,PO2,PO3,PO4,PO6, PO7,PO8,PO12	PSO1, PSO2
45.	C314	Solid waste management	PO1,PO2,PO3,PO6, PO7,PO8,PO12	PSO1, PSO2
46.	C315	Ground Improvement Techniques	PO1,PO2,PO6, PO7,PO8,PO12	PSO1, PSO2
47.	C316	Water resource management	PO1,PO2,PO8,PO11, PO12	PSO1,PSO2
48.	C317	Finite element analysis	PO1, PO2,PO5,PO12	PSO1,PSO2
49.	C318	Software Application Lab	PO1,PO2,PO3,PO5, PO8,PO9,PO10, PO11, PO12	PSO1, PSO2
50.	C319	Extensive Survey Project	PO1,PO2,PO3,PO4, PO5,PO6,PO7,PO8,PO9, PO10, PO11,PO12	PSO1, PSO2
VII SEMESTER				
51.	C401	Municipal and industrial waste water engineering	PO1, PO2,PO3, PO6, PO7,PO8,PO12	PSO1,PSO2
52.	C402	Design Of RCC & Steel Structure	PO1,PO2,PO3,PO4, PO5, PO6, PO8, PO9, PO12	PSO1, PSO2
53.	C403	Hydrology And Irrigation Engineering	PO1, PO2, PO7, PO8, PO12	PSO1, PSO2
54.	C404	Ground Water And Hydraulics	PO1,PO2,PO3,PO4,PO6, PO9,PO12	PSO1, PSO2
55.	C405	Urban Transport Planning	PO1, PO2, PO8, PO10, PO12	PSO1
56.	C406	Rehabilitation And Retrofitting Of Structure	PO1, PO2, PO5, PO6, PO8, PO12	PSO1, PSO2
57.	C407	Environmental Engineering Laboratory	PO1, PO2,PO5,PO6, PO7, PO8, PO9, PO10, PO12	PSO1, PSO2
58.	C408	Computer Aided Detailing Of Structures	PO1, PO5, PO8, PO9, PO10, PO12	PSO1, PSO2

59.	C409	Project + Seminar	PO1, PO2, PO3, PO4, PO5,PO6,PO7,PO8, PO9,PO10,PO11, PO12	PSO1, PSO2
VIII SEMESTER				
60.	C410	Quantity Surveying & Contracts Management	PO1,PO2,PO4,PO8,PO10 PO11,PO12	PSO1, PSO2
61.	C411	Design of Prestressed Concrete Elements	PO1,PO2,PO3,PO8, PO12	PSO1, PSO2
62.	C412	Earthquake Resistant Design of Structures	PO1,PO2,PO3,PO4,PO6, PO7, PO8,PO12	PSO1, PSO2
63.	C413	Pavement Design	PO1,PO2,PO3,PO4,PO8, PO12	PSO1, PSO2
64.	C414	Internship/Professional Practice	PO1,PO2, PO3, PO4, PO5,PO6,PO7,PO8, PO9,PO10,PO11, PO12	PSO1, PSO2
65.	C415	Project Work (Phase-II)	PO1,PO2, PO3, PO4, PO5,PO6,PO7,PO8, PO9,PO10,PO11, PO12	PSO1, PSO2
66.	C416	Seminar on current trends in Engineering and Technology	PO1,PO2,PO7,PO8,PO10, PO11,PO12	PSO1, PSO2

3.1.1a. 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)

After a successful completion of the course, the student will be able to:

TableB.3.2: Course Outcomes of Environmental Studies [17CIV18] (First Semester) (2017-18)

Course/Cos	Course Outcomes
C108.1	Comprehend the principles of Ecology
C108.2	Apply the observation skills to analyze the environment problem
C108.3	Describe the realities that managers face when dealing with complex issues
C108.4	Utilize socio-economic skills for sustainable development

Table B. 3.3: Course Outcomes of Elements of Civil Engineering & Mechanics [17CIV23] (Second Semester) (2017-18)

Course/Cos	Course Outcomes
C111.1	Comprehend the importance & scope of various fields of Civil Engg.
C111.2	Analyze the system of forces, moments acting on rigid bodies & compute the reactive forces.
C111.3	Locate the centroid to evaluate the moment of inertia of regular cross section
C111.4	Identify the relationship between the motions of bodies and pursue concepts of mechanics in allied courses.

Table B. 3.4: Course Outcomes of Strength of Materials [17CV32] (Third Semester) (2018-19)

Course/Cos	Course Outcomes
C202.1	Interpret the stresses and strains for different materials
C202.2	Apply the concept for compound stresses, thick and thin cylinders
C202.3	Analyze the statically determinate beams
C202.4	Assess the members subjected to torsion and failure theories
C202.5	Analyze compression members subjected to axial loads

Table B.3.5: Course Outcomes of Concrete Technology [17CV44] (Fourth Semester) (2018-19)

Course/Cos	Course Outcomes
C212.1	Identify the functional role of ingredients of concrete and apply this knowledge to mix design philosophy.
C212.2	Apply fundamental knowledge in the fresh and hardened properties of concrete
C212.3	Demonstrate properties, failure modes and techniques of measuring the Non-Destructive Testing of structural concrete
C212.4	Develop an awareness of the utilization of waste materials as novel innovative materials for use in concrete
C212.5	Design a concrete mix which fulfils the required properties for fresh and hardened concrete

Table B.3.6: Course Outcomes of Applied Geotechnical Engineering [17CV53] (Fifth Semester) (2019-20)

Course/Cos	Course Outcomes
C303.1	Identify the investigation to explore subsurface and determine dewatering techniques and its suitability for the proposed engineering works.
C303.2	Calculate stress distribution to Estimate resulting settlement beneath the loaded footings on sand and clayey soils.
C303.3	Discuss active, passive and at rest earth pressures for analysis of slope stability.
C303.4	Calculate load bearing capacity and discuss the design of foundations to Predict the possible settlement.
C303.5	Estimate the load carrying capacity of piles and their classifications in single and group of piles.

Table B.3.7: Course Outcomes of Design of Steel Structural Element [17CV62] (Sixth Semester) (2019-20)

Course/Cos	Course Outcomes
C311.1	Interpret the knowledge on the concepts of steel structural elements
C311.2	Analyse the continuous beams and connections in the steel structures
C311.3	Design steel compression members under axial loads to suit structural applications
C311.4	Design steel tension members under axial loads to suit structural applications
C311.5	Design Flexural members under variable loads to suit structural applications

Table B.3.8: Course Outcomes of Municipal Wastewater and Treatment Engineering [17CV71] (Seventh Semester) (2020-21)

Course/Cos	Course Outcomes
C401.1	Choose sewer sections and design of sewers
C401.2	Evaluate degree of treatment and type of treatment for disposal, reuse and recycle
C401.3	Identify waste streams and design the industrial waste water treatment plant
C401.4	Manage sewage and Industrial effluent issues

Table B.3.9: Course Outcomes of Earthquake Resistant Design of Structures [17CV831] (Eighth Semester) (2020-21)

Course/Cos	Course Outcomes
C412.1	Summarize the elements of Engineering seismology
C412.2	Develop response for SDOF system to free and forced vibrations
C412.3	Analyse the building irregularities and lateral load on structures as per IS:1893 code
C412.4	Design and detailing of ductile RC elements and performance of Masonry structures as per IS: 13920 code.

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

Table B. 3.10: COs-POs matrix of Strength of Materials-17CV32 (Third Semester) (2018-19)

17CV32	STRENGTH OF MATERIALS											
CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C202.1	3.0	2.0	-	-	-	1.0	-	1.0	-	-	-	1.0
C202.2	2.0	3.0	1.0	-	-	-	-	-	-	-	-	-
C202.3	3.0	3.0	1.0	-	1.0	-	-	-	-	-	-	2.0
C202.4	2.0	1.0	1.0	-	-	-	-	-	-	-	-	-
C202.5	2.0	3.0	1.0	-	-	-	-	-	-	-	-	1.0
C202Avg	2.4	2.4	1.0	-	1.0	1.0	-	1.0	-	-	-	1.33

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Table B.3.11: COs-POs matrix of Concrete Technology -17CV44 (Fourth Semester) (2018-19)

17CV44	CONCRETE TECHNOLOGY											
CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C212.1	2.0	-	2.0	-	-	1.0	-	-	-	-	-	1.0
C212.2	3.0	-	-	-	-	1.0	-	2.0	-	-	-	1.0
C212.3	2.0	2.0	-	1.0	-	1.0	-	2.0	-	-	-	1.0
C212.4	2.0	-	-	1.0	1.0	1.0	-	3.0	-	-	-	1.0
C212.5	2.0	2.0	3.0	1.0	-	1.0	-	3.0	-	-	-	1.0
C212Avg	2.2	2.0	2.5	1.0	1.0	1.0	-	2.5	-	-	-	1.0

Table B 3.12: COs-POs matrix of Applied Geotechnical Engineering-17CV53 (Fifth Semester) (2019-20)

17CV53	APPLIED GEOTECHNICAL ENGINEERING											
CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C303.1	2.0	2.0	-	-	-	2.0	1.0	1.0	-	-	-	2.0
C303.2	2.0	3.0	2.0	2.0	-	2.0	1.0	1.0	-	-	-	2.0
C303.3	1.0	3.0	2.0	1.0	-	3.0	2.0	1.0	-	-	-	2.0
C303.4	1.0	2.0	2.0	1.0	-	2.0	2.0	1.0	-	-	-	2.0
C303.5	2.0	2.0	2.0	2.0	-	2.0	3.0	1.0	-	-	-	2.0
C303 Avg	1.6	2.4	2.0	1.5	-	2.2	1.8	1.0	-	-	-	2.0

Table B 3.13: COs-POs matrix of Design of Steel Structural Element -17CV62 (Sixth Semester) (2019-20)

17CV62	DESIGN OF STEEL STRUCTURAL ELEMENT											
CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C311.1	3.0	-	-	1.0	-	1.0	-	2.0	-	-	-	1.0
C311.2	1.0	3.0	-	1.0	-	-	-	2.0	-	-	-	1.0
C311.3	1.0	2.0	3.0	1.0	-	-	-	2.0	-	-	-	1.0
C311.4	1.0	2.0	3.0	1.0	-	-	-	2.0	-	-	-	1.0
C311.5	1.0	2.0	3.0	1.0	-	-	-	2.0	-	-	-	1.0
C311Avg	1.4	2.25	3.0	1.0	-	1.0	-	2.0	-	-	-	1.0

Table B. 3.14: COs-POs matrix of Municipal Wastewater and Treatment Engineering-17CV71 (Seventh Semester) (2020-21)

17CV71	MUNICIPAL WASTEWATER AND TREATMENT ENGINEERING											
CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C401.1	3.0	2.0	3.0	-	-	2.0	2.0	1.0	-	-	-	1.0
C401.2	2.0	3.0	2	-	-	2.0	2.0	1.0	-	-	-	1.0
C401.3	2.0	2.0	3.0	-	-	2.0	2.0	1.0	-	-	-	-
C401.4	2.0	2.0	-	-	-	2.0	2.0	1.0	-	-	-	1.0
C401Avg	2.25	2.25	2.67	-	-	1.0	2.0	1.0	-	-	-	1.0

Table B. 3.15: COs-POs matrix of Earthquake Resistant Design of Structures -17CV831 (Eighth Semester) (2020-21)

17CV831	EARTHQUAKE RESISTANT DESIGN OF STRUCTURES											
CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C412.1	2.0	-	-	-	-	1.0	1.0	-	-	-	-	1.0
C412.2	2.0	3.0	-	-	-	-	-	-	-	-	-	-
C412.3	2.0	3.0	-	-	-	1.0	-	2.0	-	-	-	-
C412.4	2.0	3.0	3.0	1.0	-	-	-	2.0	-	-	-	-
C412 Avg	2.0	3.0	3.0	1.0	-	1.0	1.0	2.0	-	-	-	1.0

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

Table B. 3.16: COs-POs matrix of Strength of Materials -17CV32 (Third Semester) (2018-19)

17CV34	STRENGTH OF MATERIALS	
CO/PO	PSO1	PSO2
C202.1	2.0	1.0
C202.2	2.0	1.0
C202.3	2.0	1.0
C202.4	2.0	1.0
C202.5	2.0	1.0
C202Avg	2.0	1.0

Table B. 3.17: COs-POs matrix of Concrete Technology -17CV44 (Fourth Semester) (2018-19)

17CV44	CONCRETE TECHNOLOGY	
CO/PSO	PSO1	PSO2
C212.1	1.0	-
C212.2	-	1.0
C212.3	2.0	1.0
C212.4	-	1.0
C212.5	2.0	1.0.0
C212Avg	1.67	1.0

Table B. 3.18: COs-POs matrix of Applied Geotechnical Engineering -17CV53 (Fifth Semester) (2019-20)

17CV53	APPLIED GEOTECHNICAL ENGINEERING	
CO/PSO	PSO1	PSO2
C303.1	1.0	2.0
C303.2	2.0	2.0
C303.3	2.0	-
C303.4	2.0	2.0
C303.5	2.0	1.0
C303 Avg	1.8	1.75

Table B. 3.19: COs-POs matrix of Design of Steel Structural Element -17CV62 (Sixth Semester) (2019-20)

17CV62	DESIGN OF STEEL STRUCTURAL ELEMENTS	
CO/PSO	PSO1	PSO2
C311.1	2.0	2.0
C311.2	2.0	-
C311.3	2.0	-
C311.4	2.0	-
C311.5	2.0	-
C311Avg	2.0	2.0

Table B. 3.20: COs-POs matrix of Municipal Wastewater and Treatment Engineering-17CV71 (Seventh Semester)

17CV71	MUNICIPAL WASTEWATER AND TREATMENT ENGINEERING	
CO/PSO	PSO1	PSO2
C401.1	3.0	2.0
C401.2	3.0	2.0
C401.3	2.0	1.0
C401.4	1.0	1.0
C401Avg	2.25	1.5

Table B. 3.21: COs-POs matrix of Earthquake Resistant Design of Structures -17CV831 (Eighth Semester)

17CV831	EARTHQUAKE RESISTANT DESIGN OF STRUCTURES	
CO/PSO	PSO1	PSO2
C412.1	2.0	-
C412.2	2.0	2.0
C412.3	2.0	-
C412.4	2.0	-
C412 Avg.	2.0	2.0

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

Table B. 3.22: Lists the program level Course-PO matrix of all courses including first year courses. (2017-21)

Courses/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I SEMESTER												
C101	2.25	2.0	2.33	1.0	1.0	-	-	-	-	--	-	-
C102	3.0	2.6	1.0	-	-	-	-	-	-	-	-	-
C103	2.4	2.4	2.4	2.0	-	-	-	-	-	-	-	1.6
C104	3.0	2.0	2.0	1.0	-	-	-	2.0	2.0	-	-	-
C105	2.6	2.2	1.9	-	-	-	-	-	-	-	-	-
C106	2.0	2.0	2.0	1.0	2.0	-	-	-	-	-	-	2.0
C107	3.0	2.0	2.0	-	-	-	-	-	-	-	-	-
C108	1.3	2.5	1.0	2.0	-	1.0	3.0	-	-	-	-	-
II SEMESTER												
C109	2.4	2.0	2.5	1.0	1.5	-	-	-	-	-	-	-
C110	2.28	2.15	1.84	-	-	-	-	-	-	-	-	-
C111	2.0	2.33	3.0	-	-	-	-	-	-	-	-	1.0
C112	3.0	1.6	-	-	-	-	-	-	-	-	-	-
C113	2.3	2.0	2.0	-	-	-	-	-	-	-	-	-
C114	3.0	2.0	-	-	-	-	-	2.0	2.0	-	-	1.0
C115	3.0	2.0	1.0	-	-	-	-	-	-	-	-	-
III SEMESTER												
C201	2.2	2.0	2.33	1.4	1.66	-	-	-	-	-	-	-
C202	2.4	2.4	1.0	-	1.0	1.0	-	1.0	-	-	-	1.33
C203	1.6	1.4	1.8	-	-	-	2.0	1.0	-	-	-	1.0

C204	1.6	1.6	1.0	-	1.0	-	-	1.33	-	-	-	1.0
C205	3.0	2.0	-	-	-	1.0	1.0	1.0	-	-	-	1.0
C206	1.6	1.5	-	-	-	1.0	-	1.2	-	-	-	1.0
C207	3.0	1.25	-	-	-	1.0	1.25	1.25	1.5	1.0	-	1.0
C208	2.0	1.75	1.0	-	1.0	1.0	-	1.0	2.0	1.0	-	1.0
IV SEMESTER												
C209	2.2	2.0	2.33	1.4	1.66	-	-	-	-	-	-	-
C210	1.4	2.2	1.0	-	-	-	-	1.0	-	-	-	1.0
C211	1.75	1.8	1.75	-	-	-	-	2.0	-	-	-	1.0
C212	2.2	2.0	2.50	1.0	1.0	1.0	-	2.50	-	-	-	1.0
C213	1.8	2.0	2.0	1.75	-	1.4	1.0	1.0	-	-	-	2.0
C214	1.75	1.50	1.0	-	2.0	-	-	1.0	-	-	-	1.0
C215	2.0	2.0	2.0	-	-	-	-	1.0	2.25	2.0	-	1.0
C216	1.75	2.0	-	1.33	1.66	1.0	1.0	1.0	1.66	1.0	-	1.0
V SEMESTER												
C301	1.67	2.0	2.0	1.0	-	1.0	-	2.67	-	-	-	1.0
C302	3.0	2.0	1.0	-	-	-	-	-	-	-	-	1.0
C303	1.6	2.4	2.0	1.5	-	2.2	1.8	1.0	-	-	-	2.0
C304	1.5	-	-	-	3.0	-	-	2.0	1.0	1.0	-	1.5
C305	2.5	2.25	1.5	-	-	-	-	1.0	-	-	-	1.0
C306	3.0	1.5	3.0	-	-	-	-	2.0	-	-	-	1.0
C307	2.8	1.67	1.0	1.0	-	-	-	1.25	-	-	-	1.0
C308	1.6	2.0	-	1.6	-	-	1.2	1.0	1.0	1.6	-	2.0
C309	2.0	1.8	2.0	-	1.0	-	1.33	2.2	1.2	1.0	-	1.2
VI SEMESTER												
C310	1.8	2.0	-	-	-	-	-	1.0	-	-	1.0	1.0
C311	1.4	2.25	3.0	1.0	-	1.0	-	2.0	-	-	-	1.0
C312	2.5	1.75	3.0	-	-	1.0	-	1.33	-	-	3.0	1.25
C313	2.75	2.5	1.66	1.0	-	1.67	1.67	1.75	-	-	-	1.0
C314	2.75	3.0	2.5	-	-	1.75	2.0	1.75	-	-	-	1.0
C315	2.0	2.0	-	-	-	2.0	1.6	1.0	-	-	-	2.0
C316	2.0	1.75	-	-	-	-	-	1.66	-	-	1.0	1.33
C317	2.0	2.67	-	-	1.0	-	-	-	-	-	-	1.0
C318	1.0	1.5	2.0	-	3.0	-	-	1.0	1.0	1.0	2.0	1.0
C319	1.6	2.0	1.6	1.6	1.6	1.4	1.0	1.0	2.4	1.4	1.0	2.0
VII SEMESTER												
C401	2.25	2.25	2.66	-	-	1.0	2.0	1.0	-	-	-	1.0

C402	1.0	2.0	3.0	1.0	3.0	1.0	-	2.0	2.0	-	-	1.0
C403	2.8	2.0	-	-	-	-	1.0	3.0	-	-	-	1.5
C404	1.5	1.0	1.0	1.0	-	1.0	-	-	2.0	-	-	1.0
C405	2.6	1.6	-	-	-	-	-	1.0	-	1.0	-	1.0
C406	2.0	1.66	-	-	1.0	1.0	-	1.5	-	-	-	1.0
C407	1.5	1.5	-	-	3.0	2.0	2.0	2.5	3.0	1.0	-	1.0
C408	1.0	-	-	-	3.0	-	-	2.2	1.0	1.0	-	1.0
C409	2.0	2.66	2.5	2.33	1.67	1.0	1.0	1.33	3.0	1.70	2.0	1.75
VIII SEMESTER												
C410	1.4	2.0	-	1.0	-	-	-	2.0	-	1.0	2.0	1.0
C411	1.5	2.5	2.66	-	-	-	-	2.0	-	-	-	1.0
C412	2.0	3.0	3.0	1.0	-	1.0	1.0	2.0	-	-	-	1.0
C413	2.5	2.5	2.25	1.67	-	-	-	1.25	-	-	-	1.67
C414	3.0	2.0	1.5	2.0	2.0	2.0	1.0	2.0	2.5	2.5	2.0	2.5
C415	3.0	1.5	2.33	2.66	2.0	3.0	2.0	2.66	3.0	3.0	1.33	2.5
C416	2.0	2.5	-	-	-	-	2.0	2.0	-	3.0	2.33	2.33
AVERAGE	2.14	2.01	1.95	1.39	1.77	1.32	1.52	1.57	1.92	1.49	1.70	1.27

COs-PSOs Matrix of all Courses Including First Year Courses:

Table B. 3.23: Lists the program level CO-PSO matrix of all courses Including first year courses

Courses	PSO1	PSO2	Courses	PSO1	PSO2
I SEMESTER			II SEMESTER		
C101	2.0	2.0	C109	2.0	2.0
C102	2.0	1.0	C110	1.0	1.0
C103	1.0	1.0	C111	2.0	1.0
C104	2.0	2.0	C112	1.0	2.0
C105	-	-	C113	-	-
C106	1.0	1.0	C114	2.0	2.0
C107	2.0	2.0	C115	-	-
C108	-	-	-	-	-
III SEMESTER			IV SEMESTER		
C201	2.0	2.0	C209	2.0	2.0
C202	2.0	1.0	C210	1.8	1.0
C203	2.2	1.0	C211	2.0	1.0
C204	1.6	1.0	C212	1.67	1.0
C205	2.0	1.5	C213	2.0	1.25

C206	1.2	1.6	C214	1.25	1.5
C207	2.0	2.0	C215	2.0	-
C208	1.76	1.0	C216	1.25	1.66
V SEMESTER			VI SEMESTER		
C301	1.67	2	C310	1.4	1.0
C302	2.0	-	C311	2.0	2.0
C303	1.8	1.75	C312	2.0	1.5
C304	2.0	2.0	C313	1.0	1.0
C305	1.0	2.0	C314	1.5	2.0
C306	2.0	2.0	C315	2.0	1.4
C307	1.2	1.6	C316	1.0	1.0
C308	2.6	1.0	C317	2.0	1.0
C309	2.25	2.0	C318	2.0	2.0
			C319	2.0	1.6
VII SEMESTER			VIII SEMESTER		
C401	2.25	1.5	C410	2.0	1.6
C402	2.0	1.33	C411	1.75	1.75
C403	2.0	1.0	C412	2.0	2.0
C404	2.25	1.0	C413	2.0	2.0
C405	1.0	-	C414	2.66	2.0
C406	2.25	1.0	C415	1.75	2.75
C407	1.5	3.0	C416	2.25	2.5
C408	2.0	1.0			
C409	1.75	2.75			
AVERAGE				1.80	1.59

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)

The various types of assessment tools followed are presented in table below. This describes the mode of assessment adopted to measure the students' performance using direct assessment and indirect assessment methods.

Table B. 3.24: Assessment Tools for Course Outcomes Evaluation

DIRECT ASSESSMENT TOOLS			
Sl. No.	Assessment process	Description	Frequency
1	Continuous Internal Evaluation Assessment (Theory)	2015 scheme – 20 marks (15 marks CIE + 5 marks Assignment) 2017 scheme – 40 marks (30 marks CIE + 10 marks Assignment)	Three times in a semester
2	Continuous Internal Evaluation Assessment (Lab)	2015 scheme – 20 marks (12 marks lab record + 8 marks CIE) 2017 scheme – 40 marks (24 marks lab record + 16 marks CIE)	(1) Lab Record- Weekly (2) Lab Internal- Once per sem (End of each semester)
3	Semester End Exam (SEE)	2015 scheme: 80 Marks 2017 scheme: 60 Marks	Semester End Exam
4	Project work	Students are required to register for the project as a group. Phase wise conduction as per calendar of events will be scheduled. University exam will be conducted for 100 marks at the end of 8th semester	(1) Two phases in each semester (2) Once (Semester End University Exam will be conducted)
5	Technical Seminar	Technical semester will be evaluated at the end of 8 th semester, individual student for 100 Marks	Once (Semester End internal evaluation)
6	Internship Program	Students are assigned to complete internship program in association with industries and evaluated for 50 marks as internal assessment. University exam will be executed for 50 marks at the end of 8 th semester	Once (Semester End Evaluation)

INDIRECT ASSESSMENT TOOLS			
7	Course End Survey	Quality of the course contents & delivery is assessed through student feedback mapped with COs which aids in improving teaching learning process	Once Per Semester (End of each semester)
8	Program Exit survey	Quality of curriculum and infrastructure will be assessed through student feed back	(End of the program)

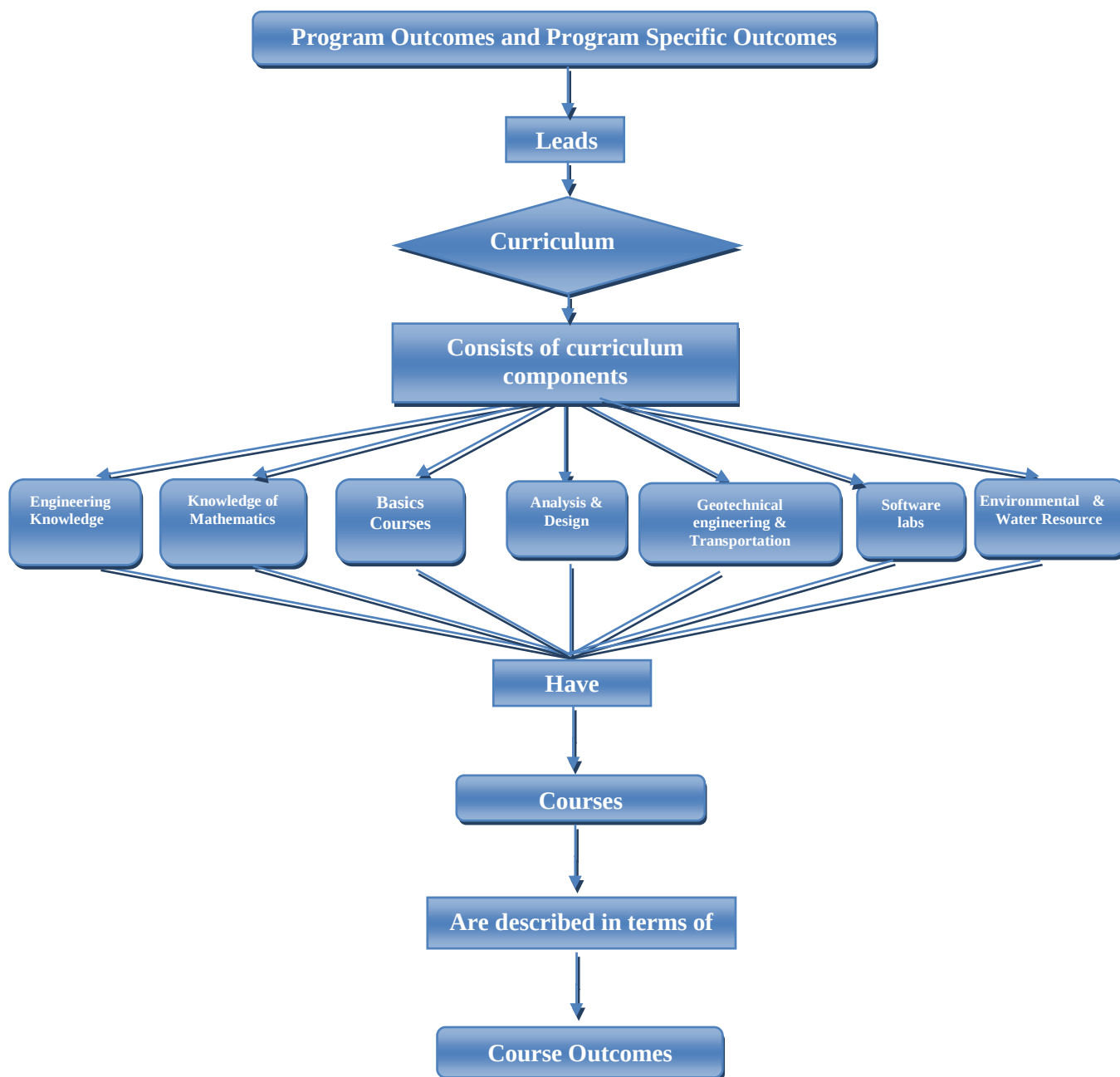


Figure 3.1: Assessment process for Course Outcomes Evaluation

Direct method (17 scheme)

The components used for direct assessment method are Internal Assessment (IA) and Semester End Examination (SEE) with a weight age of 80% and 20% respectively. IA assessment for theory courses is based on marks scored by a student in Tests, Assignment. The curriculum also includes courses such as Projects and Technical seminar.

Direct method (15 scheme)

The components used for direct assessment method are Internal Assessment (IA) and Semester End Examination (SEE) with a weight age of 80% and 20% respectively. IA assessment for theory courses is based on marks scored by a student in Tests, Assignment. The curriculum also includes courses such as Projects and Technical seminar.

CO Attainment through IA

Course Outcome (CO) attainment illustrates the performance of a student in a particular course. CO attainment is calculated based on students score in each assessment tools.

Course Achievable Matrix

The course outcomes for every course are defined based on the Bloom's taxonomy learning levels. The course achievable matrix is derived from the course content. The course coordinator ensures the distribution of COs in each question paper which will be further verified by Program Coordinator.

Test (IA)

CO attainment is calculated by considering the marks of each question in the question paper for all the three tests. Each question in test question papers is mapped with COs. Through this mapping we get the student score for each CO.

Laboratory

- Laboratory in-charge faculty members follow rubrics, which is set by the department for evaluation of laboratory programs.

- Laboratory experiments are conducted with assessment based on rubric metric as given in Table B.3.25. For every experiment, procedure is to be written, executed and demonstrated to the lab in charges. The demonstration of the output is followed by oral viva-voce.
- Laboratory tests evaluation is as discussed in criteria 2.2.1.6

Rubrics for evaluation of Laboratory work:

Table B. 3.25: Rubrics for Laboratory work Continuous Internal Evaluation Assessment

Rubric	Methodology / Process Steps	2015	2017
a	Observation, Write up and Punctuality	2	4
b	Conduction of experiment and Output	4	8
c	Viva – Voce (Questions & Answers on relevant Experiment / Topic)	2	4
d	Record write-up	4	8
CIE	Internal Test		
	(i)Write-up of Procedure:	2	4
	(ii)Conduction:	4	8
	(iii)Viva-Voce:	2	4
Total Marks		20	40

Seminar Work Evaluation:

- The seminar on technical topics with report and presentation is a part of the curriculum for every individual student. The Department selects a senior faculty member as a Seminar coordinator who along with other faculty would assess the Technical seminar presentations by students. He/She would ensure that the students choose advanced concepts in Civil Engineering and allied research areas with a lot of relevance and applicability.
- One seminar per student in the VIII semester is conducted as per the schedule.
- Seminar coordinators follow rubrics, which is set by the department for evaluation of seminar.

Rubrics for evaluation of student for technical seminars:**Table B. 3.26: Seminar Assessment Rubrics**

Rubric	Methodology / Process Steps	Marks (100)
a	Relevance and Understanding of the topic	15
b	Literature Survey and Observation	15
c	Report Content	30
d	Presentation with Explanation	30
e	Q&A	10

Major Project

The students carry out Project works, in teams during final year of the program. They are required to identify, formulate, review research literature and analyse complex engineering problems. The students are also required to design solutions using appropriate modern engineering and IT tools with considerations for public health and safety, cultural, societal and environmental aspects.

Table B. 3.27: Phase – I (Review – I): Preliminary Project Evaluation

Rubric	Methodology / Process Steps	Marks (40)
a	Literature Review	10
b	Problem identification and definition	10
c	Significance and relevance of work	05
d	Presentation and Report	15

Table B. 3.28: Phase – I (Review – II): Project Synopsis and Project Seminar Evaluation

Rubric	Methodology / Process Steps	Marks (60)
a	Objectives and methodology of project	10
b	Plan of execution	05
c	Project Seminar	20
d	Project Synopsis report	25

Table B. 3.29: Phase – II (Review – I): Project Intermediate Evaluation

Rubric	Methodology / Process Steps	Marks (40)
a	Plan of execution	05
b	Progress of work	10
c	Implementation/Results	05
d	Presentation and Report	20

Table B 3.30 Phase – II (Review – II): Project End Evaluation

Rubric	Methodology / Process Steps	Marks (60)
a	Demonstration	10
b	Project Presentation	10
c	Results, discussions and conclusion	15
d	Final project report	25

Sl. No	Title		Level of Achievement			
			Excellent	Good	Average	Poor
1	Literature Review(10)		- Information is gathered from multiple, research-based sources. - Detailed conclusions are reached from the evidence offered. - Information is cited properly and in standard format.	- Information is gathered from multiple sources. - Conclusions are reached from the evidence offered. - Information is cited properly.	- Information is gathered from a limited number of sources. - There is some indication of conclusions from the evidence offered. - Information is cited, but has errors.	- Information is gathered from a single source. - No conclusions are made from the evidence offered. - Information is not cited or is cited incorrectly.
2	Problem identification and definition(10)		- Detailed and extensive explanation of the purpose and need of the project - Detailed and extensive explanation of the specifications and the limitations of the existing systems	- Good explanation of the purpose and need of the project - Collects a great deal of information and good study of the existing systems.	- Average explanation of the purpose and need of the project - Moderate study of the existing systems; collects some basic information	- Moderate explanation of the purpose and need of the project - Explanation of the specifications and the limitations of the existing systems not very satisfactory; limited information
3	Significance and relevance of work (5)		- Selected work is researchable and could potentially resolve a clearly identified problem or issue - Selected work is relevant timely and grounded in practice	- Description of the context for the question is clear - Selected work is timely and relevant to the issue or problem	- Context is mentioned but not well described - Selected work is timely or relevant to the issue or problem, but not both	No description for the context of the new or revised question
4	Presentation and Report (15)	Presentation (10)	- Contents of presentations are appropriate and well arranged - Proper eye contact with audience and clear voice with good spoken language	- Contents of presentations are appropriate but not well arranged - Satisfactory demonstration, clear voice with good spoken language but eye contact not proper	- Contents of presentations are appropriate but not well arranged - Eye contact with few people and unclear voice	- Contents of presentations are not appropriate - Demonstration not satisfactory
		Report (5)	Project preliminary report is according to the specified format and submitted in time	Project preliminary report is according to the specified format but not submitted in time	Project preliminary report is according to the specified format but some mistakes	Project preliminary report not prepared according to the specified format

Figure 3.2: Snapshot of Micro level rubrics for Project Evaluation

CO Attainment through SEE

CO attainment through SEE will be derived from the Marks scored by the students in the university examination in that particular course.

Indirect method

Indirect method includes course end survey for particular course in a semester. Feedback will be collected at the end of every course and are mapped to Cos. All these components contribute to 10% of CO attainment.

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

- **Process for the CO attainment:** Course Outcome for a course identifies the knowledge and skills gained by the students upon completion of the course. Course attainment is a measure of the course outcomes acquired by the students. The COs is discreetly defined based on the Syllabus of each course.
- **Expected Attainment:** The expected attainment level is the threshold of attainment, which the student has to gain after completion of each course. The expected attainment levels for each course are set based on the previous attainment level for that course or based on class average marks. The students are required to achieve the expected CO attainment level which facilitates the CO attainment of that particular course. If the attainment of the course is not meeting the target level, course coordinators retrospect the reason and recommend for modification of course curriculum or the delivery/assessment method, to improve the CO levels. If the course is introduced for the first time, the target level is set based on the inputs from faculty expertise in that course.
- **Course Outcome Attainment:** The process of CO attainment, based on direct and indirect methods is as depicted in Figure below. The CO of every course is mapped with PO as defined by NBA. Question papers of CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) are mapped with CO to arrive at individual CO Weightage. CO attainment of each student is calculated based on CIE, SEE, laboratory, assignment and self study performance. The CO attainment of students is averaged to obtain target attainment levels.

Course Outcome attainment Target levels for all courses**Table B.3.31: Assessment Targets for Course Outcomes Evaluation (2017-2021 Batch) (CAY)**

Batch: 2017 – 2021				
Sl. No.	Assessment Method	Maximum Marks	Course Outcome Target	
			Percentage	Marks
1	Internal Assessment Test (IA) CIE	30	60%	18
2	Semester End Examinations (SEE)	60	50%	30
3	Lab Assessment (Internal)	16	70%	12
4	Practical Examinations	60	60%	36
5	Seminar	100	70%	70
6	Project Work Evaluation (Phase-I and Phase-II)	200	70%	140
7	Project Work Evaluation and viva voce (External)	100	60%	60
8	Internship Evaluation (Internal)	50	60%	30
9	Internship Evaluation (External)	50	60%	30

Set attainment level for above Course Outcomes targets are:

Attainment Level 1: 40% students scoring more than set target level in the final examination.

Attainment Level 2: 50% students scoring more than set target level in the final examination.

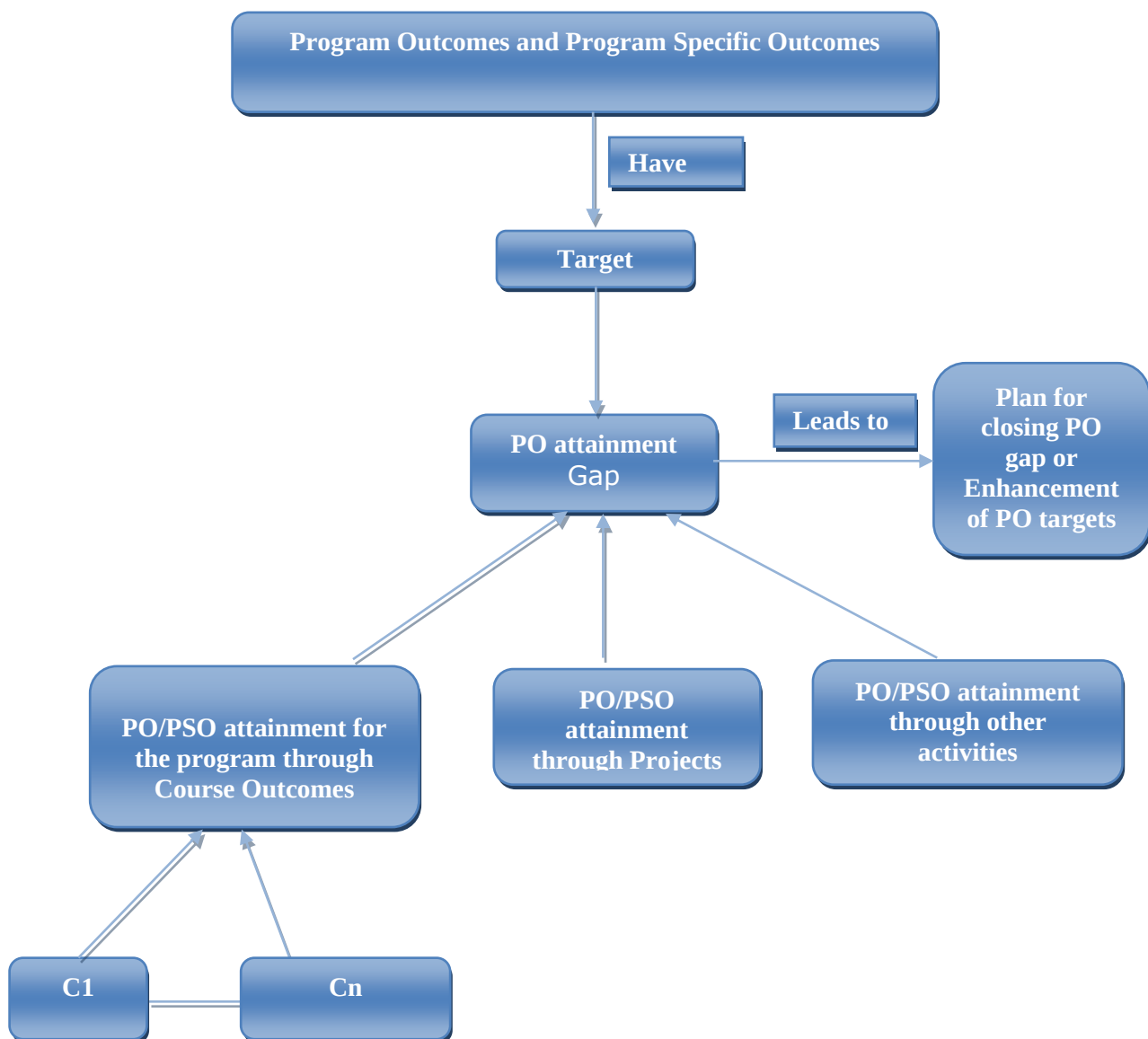
Attainment Level 3: 60% students scoring more than set target level in the final examination.

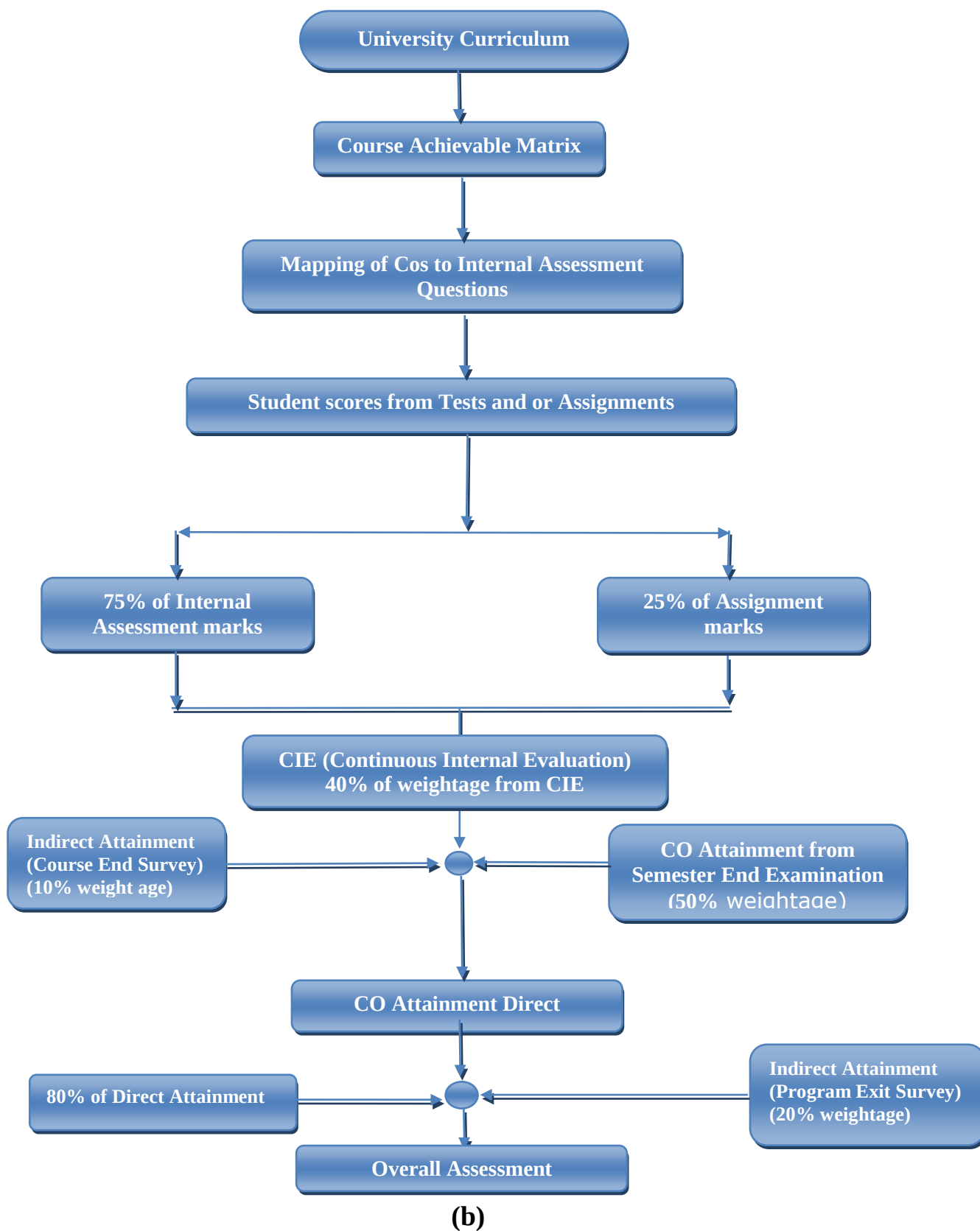
Table B.3.32: Indirect Assessment Methods

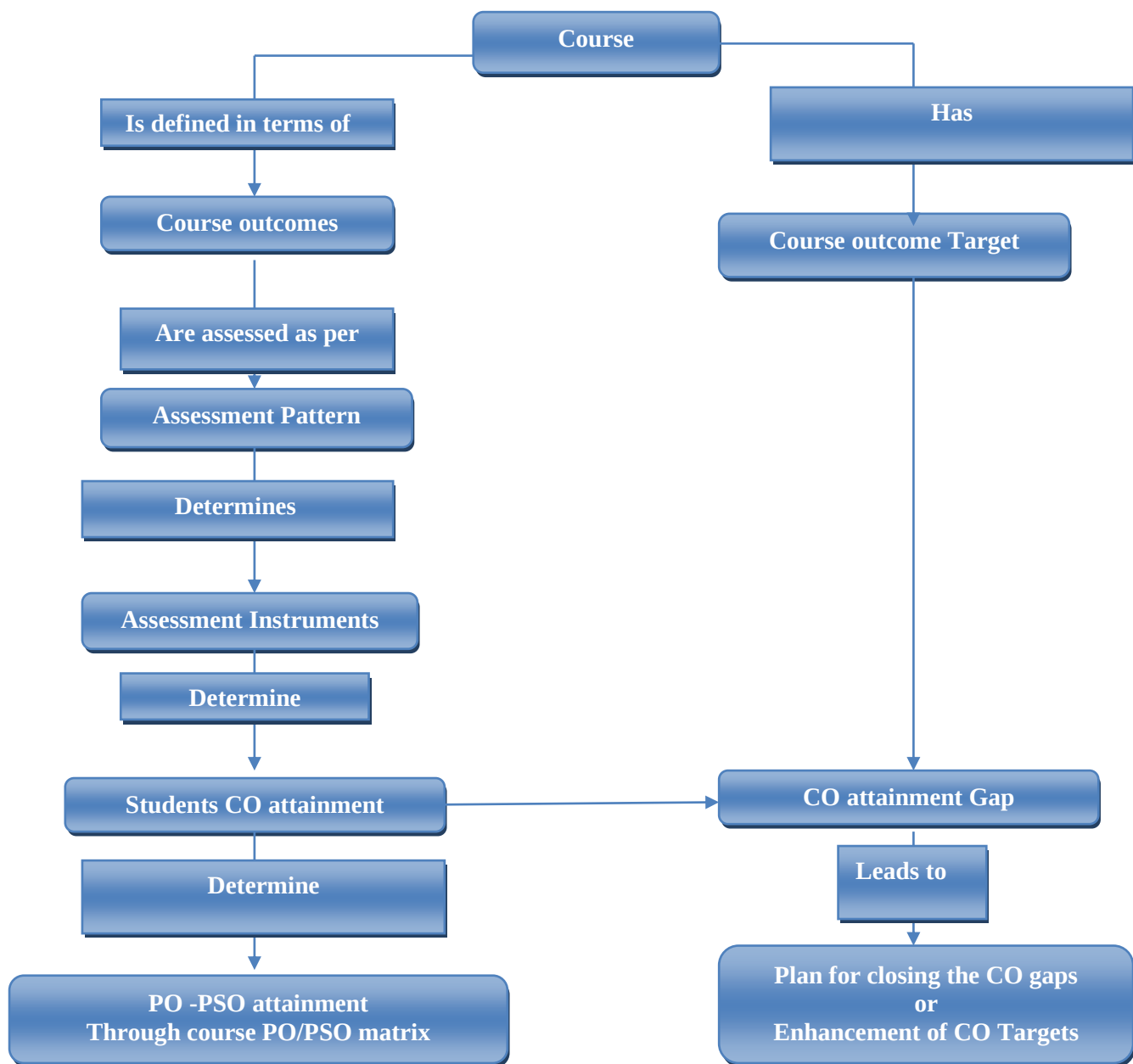
Sl. No.	Survey Type	Methodology	Frequency
1	Course End Survey	Online Survey – DHI Software	After end of the course /Semester
2	Program Exit Survey	Online Survey – DHI Software Survey forms – Hard copy	After end of the Graduation Programme

Model / Tool used for assessment of CO, PO and PSO:

The assessment tool for the assessment of Course Outcomes (COs), Program Outcomes (POs) and the Program Specific Outcomes (PSOs) has been designed and developed based on the inputs from the coordinators from different departments, all the heads of the departments and the Principal following the basic steps as described in Figure 3.3: (a), (b) & (c).

**(a)**





(c)

Figure 3.3 (a), (b) & (c): PO-PSO attainment through Co attainment

Attainment calculation tool and snapshots:

The sample snapshots of the final summary sheet to display initial setting of targets, weightages of SEE and CIE, CO-PO-PSO mapping correlation matrix and CO/PO/PSO attainment calculations is as shown in figures 3.4 to 3.8.

(a) Summary Sheet to display CO, CO-PO Mapping and CO / PO targets for Attainment

SJCIT/NBA/ COURSE/ 2020-21		 S J C INSTITUTE OF TECHNOLOGY Chickballapur - 562 101 Department of Civil Engineering																
Course Information																		
Programme Name:		Civil Engineering																
Academic Year:		2020-21	Semester:		8	Section:		A & B	Subject Type:		Theory							
Course Title:		DESIGN OF PRESTRESSED CONCRETE ELEMENTS																
Course Instructor Name:		Mrs SHARADA S A & Mrs. CHANDRAKALA S								Class Strength:								
Subject Code:		17CV82	Course No:		2	Course ID:		C412	98									
Scheme of Teaching & Marks																		
Contact Hr/Week:		4	Lecture Hours (Hr.):		4	Tutorials (Hr.):		0										
Max.CIE Marks:		40	Max. SEE Marks:		60	Total Max.Marks:		100										
Min.CIE Marks:		19	Min.SEE Marks:		21	Total Min.Marks:		40										
Final CIE (IA) Marks:		40	Assignment Marks:		10	Test Marks:		30										
Threshold Values for Attainment Calculation																		
Attainment level		3	%	2	%	1	%	(Percentage Contribution, %)										
Internal Assessment		>=	70	>=	60	>=	50	CIE	40	SEE	50							
SE Examination		>=	60	>=	50	>=	40	-		CES	10							
Statements of Course Outcomes																		
No.of CO's						4		Target(%)										
C412.1	Identify the requirement of PSC members & apply the principles of prestressing							60										
C412.2	Analyze PSC elements for stresses, Losses and deflection							60										
C412.3	Analyze and design PSC elements for flexure and shear as per Codal provisions							60										
C412.4	Design PSC element for different requirement in a team setting							60										
Semester End Exam. (SEE) Target(%)				75		Course End Survey(CES) Target (%)				75								
CO-PO Mapping Table (In the scale of 3)																		
CO/PO		1	2	3	4	5	6	7	8	9	10	11	12	CO-PSO Mapping Table				
C412.1		2	2						2				1	C412.1	1			
C412.2		1	3	2					2				1	C412.2	2			
C412.3		2	3	3					2				1	C412.3	2			
C412.4		1	2	3					2				1	C412.4	2			
Total		6	10	8					8				4	Total	7			

Figure 3.4: Sample snapshot of Cos, CO-PO mapping & targets set for attainment

(b) Internal Tests Marks/ Quiz / Assignment

SJCIT/NBA/ CE-MARKS/ 2020-21		 S J C INSTITUTE OF TECHNOLOGY Chickballapur - 562 101 Department of Civil Engineering										 S J C INSTITUTE OF TECHNOLOGY Chickballapur - 562 101 Department of Civil Engineering										 S J C INSTITUTE OF TECHNOLOGY Chickballapur - 562 101 Department of Civil Engineering									
Course Title:		DESIGN OF PRESTRESSED CONCRETE ELEMENTS										DESIGN OF PRESTRESSED CONCRETE ELEMENTS										DESIGN OF PRESTRESSED CONCRETE EL									
Subject Code:		17CV82	Semester & Section				8 - A&B	No Students		98	17CV82	Semester & Section				8 - A&B	No Students		98	17CV82	Semester & Section				8 - A&B	No Students		98			
Course Instructor Name:		Mrs SHARADA S A & Mrs. CHANDRAKALA S				Course ID:		C412				Mrs SHARADA S A & Mrs. CHANDRAKALA S				Course ID:		C412				Mrs SHARADA S A & Mrs. CHANDRAKALA S				Course ID:		C412			
		Test No: 01										Test No: 02										Test No: 03									
Ref-Question Number:		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27			
		CIE Marks Entry Format For the Academic Year - 2020-21										CIE Marks Entry Format For the Academic Year - 2020-21										CIE Marks Entry Format For the Academic Y									
Questions		1,2	3,4	5,6	7,8	9,10	A1	A2				1,2	3,4	5,6	7,8	9,10	A3					1,2	3,4	5,6	7,8	9,10	A4				
Main Question No.		1	2	3	4	5	6	7				1	2	3	4	5	6					1	2	3	4	5	6				
Mapped CO-No.		1	2	1	2	2	1	2				2	2	3	3	3	3					3	3	4	3	4	4				
SL USM/Q-Marks		10	10	10	10	10	10	10				10	10	10	10	10	10					10	10	10	10	10	10				
1 JSJ17CV001		10		6	10	6	10	10				10	8	5	10	10	10					7	10	4	9	10	10				
2 JSJ17CV002		10	4	8	10	2	10	10				10	8		10	9	10					7	8	4	9	8	10				
3 JSJ17CV003		10	5	7	10	6	10	10				10	8	10	10	10	10					7	10	6	9	10	10				
4 JSJ17CV004		4	4	8	10	10	10	10				10	8	10	3	10	10					8	6	7	10	10	10				
5 JSJ17CV005		8	4	7	8	6	10	10				10	8	5	8	10	10					6	7	9	8	10	10				
6 JSJ17CV006		10	5	7	10	10	10	10				10	8	6	10	10	10					6	10	7	10	9	10				
7 JSJ17CV007		7	2	8	10	6	10	10				10	8	4	10	10	10					6	10	5	9	8	10				
8 JSJ17CV008		10	5	6	10	10	10	10				10	8	8	10	10	10					5	10	7	10	10	10				
9 JSJ17CV009		10	5	8	10	10	10	10				10	8	10	7	10	10					6	10	9	10	10	10				
10 JSJ17CV010		10	6	8	10	10	10	10				10	8	10	8	10	10					8	10	9	10	10	10				
11 JSJ17CV011		8	5	9	10	6	10	10				10	8	10	10	9	10					9	8	9	10	10	10				
12 JSJ17CV012		7		6	3		10	10				10	8	9	10		10					7	10	7	10		10				
13 JSJ17CV013		8	5	10	10	10	10	10				10	8	9	10	10	10					8	10	7	10	10	10				
COURSE		STUDENT-LIST		CIE	CO-ATMT	CO-REPORT	SEE	RESULTS	CES	COND-REPORT	MAIN																				

Figure 3.5: Sample Snapshot showing Quiz, Assignment & Continuous Internal Evaluation marks entry sheet

(c) Internal/ External Assessment:

(C) Internal/ External Assessment.

SJCIT/NBA/ SEE-MARKS/ 2020-21		 S J C INSTITUTE OF TECHNOLOGY Chickballapur - 562 101 Department of Civil Engineering							
Course Title		DESIGN OF PRESTRESSED CONCRETE ELEMENTS				Course Code	C412		
Subject Code		17CV82	Semester	8	Section	A & B	Emp.ID	956	
Faculty Name		Mrs. SHARADA S A & Mrs. CHANDRAKALA S				No.students	98		
		Format for Entry of Semester End Examination Marks					40	60	100
Sl.	USN	NAME					CIE	SEE	Total
1	1SJ17CV001	ABILASH K R					33	21	54
2	1SJ17CV002	AKSHAY N HADIMANI					32	27	59
3	1SJ17CV003	ALIASGAR KHOJA					36	29	65
4	1SJ17CV004	ANKITHA REDDY R					34	32	66
5	1SJ17CV005	ARCHANA B C					33	21	54
6	1SJ17CV006	ARUN M					36	41	77
7	1SJ17CV007	BASAVARAJ SINGRY					33	29	62
8	1SJ17CV008	BHARATHREDDY V					36	29	65
9	1SJ17CV009	BHAVANA T N					36	29	65
10	1SJ17CV010	CHAITHANYA K R					38	47	85
11	1SJ17CV011	CHANDANA K M					36	37	73
12	1SJ17CV012	CHARAN K S					27	26	53
13	1SJ17CV013	CHARAN M					37	39	76
14	1SJ17CV014	CHARAN R					33	32	65
15	1SJ17CV015	CHETHAN K N					31	21	52
16	1SJ17CV016	CHETHAN KUMAR K J					39	41	80
17	1SJ17CV018	DEVIYANI G S					35	36	71
18	1SJ17CV021	GOWTHAMI J					35	43	78
19	1SJ17CV022	H LINGAREDDY					32	21	53
20	1SJ17CV023	HEMANTH K					33	41	74
21	1SJ17CV024	HEMAVATHI R					35	47	82
22	1SJ17CV025	ISMAIL PINJAR					27	29	56
23	1SJ17CV026	JEEVAN KUMAR G S					30	38	68
24	1SJ17CV027	KANTHRAJ B N					33	36	69
25	1SJ17CV028	KAVYA K					36	28	64
26	1SJ17CV029	KAVYASHREE B V					35	29	64
27	1SJ17CV032	KIRAN KUMAR M A					31	28	59
28	1SJ17CV033	KOWSHIK D					36	42	78
29	1SJ17CV034	KRITHI C N					35	33	68

Figure 3.6: Sample snapshot of Continuous Internal Evaluation & Semester End Examination marks

(d) Summary Sheet to display result analysis of the course

SJCIT/NBA/

SEE-REPT/

2020-21

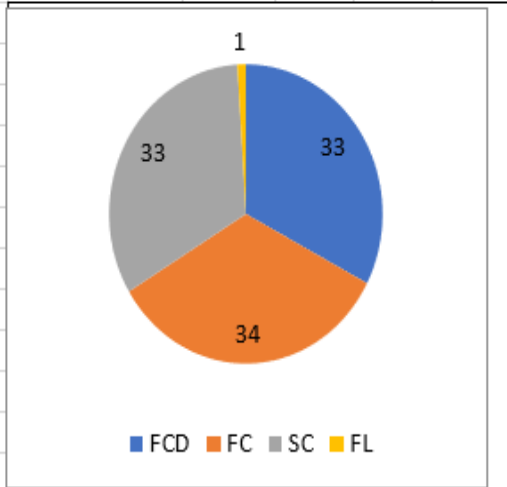


S J C INSTITUTE OF TECHNOLOGY

Chickballapur - 562 101

Department of Civil Engineering

Course Title	DESIGN OF PRESTRESSED CONCRETE ELEMENTS				Course Code	C412	
Subject Code	17CV82	Semester	8	Section	A & B	Emp.ID	815
Faculty Name	Mrs. SHARADA S A & Mrs CHANDRAKALA				No.students	98	
Result Analysis of Subject Code -17CV82 - for the Academic year 2020-21							



Result Analysis of Section: 8 - A & B					
No. Students	Pass	%	Fail	%	
98	97	99	1	1	
Class Analysis of Section: 8 - A & B					
No. Students	98	%	Grade Point		
FCD	32	33	10,9,8		
FC	33	34	7		
SC	32	33	6,4		
FL	1	1	0		
Max. and Avg. Marks					
CIE	AVG	SEE	AVG	TOT	AVG
40	33	60	32	100	66

CO Attainment in SEE	
Sum_AT	169
T_students	98
Avg.ATNT	1.7
Sum_AT(=3)	34
AT(=3)%	35
Attainment	NO

ANALYSIS OF GRADE POINT AND GRADE LETTER							
Grade Letter	S	A	B	C	D	E	F
Grade Point	10	9	8	7	6	4	0
No.of Students		10	22	33	32		
% of Students		10	22	34	33		

CIE and SEE correlation Coefficient						0.32

Figure 3.7: Sample snapshot of result analysis of the course

(f) Final Summary Sheet to display attainment of Course outcomes

Final Summary Sheet to display attainment of Course outcomes

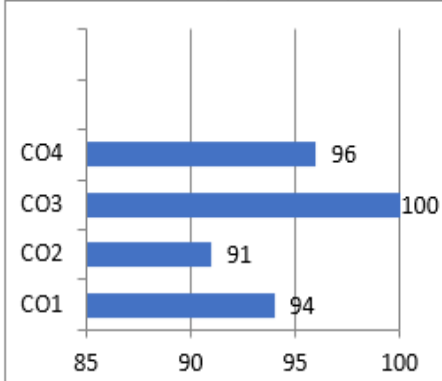
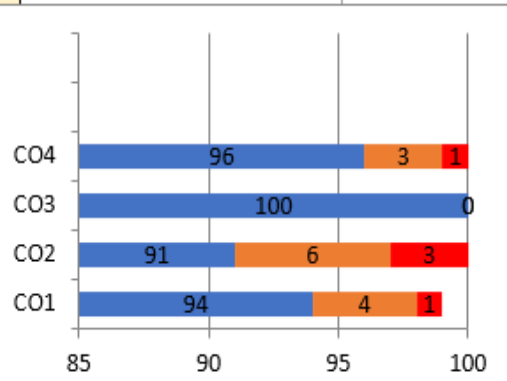
SJCIT/NBA/ CO-REPT/ 2020-21		 S J C INSTITUTE OF TECHNOLOGY Chickballapur - 562 101 Department of Civil Engineering						
Course Title	DESIGN OF PRESTRESSED CONCRETE ELEMENTS						Course Code	C412
Subject Code	17CV82	Semester	8	Section	A & B	Emp.ID	815	
Faculty Name	Mrs. SHARADA S A & Mrs CHANDRAKALA						No.students	98
CO Attainment from -, in the Subject: 17CV82-Based on: TYPE-1, Academic Year 2020-21								
Sl.	CO Number	Sum	T_Std	Av-AT	TS(=3)	AT,%	Ac_AT	ATNT
CO1	C412.1	285	98	2.9	92	94	2.8	YES
CO2	C412.2	282	98	2.9	89	91	2.7	YES
CO3	C412.3	294	98	3	98	100	3	YES
CO4	C412.4	289	98	3	94	96	2.9	YES
								
Distribution of CO Attainment from -, in Subj: 17CV82-Based on: TYPE-1, ACDY:2020-21								
Sl.	CO Number	3	%	2	%	1	%	
CO1	C412.1	92	94	4	4	1	1	
CO2	C412.2	89	91	6	6	3	3	
CO3	C412.3	98	100		0		0	
CO4	C412.4	94	96	3	3	1	1	
								

Fig. 3.8 Sample snapshot of attainment of the Course Outcomes

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 PO and PSO (10)**

For each course, COs contribute to the attainment of POs. Different courses emphasize on contribution to different POs leading to eventual attainment of POs upon successful completion of all courses and hence the programme. Following are the assessment tools used for measuring the POs and PSOs

Table B. 3.33: Direct and Indirect Assessment Method

Direct Assessment		
Direct method	Form of assessment	Frequency of assessment
CO Attainment	1.Test 2. Assignment	1. Test: Three times / semester 2.Assignment:3 times for semester
	2.Laboratory	2. Laboratory: Weekly
	3.Semester End Examination	3.SEE: End of semester
	4.Tech Seminar	4.Tech Seminar: 8 th semester as per event of calendar
	5.Project Work	5.Project Work: Assessed phase wise 1,2,3 (7 th and 8 th semester)
	6.Internship	6.Four weeks duration (During 7 th and 8 th semester)
Indirect Assessment Methods		
Indirect method	Form of assessment	Frequency of assessment
Course end survey	Survey Questionnaire through DHI software	After completion of each course
Program exit survey	Survey Questionnaire through DHI software	After completion of programme

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

Direct attainment levels of PO & PSO is determined by taking average across all courses addressing that PO and/or PSO

Table B.3.34, Table B.3.38 and Table B.3.42 presents the PO attainment and Table B.3.25 Table B.3.39 and Table B.3.43 presents the PSO attainment for 2017 and 2015 scheme. The attainment for every course has been calculated based on direct and indirect assessment methods with a weightage of 80% and 20% respectively. The PO attainments of every course have been rated on a scale of 1-3. These values are the weighted average of PO attainment of all the courses.

Table B.3.34: PO Total Attainment (CAY: 2017-21 Batch)

Courses/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I SEMESTER												
C101	1.20	1.10	1.28	0.55	0.55	--	--	--	--	--	--	--
C102	2.00	1.70	0.7	---	---	---	---	---	---	---	---	--
C103	0.96	0.96	0.96	0.8	--	--	--	--	--	--	--	0.64
C104	3.00	2.00	2.00	1.0	--	--	--	2.0	2.0	--	--	--
C105	1.62	1.62	1.80	--	--	--	--	--	--	--	--	--
C106	2.00	2.00	2.00	1.0	2.0	--	--	--	--	--	--	2.0
C107	2.00	1.73	0.67	--	--	--	--	--	--	--	--	--
C108	0.71	1.33	0.53	1.07	--	1.6	1.6	--	--	--	--	--
II SEMESTER												
C109	1.70	1.42	1.59	0.71	1.0	--	--	--	--	--	--	--
C110	1.0	0.67	0.33	--	--	--	--	--	--	--	--	--
C111	1.13	1.32	1.70	--	--	--	--	--	--	--	--	1.0
C112	3.0	1.60	--	--	--	--	--	--	--	--	--	--
C113	2.4	1.84	1.31	--	--	--	--	--	--	--	--	--
C114	3.0	2.0	--	--	--	--	--	2.0	2.0	--	--	1.0
C115	3.0	2.0	1.0	--	--	--	--	--	--	--	--	--

III SEMESTER												
C201	1.54	1.40	1.63	0.98	1.16	--	--	--	--	--	--	--
C202	1.25	1.19	0.48	--	0.43	0.67	--	0.67	--	--	--	0.69
C203	1.22	1.06	1.37	--	--	1.47	1.47	0.77	--	--	--	0.73
C204	0.93	0.95	0.63	--	0.63	--	--	0.81	--	--	--	0.59
C205	1.95	1.27	--	--	--	0.65	0.65	0.65	--	--	--	0.64
C206	1.05	0.99	--	--	--	--	--	0.79	--	--	--	0.66
C207	2.88	1.20	--	--	--	1.20	1.20	1.20	1.44	0.96	--	0.96
C208	1.80	1.58	0.90	--	0.90	--	--	0.90	1.80	0.90	--	0.90
IV SEMESTER												
C209	1.24	1.12	1.31	0.79	0.93	--	--	--	--	--	--	--
C210	0.77	1.22	0.55	--	--	--	--	0.60	--	--	--	0.55
C211	1.24	1.31	1.28	--	--	--	--	1.49	--	--	--	0.73
C212	1.60	1.43	1.82	0.74	0.8	--	--	1.83	--	--	--	0.73
C213	1.23	1.38	1.37	1.20	--	0.97	0.69	0.69	--	--	--	1.38
C214	1.06	0.90	0.60	--	1.2	--	--	0.60	--	--	--	0.60
C215	1.81	1.81	1.81	--	--	--	--	0.90	2.03	1.81		0.90
C216	1.43	1.63	-	1.09	1.36	0.82	0.82	0.82	0.82	0.82	--	0.82
V SEMESTER												
C301	0.96	1.12	1.11	0.55	--	--	--	1.51	--	--	--	0.57
C302	1.88	1.25	0.63	--	--	--	--	--	--	--	--	0.63
C303	1.04	1.55	1.25	0.95	--	1.13	1.13	0.64	--	--	--	1.28
C304	1.47	--	--	--	2.95	--	--	1.31	0.33	0.33	--	0.74
C305	1.82	1.68	1.15	--	--	--	--	0.75	--	--	--	0.75
C306	2.80	1.4	2.8	--	--	--	--	1.87	--	--	--	0.93
C307	2.09	1.28	0.77	0.73	--	--	--	0.92	--	--	--	0.77
C308	1.57	1.96	--	1.57	--	1.18	1.20	0.98	0.98	1.57	--	1.77
C309	1.92	1.73	1.92	--	0.96	1.28	1.30	2.11	1.15	0.96	--	1.20

VI SEMESTER												
C310	1.44	1.60	--	--	--	--	--	0.83	--	--	0.8	0.8
C311	1.29	2.00	2.63	0.9	--	--	--	1.80	--	--	--	0.9
C312	2.08	1.46	2.5	--	--	--	--	1.11	--	--	2.5	1.04
C313	2.26	2.03	1.36	0.83	--	1.37	1.37	1.42	--	--	--	0.83
C314	2.61	2.85	2.37	--	--	1.90	1.90	1.66	--	--	--	0.97
C315	1.67	1.67	--	--	--	1.33	1.33	0.83	--	--	--	1.67
C316	1.30	1.22	--	--	--	--	--	1.14	--	--	0.73	0.93
C317	1.92	2.52	--	--	0.93	--	--	--	--	--	--	0.90
C318	0.95	1.43	1.91	--	2.86	--	--	0.95	0.95	0.95	1.90	0.95
C319	1.50	1.87	1.50	0.83	1.56	0.94	0.94	0.94	2.24	1.31	0.94	1.87
VII SEMESTER												
C401	1.82	1.82	2.17	--	--	1.62	1.62	0.81	--	--	--	0.80
C402	0.60	1.20	1.80	0.60	2.1	--	--	1.2	1.4	--	--	0.60
C403	2.15	1.53	--	--	--	0.77	0.77	2.3	--	--	--	1.15
C404	1.40	0.93	0.93	0.93	--	--	--	--	1.87	--	--	0.93
C405	2.05	1.26	--	--	--	--	--	0.79	--	0.77	--	0.78
C406	1.75	1.45	--	--	0.87	--	--	1.32	--	--	--	0.88
C407	1.46	1.46	--	--	2.92	1.95	1.95	2.43	2.92	0.97	--	0.97
C408	0.98	--	--	--	2.96	--	--	2.17	0.98	0.98	--	0.99
C409	2.00	2.66	2.5	2.33	1.67	1.00	1.00	1.33	3.00	1.75	2.00	1.75
VIII SEMESTER												
C410	1.30	1.85	--	0.92	--	--	--	1.85	--	1.93	1.87	0.93
C411	1.15	1.92	2.05	--	--	--	--	1.53	--	--	--	0.77
C412	1.73	2.57	2.3	0.90	--	0.90	0.90	1.67	--	--	--	0.90
C413	2.03	2.03	1.83	1.37	--	--	--	1.02	--	--	--	1.32
C414	3.00	2.00	1.50	2.00	2.00	1.00	1.00	2.00	2.50	2.50	2.00	2.50
C415	3.00	1.50	2.33	2.67	2.00	2.00	2.00	2.67	3.00	3.00	1.33	2.50
C416	2.00	2.50	--	--	--	--	2.00	2.00	--	3.00	2.33	2.33

Direct	1.71	1.58	1.47	1.08	1.51	1.25	1.28	1.30	1.74	1.44	1.64	1.04
Indirect Assessment	2.75	3.00	2.67	2.00	2.17	1.50	1.67	2.00	2.83	1.83	1.75	2.20
Overall attainment (80% direct + 20%)	1.92	1.86	1.71	1.26	1.64	1.30	1.36	1.44	1.96	1.52	1.66	1.27

Table B.3.35: PO Direct Attainment (CAY: 2017-21 Batch)

Courses	PSO1	PSO2	Courses	PSO1	PSO2
I SEMESTER			II SEMESTER		
C101	1.1	1.1	C109	1.4	1.4
C102	1.33	0.67	C110	0.33	0.33
C103	0.4	0.4	C111	0.93	0.50
C104	2.0	2.0	C112	1.0	3.0
C105	-	-	C113	-	-
C106	1.0	1.0	C114	2.0	2.0
C107	2.0	2.0	C115	-	-
C108	-	-			
III SEMESTER			IV SEMESTER		
C201	1.4	1.4	C209	1.12	1.12
C202	1.03	0.51	C210	0.99	0.92
C203	1.69	0.77	C211	1.45	0.75
C204	0.95	0.89	C212	1.21	0.73
C205	1.29	0.99	C213	1.38	0.87
C206	0.79	1.06	C214	0.75	1.21
C207	1.92	1.92	C215	1.81	-
C208	1.58	0.90	C216	1.02	1.22
V SEMESTER			VI SEMESTER		
C301	0.98	1.1	C310	1.12	0.8
C302	1.25	-	C311	1.80	1.90
C303	1.39	1.25	C312	1.67	1.30
C304	1.31	1.31	C313	0.82	0.80
C305	0.73	1.43	C314	1.42	1.90
C306	1.87	1.87	C315	1.67	1.70
C307	0.90	1.16	C316	0.68	0.70
C308	2.55	0.98	C317	1.90	0.90

C309	2.16	1.92	C318	1.90	1.90
			C319	2.06	1.31
VII SEMESTER			VIII SEMESTER		
C401	1.82	1.21	C410	1.85	1.48
C402	1.20	1.25	C411	1.34	1.34
C403	1.53	0.77	C412	1.73	1.80
C404	2.10	0.93	C413	1.62	1.60
C405	0.78	-	C414	2.66	2.00
C406	1.97	0.87	C415	1.75	2.75
C407	1.46	2.92	C416	2.25	2.50
C408	1.97	0.98	Average	1.45	1.34
C409	1.75	2.75	Indirect	2.13	2.25
			Overall PSO attainment	1.58	1.52

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

The following Table B.3.36 lists the program level Course-PO matrix of all courses including first year courses.

Table B.3.36: Program level Course-PO matrix (2016-2020) Batch (CAYm1)

Course Code/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I SEMESTER												
C101	2.25	2.00	2.33	1.00	1.00	-	-	-	-	-	-	-
C102	2.50	1.50	1.00	-	-	-	-	-	-	-	-	1.00
C103	2.6	2.6	2.2	2	2	-	-	-	-	-	-	2
C104	2.80	2.00	2.00	1.50	-	-	-	3.00	3.00	-	-	2.00
C105	2.33	2.33	2.33	2.00	2.50	-	-	-	-	-	-	2.00
C106	2.20	2.40	1.60	2.00	2.60	-	-	-	-	-	-	2.20
C107	2.50	1.50	1.00	-	-	-	-	-	-	-	-	1.00
C108	1.33	2.50	1.00	2.00	-	1.00	3.00	-	-	-	-	-
II SEMESTER												
C109	2.40	2.00	2.25	1.00	1.50	-	-	-	-	-	-	-

C110	3.00	2.00	1.00	-	-	-	-	-	-	-	-	-
C111	2.00	2.33	3.00	-	-	-	-	-	-	-	-	1.00
C112	3.00	1.50	-	-	-	-	-	-	-	-	-	-
C113	3.00	2.33	1.75	-	-	-	-	-	-	-	-	-
C114	3.00	2.50	3.00	-	-	-	-	2.00	2.00	2.00	-	1.00
C115	3.00	2.00	1.00	-	-	-	-	-	-	-	-	-
C116	1.33	2.50	1.00	2.00	-	2.00	3.00	-	-	-	-	-
III SEMESTER												
C201	2.2	2.0	2.33	1.4	1.66	-	-	-	-	-	-	-
C202	1.6	3.0	-	-	-	-	-	-	-	-	-	-
C203	2.33	2.67	-	-	-	-	-	-	-	-	-	-
C204	1.75	2.0	-	-	-	-	-	-	-	-	-	-
C205	2.0	2.0	-	-	-	-	-	-	-	-	-	-
C206	3.0	1.0	-	-	-	-	-	-	-	-	-	-
C207	3.0	1.0	-	-	-	-	-	2.0	2.0	-	-	-
C208	2.0	2.33	-	-	-	-	-	-	-	3.0	1.0	-
IV SEMESTER												
C209	2.4	1.8	1.67	1.5	1.67	-	-	-	-	-	-	-
C210	1.5	2.75	-	-	-	-	-	-	-	-	-	-
C211	1.4	2.6	-	-	-	-	-	-	-	-	-	-
C212	2.0	3.0	-	-	-	-	-	1.5	-	-	-	-
C213	1.5	2.33	-	-	-	-	-	-	-	-	-	-
C214	1.5	2.33	-	-	-	-	-	-	-	-	-	-
C215	1.0	3.0	-	-	-	-	-	-	1.0	-	-	-
C216	1.75	2.0	-	-	-	-	-	-	-	-	-	-
V SEMESTER												
C301	3.0	2.0	3.0	-	-	-	-	1.33	-	-	-	-
C302	3.0	2.0	-	-	-	-	-	-	-	-	-	-
C303	1.2	2.6	-	-	-	-	-	-	-	-	-	-
C304	1.4	1.0	-	-	2.0	-	-	-	-	-	-	1.0

C305	1.5	2.0	2.0	-	-	-	-	-	-	-	-	-
C306	2.33	1.5	3.0	-	-	-	-	2.0	-	-	-	-
C307	1.75	2.0	2.0	-	-	-	-	-	-	-	-	-
C308	1.5	2.0	-	-	-	-	-	1.0	1.0	-	-	-
C309	1.0	2.33	-	2.0	-	2.0	-	2.5	1.2	-	-	-
VI SEMESTER												
C310	1.8	2.0	-	-	-	-	-	-	-	-	1.0	-
C311	1.33	3.0	3.0	-	-	-	-	2.0	-	-	-	-
C312	1.4	1.5	2.0	-	-	-	-	2.0	-	-	2.0	-
C313	2.5	1.0	3.0	-	-	3.0	2.0	-	-	-	-	-
C314	2.75	3.0	2.5	-	-	2.25	2.0	1.75	-	-	-	1.0
C315	1.5	2.0	-	-	-	-	-	2.0	-	-	-	-
C316	1.67	2.67	-	-	-	-	-	-	-	-	-	-
C317	1.33	2.0		-	3.0	-	-	1.0		-	2.0	-
C318	1.67	2.0	2.0	-	2.0	-	-	-	1.75	1.0s	-	-
VII SEMESTER												
C401	2.75	3.0	2.5	-	-	2.25	2.0	1.75	-	-	-	1.0
C402	-	-	3.0	-	3.0	-	-	2.0	-	-	-	1.0
C403	1.67	2.0	2.0	-	-	-	-	-	-	-	-	-
C404	1.5	1.75	-	-	-	-	-	-	-	-	-	-
C405	2.0	1.0	-	-	-	-	2.0	-	-	-	-	-
C406	2.0	2.0	-	-	-	-	-	-	-	-	-	-
C407	1.67	2.0	2.0	1.0	-	1.0	2.0	-	-	-	2.0	-
C408	1.0	-	-	-	3.0	-	-	2.0	-	-	-	-
C409	2.0	2.33	2.5	2.3	2.0	1.0	1.0	1.5	3.0	2.0	2.0	1.8
VIII SEMESTER												
C410	1.5	1.8	-	-	-	-	-	2.0	-	-	2.0	
C411	1.5	2.5	3.0	-	2.0	-	-	2.0	-	-	-	-
C412	2.0	3.0	2.5	-	-	-	1.0	2.0	-	-	-	1.0
C413	2.33	2.5	3.0	-	-	-	1.0	1.0	-	-	-	3.0

C414	3.0	2.0	1.5	2.0	2.0	2.0	1.0	2.0	2.5	2.5	2.0	2.5
C415	-	3.0	2.5	3.0	3.0	3.0	2.0	3.0	3.0	3.0	1.5	2.5
C416	2.0	2.5	-	-	-	-	2.0	2.0	-	3.0	2.33	2.33
Average	2.09	2.17	2.05	1.70	2.05	1.85	1.71	2.08	2.09	1.86	1.79	1.69

COs-PSOs Matrix of all Courses Including First Year Courses:

The following Table B 3.37 lists the program level Course-PSO matrix of all courses including first year courses.

Table B.3.37: Program level Course-PSO matrix (2016-2020Batch) (CAYm1)

Course	PSO1	PSO2	Course	PSO1	PSO2
I SEMESTER			II SEMESTER		
C101	-	-	C109	-	-
C102	-	-	C110	-	-
C103	-	-	C111	1.67	-
C104	-	-	C112	1.00	-
C105	-	-	C113	-	-
C106	-	-	C114	-	2.00
C107	-	-	C115	-	-
C108	1.00	-	C116	1.00	-
III SEMESTER			IV SEMESTER		
C201	-	-	C209	-	-
C202	1.8	-	C210	1.8	-
C203	2.0	-	C211	2.0	-
C204	2.0	-	C212	1.0	-
C205	2.0	-	C213	2.0	-
C206	1.0	-	C214	1.75	-
C207	2.0	2.0	C215	2.0	-
C208	2.0	-	C216	1.25	-
V SEMESTER			VI SEMESTER		
C301	1.75	-	C309	1.0	-
C302	2.0	-	C310	2.5	-
C303	2.2	-	C311	1.6	-

C304	2.0	2.0	C312	2.33	-
C304	2.0	-	C313	1.0	-
C305	2.0	-	C314	1.4	-
C306	1.75	-	C315	1.8	-
C307	1.8	-	C316	2.0	2.0
C308	2.0	-	C317	2.0	2.0
VII SEMESTER			VIII SEMESTER		
C401	1.5	-	C410	2.0	-
C402	2.0	2.0	C411	1.75	2.0
C403	2.0	-	C412	2.0	-
C404	2.0	-	C413	2.0	-
C405	1.0	-	C414	2.67	2.00
C406	2.0	-	C415	1.75	2.75
C407	1.0	-	C416	2.25	2.5
C408	2.0	-	Average	1.91	1.90
C409	1.8	2.8			

Table B.3.38 Overall PO Attainment for 2016-2020 Batch (CAYm1)

Course Code/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I SEMESTER												
C101	1.50	1.33	1.55	0.66	0.66	-	-	-	-	-	-	-
C102	0.42	0.25	0.17	-	-	-	-	-	-	-	-	0.17
C103	2.6	2.6	2.2	2.0	2.0	-	-	-	-	-	-	2.0
C104	2.8	2.0	2.0	1.5	-	-	-	3.00	3.00	-	-	2.00
C105	2.33	2.33	2.33	2.0	2.5	-	-	-	-	-	-	2.00
C106	2.2	2.4	1.6	2.0	2.6	-	-	-	-	-	-	2.20
C107	2.5	1.5	1.0	-	-	-	-	-	-	-	-	1.00
C108	1.33	2.5	1.0	2.0	-	1.0	3.0	-	-	-	-	-
II SEMESTER												
C109	1.6	1.33	1.50	0.66	1.0	-	-	-	-	-	-	-
C110	2.50	1.67	0.83	-	-	-	-	-	-	-	-	-
C111	0.7	0.8	1.0	-	-	-	-	-	-	-	-	0.30
C112	3.0	1.50	-	-	-	-	-	-	-	-	-	-
C113	2.0	1.55	1.11	-	-	-	-	-	-	-	-	-
C114	3.0	2.5	3.0	-	2.0	-	-	2.0	2.0	2.0	-	1.00

C115	2.5	1.67	0.83	-	-	-	-	-	-	-	-	-
III SEMESTER												
C201	0.73	0.66	0.78	0.47	0.55	-	-	-	-	-	-	-
C202	1.21	2.22	-	-	-	-	-	-	-	-	-	-
C203	1.31	1.30	-	-	-	-	-	-	-	-s	-	-
C204	1.24	1.41	-	-	-	-	-	-	-	-	-	-
C205	1.91	1.58	-	-	-	-	-	-	-	-	-	-
C206	2.40	0.82	-	-	-	-	-	-	-	-	-	-
C207	2.84	0.95	-	-	-	-	-	1.90	1.90	-	-	-
C208	1.94	2.33	-	-	-	-	-	-	-	2.91	0.97	-
IV SEMESTER												
C209	1.20	0.90	0.83	0.75	0.83	-	-	-	-	-	-	-
C210	0.96	1.72	-	-	-	-	-	-	-	-	-	-
C211	0.99	1.82	-	-	-	-	-	-	-	-	-	-
C212	1.62	2.44						1.22				
C213	0.79	1.22	-	-	-	-	-	-	-	-	-	-
C214	0.92	1.43	-	-	-	-	-	-	-	-	-	-
C215	1.00	2.99	-	-	-	-	-	-	1.00	-	-	-
C216	1.54	1.76	-	-	-	-	-	-	-	-	-	-
V SEMESTER												
C301	1.93	1.30	2.08	-	-	-	-	0.88	-	-	-	-
C302	1.87	1.24	-	-	-	-	-	-	-	-	-	-
C303	0.84	1.82	-	-	-	-	-	-	-	-	-	-
C304	1.36	0.97	-	-	1.94	-	-	-	-	-	-	0.97
C305	1.07	1.40	1.52	-	-	-	-	-	-	-	-	-
C306	2.19	1.33	2.66	-	-	-	-	1.82	-	-	-	-
C307	1.34	1.47	1.59	-	-	-	-	-	-	-	-	-
C308	1.47	1.95	-	-	-	-	-	0.98	0.98	-	-	-
C309	0.96	2.25	-	1.92	-	1.93	-	2.40	0.96	-	-	-
VI SEMESTER												
C310	1.40	1.49	-	-	-	-	-	-	-	-	0.79	-
C311	0.98	2.31	2.19	-	-	-	-	1.48	-	-	-	-
C312	1.06	1.16	1.38	-	-	-	-	1.38	-	-	1.62	-
C313	1.93	0.81	2.44	-	-	2.36	1.57	-	-	-	-	-
C314	2.22	2.45	2.01	-	-	1.82	1.62	1.41	-	-	-	0.81
C315	1.19	1.55	-	-	-	-	-	1.34	-	-	-	-
C316	1.47	2.33	-	-	-	-	-	-	-	-	-	-

C317	1.14	1.72	-	-	2.58	-	-	0.86	-	-	1.72	-
C318	1.61	1.93	1.93	-	1.93	-	-	-	1.69	0.97	-	-
VII SEMESTER												
C401	2.19	2.43	2.00	-	-	1.80	1.60	1.39	-	-	-	0.80
C402	-	-	2.48	-	2.96	-	-	1.65	-	-	-	0.99
C403	1.42	1.98	1.96	-	-	-	-	-	-	-	-	-
C404	1.22	1.42	-	-	-	-	-	-	-	-	-	-
C405	1.72	0.85	-	-	-	-	1.61	-	-	-	-	-
C406	1.88	1.90	-	-	-	-	-	-	-	-	-	-
C407	1.64	1.97	1.97	1.00	-	0.99	1.97	-	-	-	1.97	-
C408	0.97	-	-	-	2.91	-	-	1.94	-	-	-	-
C409	2.0	2.33	2.5	2.33	2.0	1.0	1.0	1.5	3.0	2.0	2.0	1.8
VIII SEMESTER												
C410	0.94	1.08	-	-	-	-	-	1.18	-	-	1.07	-
C411	1.08	1.77	2.04	-	1.28	-	-	1.41	-	-	-	-
C412	1.62	2.47	2.06	-	-	-	0.78	1.65	-	-	-	0.81
C413	2.04	2.11	2.50	-	-	-	0.91	0.83	-	-	-	2.72
C414	3.0	2.0	1.5	2.0	2.0	2.0	1.0	2.0	2.5	2.5	2.0	2.50
C415	-	2.77	2.31	2.77	2.77	2.77	1.85	2.77	2.77	2.77	1.39	2.31
C416	2.0	2.5	-	-	-	-	2.0	2.0	-	3.0	2.33	2.33
Direct Assessment (Average)	1.66	1.78	1.65	1.43	1.83	1.54	1.49	1.63	2.07	1.76	1.53	1.31
Indirect Assessment	2.32	2.4	2.32	2.32	2.32	2.25	2.32	2.32	2.32	2.25	2.32	2.32
Overall Attainment = (80% OF DIRECT + 20% OF INDIRECT)	1.79	1.90	1.78	1.61	1.93	1.68	1.66	1.77	2.11	1.86	1.69	1.51

Table B.3.39: Overall PSO Attainment for 2016-2020 Batch (CAYm1)

Course	PSO1	PSO2	Course	PSO1	PSO2
I SEMESTER			II SEMESTER		
C101	-	-	C109	-	-
C102	-	-	C110	-	-
C103	-	-	C111	0.6	-
C104	-	-	C112	1.00	-
C105	-	-	C113	-	-
C106	-	-	C114		2.00
C107	-	-	C115	-	-
C108	1.00	-	C116	1.00	-
III SEMESTER			IV SEMESTER		
C201	-	-	C209	-	-
C202	1.34	-	C210	1.15	-
C203	1.03	-	C211	1.41	-
C204	1.41	-	C212	0.81	
C205	1.59	-	C213	1.05	-
C206	0.80	-	C214	1.08	-
C207	1.90	1.90	C215	1.99	-
C208	1.94	-	C216	1.10	-
V SEMESTER			VI SEMESTER		
C301	1.14	-	C310	0.81	-
C302	1.24	-	C311	1.85	-
C303	1.54	-	C312	1.21	-
C304	1.94	1.94	C313	1.81	-
C305	1.43	-	C314	0.81	-
C306	1.84	-	C315	1.07	-
C307	1.32	-	C316	1.58	-
C308	1.76	-	C317	1.72	1.72
C309	1.92	-	C318	1.93	1.93

VII SEMESTER			VIII SEMESTER		
C401	0.80	-	C410	1.18	-
C402	1.65	1.97	C411	1.22	1.36
C403	1.69	-	C412	1.62	-
C404	1.61	-	C413	1.77	-
C405	0.83	-	C414	2.67	2.00
C406	1.88	-	C415	1.62	2.54
C407	0.99	-	C416	2.25	2.5
C408	1.94	-	Avg Direct	1.69	1.89
C409	1.8	2.8	Indirect	1.4	1.7
			Overall Attainment	1.63	1.85

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

Table B.3.40: lists the program level Course-PO matrix of all courses, including first year courses. (2015-19)

Course Code/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I SEMESTER												
C101	2.75	1.75	2.33	1.5	1.5	-	-	-	-	-	-	-
C102	2.5	1.5	1.0	-	-	-	-	-	-	-	-	1.0
C103	2.6	2.6	2.2	2.0	2.0	-	-	-	-	-	-	2.0
C104	2.8	2.0	2.0	1.5	-	-	-	3.0	3.0	-	-	2.0
C105	2.6	2.2	1.0	1.0	1.0	-	-	-	-	-	-	-
C106	2.2	2.4	1.6	2.0	2.6	-	-	-	-	-	-	2.2
C107	2.5	1.5	1.0	-	-	-	-	-	-	-	-	1.0
C108	1.33	2.5	1.0	2.0	-	2.0	3.0	-	-	-	-	-
II SEMESTER												
C109	2.4	2.0	2.25	1.0	1.5	-	-	-	-	-	-	-

C110	3.0	2.0	1.0	-	-	-	-	-	-	-	-	-
C111	2.0	2.33	3.0	-	-	-	-	-	-	-	-	1.0
C112	3.0	1.5	-	-	-	-	-	-	-	-	-	-
C113	2.0	2.33	3.0	-	-	-	-	-	-	-	-	1.0
C114	3.0	2.5	3.0	-	2.0	-	-	2.0	2.0	2.0	-	1.0
C115	3.0	2.0	1.0	-	-	-	-	-	-	-	-	-
C116	2.0	1.0	2.0	1.0	1.0	2.0	1.5	2.2	2.5	2.0	2.16	2.83
III SEMESTER												
C201	2.20	2.00	2.33	1.40	1.66	-	-	-	-	-	-	-
C202	1.60	3.00	-	-	-	-	-	-	-	-	-	-
C203	2.33	2.66	-	-	-	-	-	-	-	-	-	-
C204	1.75	2.00	-	-	-	-	-	-	-	-	-	-
C205	2.00	2.00	-	-	-	-	-	-	-	-	-	-
C206	3.00	1.00	-	-	-	-	-	-	-	-	-	-
C207	3.00	1.00	-	-	-	2.00	-	2.00	2.00	-	-	-
C208	2.00	2.33	-	-	-	-	-	-	2.00	1.00	-	-
IV SEMESTER												
C209	2.40	1.80	1.66	1.50	1.66	-	-	-	-	-	-	-
C210	1.75	2.75	-	-	-	-	-	-	-	-	-	-
C211	1.50	2.50	-	-	-	-	-	-	-	-	-	-
C212	2.00	3.00	-	-	-	-	-	1.50	-	-	-	-
C213	1.50	2.25	-	-	-	-	-	-	-	-	-	-
C214	1.50	2.33	-	-	-	-	-	-	-	-	-	-
C215	1.00	3.00	-	-	-	-	-	-	1.00	-	-	-
C216	1.75	2.00	-	-	-	-	-	-	-	-	-	-
V SEMESTER												
C301	3.00	2.00	3.00	-	-	-	-	1.33	-	-	-	-
C302	3.00	2.00	-	-	-	-	-	-	-	-	-	-
C303	1.20	2.60	-	-	-	-	-	-	-	-	-	-

C304	1.40	1.00	-	-	2.00	-	-	-	-	-		1.00
C305	2.33	1.50	3.00	-	-	-	-	2.00	-	-	-	-
C306	2.60	2.00	-	-	1.00	-	-	-	-	-	-	-
C307	1.50	2.00	-	-	-	-	-	1.00	1.00	-	-	-
C308	1.00	2.33	-	2.00	-	2.00	-	2.50	1.20	-	-	-
VI SEMESTER												
C309	1.80	2.00	-	-	-	-	-	-	-	-	1.00	-
C310	1.40	3.00	3.00	-	-	-	-	2.00	-	-	-	-
C311	1.75	1.67	2.00	-	-	-	-	2.00	-	-	-	-
C312	1.50	1.00	-	2.50	2.00		1.00		-	-	-	1.00
C313	1.50	2.00	3.00	-	-	-	-		-	-	-	-
C314	1.50	2.00	-	-	-	-	-	2.00	-	-	-	-
C315	1.33	2.00	-	-	3.00	-	-	1.00		-	2.00	-
C316	1.67	2.00	2.00	-	2.00	-	-	-	1.75	1.00	-	-
VII SEMESTER												
C401	1.00	-	2.25	-	-	2.20	2.60	2.00	-	-	-	-
C402	3.00	-	3.00	-	-	-	-	2.00	-	-	-	-
C403	1.67	2.00	2.00	-	-	-	-	-	-	-	-	-
C404	1.50	1.75	-	-	-	-	-	-	-	-	-	-
C405	2.00	1.00	-	-	-	-	2.00	-	-	-	-	-
C406	2.00	2.00	-	-	-	-		-	-	-	-	-
C407	1.66	2.00	2.00	1.00	-	1.00	2.00	-	-	-	2.00	-
C408	1.00	-	-	-	3.00	-	-	2.00	-	-	-	-
C409	2.00	2.66	2.50	2.33	2.00	1.00	1.00	1.50	3.00	2.00	2.00	1.80
VIII SEMESTER												
C410	1.50	1.80	-	-	-	-	-	2.00	-	-	2.00	
C411	1.50	2.50	3.00	-	2.00	-	-	2.00	-	-	-	-
C412	2.00	3.00	2.50	-	-	-	1.00	2.00	-	-	-	1.00
C413	2.33	2.50	3.00	-	-	-	1.00	1.00	-	-	-	3.00

C414	3.00	2.00	1.50	2.00	2.00	2.00	1.00	2.00	2.50	2.50	2.00	2.50
C415	-	3.00	2.50	3.00	3.00	3.00	2.00	3.00	3.00	3.00	1.50	2.50
C416	2.00	2.50	-	-	-	-	2.00	2.00	-	3.00	2.33	2.33
Average	2.03	2.09	2.17	1.73	1.94	1.91	1.68	1.92	2.08	2.06	1.89	1.72

COs-PSOs Matrix of all Courses Including First Year Courses:

Table B.3.41: lists the Program Level Course-PSO matrix of all courses Including first year courses.

Courses	PSO1	PSO2	Courses	PSO1	PSO2
I SEMESTER			II SEMESTER		
C101	-	-	C109	-	-
C102	-	-	C110	-	-
C103	-	-	C111	2.25	-
C104	-	3.0	C112	1.0	-
C105	1.0	1.0	C113	2.25	-
C106	-	-	C114	-	2.0
C107	-	-	C115	-	-
C108	-	-	C116	-	-
III SEMESTER			IV SEMESTER		
C201	-	-	C209		-
C202	1.80	-	C210	1.75	-
C203	2.00	-	C211	2.00	-
C204	2.00	-	C212	1.00	-
C205	2.00	-	C213	2.00	-
C206	1.00	-	C214	1.75	-
C207	2.00	2.00	C215	2.00	-
C208	2.00	-	C216	1.25	-
V SEMESTER			VI SEMESTER		
C301	1.75	-	C309	1.00	-

C302	2.00	-	C310	2.60	-
C303	2.20	-	C311	1.75	-
C304	2.00	2.00	C312	3.00	-
C305	2.00	-	C313	2.33	-
C306	1.00	-	C314	1.40	-
C307	1.80	-	C315	2.00	2.00
C308	2.00	-	C316	2.00	2.00
VII SEMESTER			VIII SEMESTER		
C401	2.00	-	C410	2.00	-
C402	2.00	-	C411	1.75	2.00
C403	2.00	-	C412	2.00	-
C404	2.00	-	C413	2.00	-
C405	1.00	-	C414	2.67	2.00
C406	2.00	-	C415	1.75	2.75
C407	1.00	-	C416	2.25	2.50
C408	2.00	-	Average	1.84	2.17
C409	1.80	2.80			

3.3.2.1. Direct Assessment Results

Direct attainment level of a PO & PSO is determined by taking average across all courses addressing that PO and/or PSO

Table B.3.42: PO Direct Attainment (CAYm2: 2015-19 Batch)

Course Code/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I SEMESTER												
C101	1.83	1.16	1.55	1.00	1.00	-	-	-	-	-	-	-
C102	0.42	0.25	0.12	-	-	-	-	-	-	-	-	0.12
C103	1.30	1.30	1.10	1.00	1.00	-	-	-	-	-	-	1.00
C104	2.80	2.00	2.00	1.50	-	-	-	3.00	3.00	-	-	2.00
C105	1.73	1.47	0.67	0.67	0.67	-	-	-	-	-	-	-
C106	2.20	2.40	1.60	2.00	2.60	-	-	-	-	-	-	2.20

C107	0.42	0.25	0.17	-	-	-	-	-	-	-	-	0.17
C108	1.33	2.50	1.00	-	-	-	-	-	-	-	-	-
II SEMESTER												
C109	2.4	2.0	2.25	1.0	1.50	-	-	-	-	-	-	-
C110	2.5	1.8	1.66	-	-	-	-	-	-	-	-	-
C111	1.67	1.94	2.5	-	-	-	-	-	-	-	-	0.83
C112	2.5	1.25	-	-	-	-	-	-	-	-	-	-
C113	1.33	1.55	2.0	-	-	-	-	-	-	-	-	0.67
C114	3.0	2.5	3.0		2.0	-	-	2.0	2.0	2.0	-	1.0
C115	3.0	2.0	1.0	-	-	-	-	-	-	-	-	-
C116	2.0	1.0	2.0	1.0	1.0	2.0	1.5	2.2	2.5	2.0	2.16	2.83
III SEMESTER												
C201	1.47	1.33	1.55	0.93	1.11	-	-	-	-	-	-	-
C202	0.93	1.71	-	-	-	-	-	-	-	-	-	-
C203	1.20	1.37	-	-	-	-	-	-	-	-	-	-
C204	1.34	1.50	-	-	-	-	-	-	-	-	-	-
C205	1.45	1.52	-	-	-	-	-	-	-	-	-	-
C206	2.48	0.80	-	-	-	-	-	-	-	-	-	-
C207	2.94	0.98	-	-	-	1.96	-	1.96	1.96	-	-	-
C208	2.00	2.33	-	-	-	-	-	-	2.00	1.00	-	-
IV SEMESTER												
C209	1.20	0.90	0.83	0.75	0.83	-	-	-	-	-	-	-
C210	1.01	1.60	-	-	-	-	-	-	-	-	-	-
C211	1.00	1.68	-	-	-	-	-	-	-	-	-	-
C212	1.02	1.51	-	-	-	-	-	0.77	-	-	-	-
C213	0.86	1.32	-	-	-	-	-	-	-	-	-	-
C214	0.98	1.63	-	-	-	-	-	-	-	-	-	-
C215	1.00	2.99	-	-	-	-	-	-	1.00	-	-	-
C216	1.48	0.26	-	-	-	-	-	-	-	-	-	-
V SEMESTER												

C301	2.19	1.44	2.06	-	-	-	-	0.95	-	-	-	-
C302	2.07	1.38	-	-	-	-	-	-	-	-	-	-
C303	1.00	2.16	-	-	-	-	-	-	-	-	-	-
C304	1.36	0.97	-	-	1.94	-	-	-	-	-	-	0.97
C305	1.96	1.25	2.47	-	-	-	-	1.68	-	-	-	-
C306	1.72	1.47	-	-	0.75	-	-	-	-	-	-	-
C307	1.45	1.94	-	-	-	-	-	0.97	0.97	-	-	-
C308	0.98	2.27	-	1.94	-	1.95	-	2.44	1.17	-	-	-
VI SEMESTER												
C309	1.18	1.38	-	-	-	-	-	-	-	-	0.69	-
C310	1.04	2.30	2.14	-	-	-	-	1.47	-	-	-	-
C311	1.41	1.35	1.62	-	-	-	-	1.60	-	-	-	-
C312	1.33	0.91	-	2.09	1.68	-	0.90	-	-	-	-	0.80
C313	1.25	1.55	2.33	-	-	-	-	-	-	-	-	-
C314	1.09	1.42	-	-	-	-	-	1.24	-	-	-	-
C315	1.17	1.75	-	-	2.63	-	-	0.88	-	-	1.75	-
C316	1.67	2.00	2.00	-	2.00	-	-	-	1.75	1.00	-	-
VII SEMESTER												
C401	0.83	-	1.90	-	-	1.80	2.20	1.66	-	-	-	-
C402	2.32	-	2.26	-	-	-	-	1.52	-	-	-	-
C403	1.59	1.81	1.20	-	-	-	-	-	-	-	-	-
C404	1.28	1.50	-	-	-	-	-	-	-	-	-	-
C405	1.49	0.69	-	-	-	-	1.57	-	-	-	-	-
C406	1.59	1.51	-	-	-	-	-	-	-	-	-	-
C407	1.66	2.00	2.00	1.00	-	1.00	2.00	-	-	-	2.00	-
C408	0.98	-	-	-	2.95	-	-	1.97	-	-	-	-
C409	2.00	2.66	2.50	2.33	2.00	1.00	1.00	1.50	3.00	2.00	2.00	1.80
VIII SEMESTER												
C410	1.26	1.50	-	-	-	-	-	1.67	-	-	1.63	-
C411	0.90	1.53	1.90	-	1.34	-	-	1.23	-	-	-	-

C412	1.60	2.39	1.95	-	-	-	0.81	1.58	-	-	-	0.80
C413	1.66	1.74	2.18	-	-	-	0.75	0.73	-	-	-	2.26
C414	2.62	1.74	1.31	1.74	1.74	1.74	0.87	1.74	2.18	2.18	1.74	2.18
C415	-	2.77	2.31	2.77	2.77	2.77	1.85	2.77	2.77	2.77	1.39	2.31
C416	2.00	2.50	-	-	-	-	2.00	2.00	-	3.00	2.33	2.33
Direct Assessment (Average)	1.58	1.62	1.73	1.45	1.66	1.78	1.40	1.65	2.02	1.99	1.74	1.43
Indirect Assessment	1.83	2.00	1.78	1.33	1.44	1.00	1.11	1.33	1.89	1.22	1.17	1.47
Overall Attainment (80% OF DIRECT + 20% OF INDIRECT)	1.63	1.69	1.74	1.42	1.62	1.62	1.35	1.58	2.00	1.84	1.63	1.44

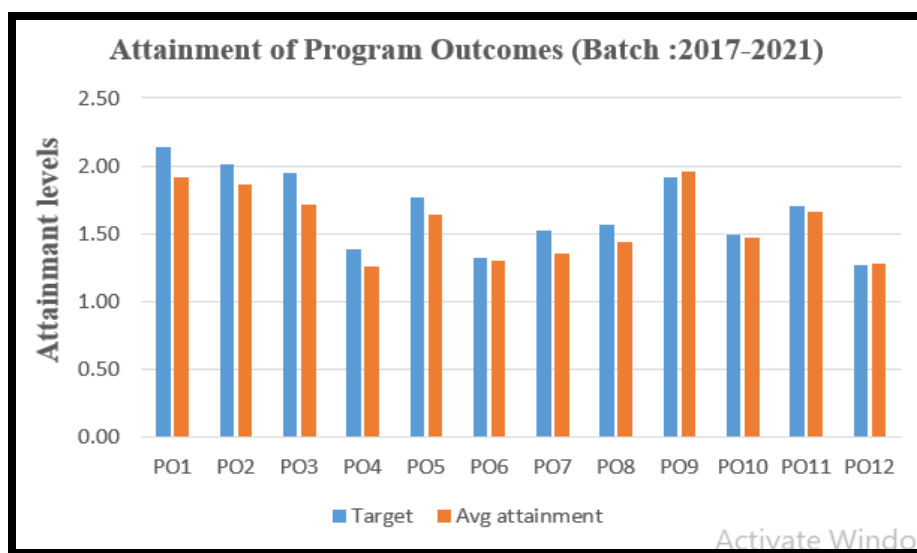
Table B.3.43: PSO Direct Attainment (CAYm2: 2015-2019 Batch)

Courses	PSO1	PSO2	Courses	PSO1	PSO2
I SEMESTER			II SEMESTER		
C101	-	-	C109	-	-
C102	-	-	C110	-	-
C103	-	-	C111	1.88	-
C104	-	3.0	C112	1.0	-
C105	0.67	0.67	C113	2.25	-
C106	-	-	C114	-	2.0
C107	-	-	C115	-	-
C108	1	-	C116	-	-
III SEMESTER			IV SEMESTER		
C201	-	-	C209	-	-
C202	1.03	-	C210	1.02	-
C203	1.03	-	C211	1.34	-
C204	1.52	-	C212	0.51	-
C205	1.46	-	C213	1.13	-
C206	0.80	-	C214	0.64	-

C207	1.96	1.96	C215	1.99	-
C208	2.00	-	C216	1.05	-
V SEMESTER			VI SEMESTER		
C301	1.26	-	C309	0.65	-
C302	1.38	-	C310	1.90	-
C303	1.83	-	C311	1.42	-
C304	1.94	1.94	C312	2.50	-
C305	1.67	-	C313	1.83	-
C306	0.72	-	C314	1.04	-
C307	1.74	-	C315	1.75	1.75
C308	1.95	-	C316	2.00	2.00
VII SEMESTER			VIII SEMESTER		
C401	1.75	-	C410	1.67	-
C402	1.52	-	C411	1.09	1.27
C403	1.20	-	C412	1.60	-
C404	1.71	-	C413	1.45	-
C405	0.75	-	C414	2.33	1.74
C406	1.55	-	C415	1.62	2.54
C407	1.00	-	C416	2.25	2.5
C408	1.97	-	Direct Assessment(Average)	1.48	2.01
C409	1.80	2.80	Indirect Assessment	1.50	1.50
			Overall Attainment = (80% OF DIRECT + 20% OF INDIRECT)	1.49	1.91

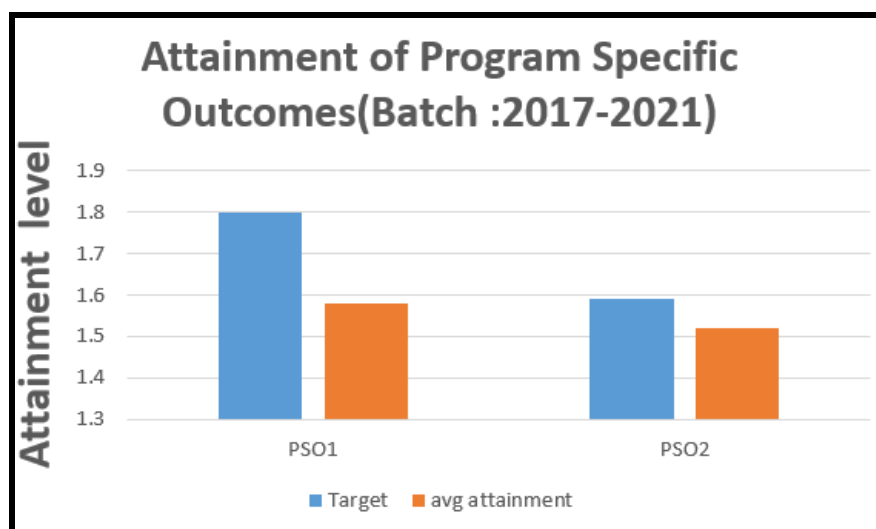
3.3.2.3. PO Attainment level = 80 % of direct assessment + 20% of indirect assessment
Program Outcomes Attainment (2017-2021)

PO attainment	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Target	2.14	2.01	1.95	1.39	1.77	1.32	1.52	1.57	1.92	1.49	1.70	1.27
Avg. attainment	1.92	1.86	1.71	1.26	1.64	1.30	1.36	1.44	1.96	1.52	1.66	1.27



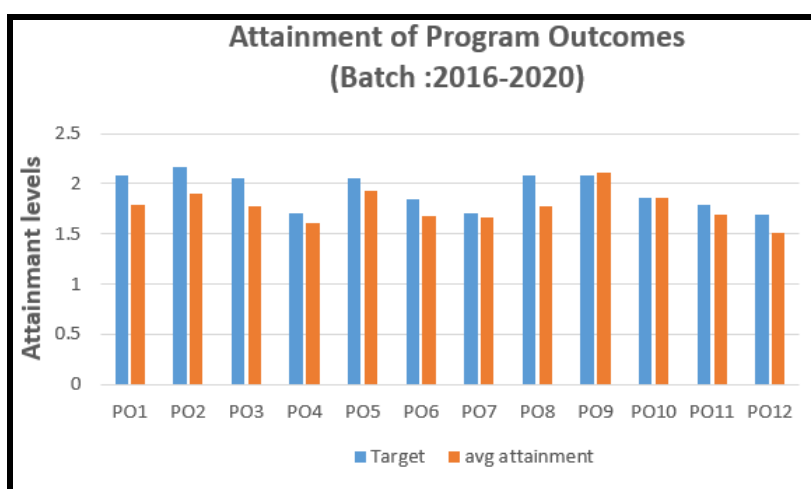
Program Specific Outcomes Attainment (2017-2021):

POs/ attainment	PSO1	PSO2
Target	1.80	1.59
Avg. attainment	1.58	1.52



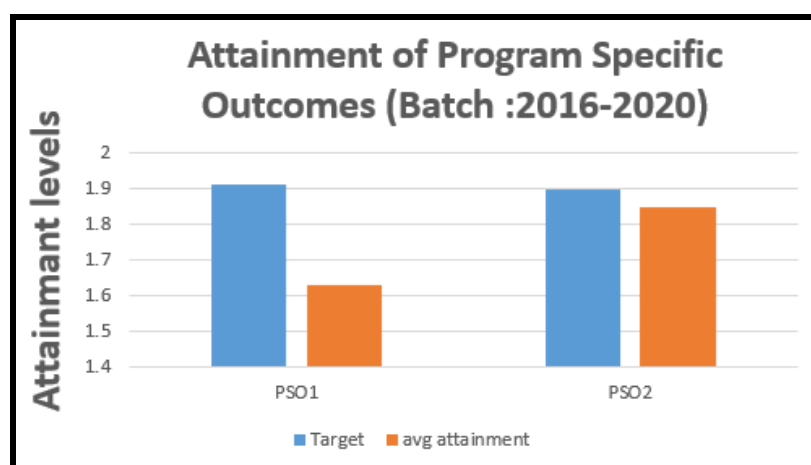
3.3.2.4. PO Attainment level = 80 % of direct assessment + 20% of indirect assessment
Program Outcomes Attainment (2016-2020):

PO attainment	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Target	2.09	2.17	2.05	1.70	2.05	1.85	1.71	2.08	2.09	1.86	1.79	1.69
Avg. attainment	1.79	1.90	1.78	1.61	1.93	1.68	1.66	1.77	2.11	1.86	1.69	1.51



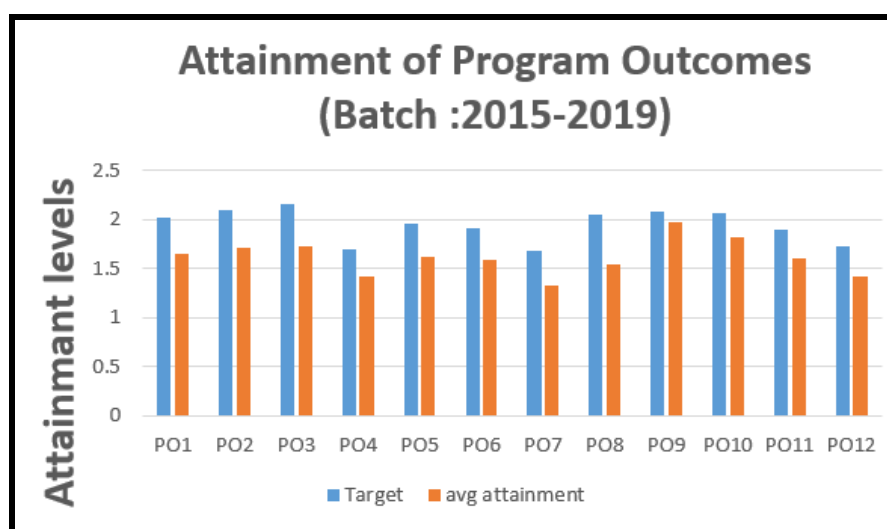
Program Specific Outcomes Attainment (2016-2020)

POs/ attainment	PSO1	PSO2
Target	1.91	1.90
Avg attainment	1.63	1.85



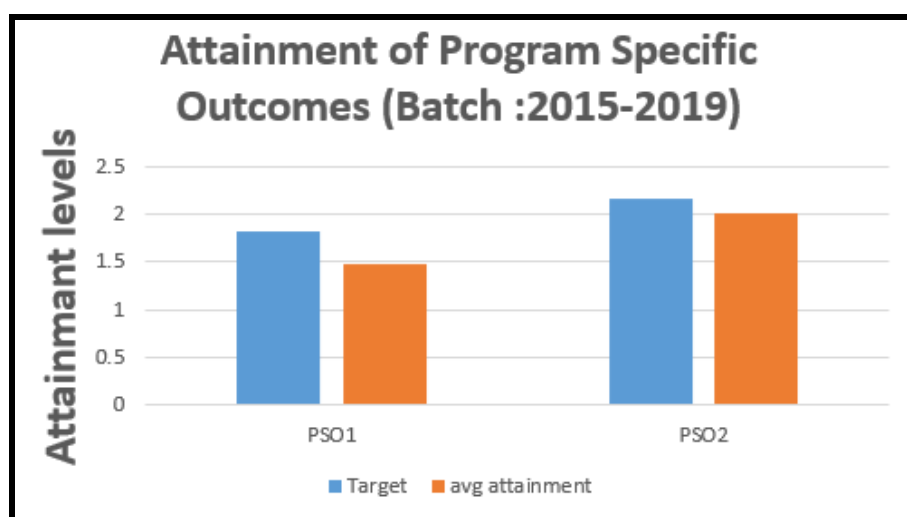
3.3.2.5. PO Attainment level = 80 % of direct assessment + 20% of indirect assessment
Program Outcomes Attainment (2015-2019)

PO attainment	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Target	2.03	2.09	2.17	1.73	1.94	1.91	1.68	1.92	2.08	2.06	1.89	1.72
Avg. attainment	1.63	1.69	1.74	1.42	1.62	1.62	1.35	1.58	2.00	1.84	1.63	1.44



Program Specific Outcomes Attainment (2015-2019)

POs/ attainment	PSO1	PSO2
Target	1.84	2.17
Avg. attainment	1.49	1.91



CRITERIA 4

Students' Performance

Criterion 4	Students' Performance	150

4. STUDENTS' PERFORMANCE (150)

Table B. 4.1 Students' Performance

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	CAY 2020-21	CAYm1 2019-20	CAYm2 2018-19
Sanctioned intake of the program (N)	120	120	120
Total number of students admitted in first year <i>minus</i> number of students migrated to other programs/institutions plus no. of students migrated to this program (N1)	42	56	107
Number of students admitted in 2nd year in the same batch via lateral entry (N2)	0	20	20
Separate division students, if applicable (N3)	0	0	0
Total number of students admitted in the Program (N1 + N2 + N3)	42	76	127

CAY – Current Academic Year

CAYm1 – Current Academic Year minus 1 = Current Assessment Year

CAYm2 – Current Academic Year minus 2 = Current Assessment Year minus 1

LYG – Last Year Graduate minus 1

LYGm1 – Last Year Graduate minus 1

LYGm2 – Last Year Graduate minus 2

Table B.4.2 Students' Performance

Year of entry	N1 + N2 + N3 (As defined above)	Number of students who have successfully graduated without backlogs in any semester/year of study (Without Backlog means no compartment or failures in any semester/year of study)			
		I Year	II Year	III Year	IV Year
CAY (2020-21)	42 (42+0+0)				
CAYm1 (2019-20)	76 (56+20+0)	27 (27+00+00)			
CAYm2 (2018-19)	127 (107+20+0)	59 (59+00+00)	60 (51+09+00)		
CAYm3 (2017-18)	119 (84+35+0)	56 (56+00+00)	41 (40+01+00)	38 (37+01+00)	
CAYm4 (2016-17)	147 (121+26+0)	49 (49+00+00)	54 (44+10+00)	49 (39+10+00)	49 (39+10+00)
CAYm5 (2015-16)	158 (120+38+0)	49 (49+00+00)	54 (39+15+00)	54 (39+15+00)	54 (39+15+00)
CAYm6 (2014-15)	141 (114+27+0)	55 (55+00+00)	62 (54+08+00)	57 (51+06+00)	57 (51+06+00)

Table B.4.3 Students' Performance

Year of entry	N1 + N2 + N3 (As defined above)	Number of students who have successfully graduated in stipulated period of study [Total of with Backlog + without Backlog]			
		I Year	II Year	III Year	IV Year
CAY(2020-21)	42 (42+0+0)				
CAYm1 (2019-20)	76 (56+20+0)	50 (50+00+00)			
CAYm2 (2018-19)	127 (107+20+0)	85 (85+00+00)	102 (83+19+00)		
CAYm3 (2017-18)	119 (84+35+0)	79 (79+00+00)	99 (71+28+00)	99 (71+28+00)	
CAYm4 (2016-17)	147 (121+26+0)	97 (97+00+00)	111 (86+25+00)	106 (84+22+00)	102 (82+20+00)
CAYm5 (2015-16)	158 (120+38+0)	88 (88+00+00)	111 (78+33+00)	111 (78+33+00)	105 (75+30+00)
CAYm6 (2014-15)	141 (114+27+0)	93 (93+00+00)	110 (84+26+00)	104 (83+21+00)	104 (83+21+00)

4.1 Enrolment Ratio (20): Enrolment Ratio = $N1/N$

Table B.4.4 Enrollment Ratio

Sl. No.	Year	N1	N	Enrollment Ratio (N1/N)	Percentage
1	CAY(2020-21)	42	120	0.35	35.00
2	CAYm1 (2019-20)	56	120	0.46	46.67
3	CAYm2 (2018-19)	107	120	0.89	89.17
Average Enrollment Ratio				0.56	56.95

Item (Students enrolled at the First Year Level on average basis during the previous three academic years starting from current academic year)	Marks
$\geq 50\%$ students enrolled	12

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 actually admitted in 2nd year via lateral entry and separate division, if applicable)

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

Success rate without backlogs in any year of study = $25 \times \text{Average SI}$

Table B.4.5 Success rate without backlogs

Item	Last Year of Graduate, LYG (CAYm4) 2016-17	Last Year of Graduate minus 1,LYGm1 (CAYm5) 2015-16	Last Year of Graduate minus 2,LYGm2 (CAYm6) 2014-15
Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry and separatedivision, if applicable	147 (121+26+0)	158 (120+38+0)	141 (114+27+0)
Number of students who have graduated without backlogs in the stipulated period	49 (39+10+00)	54 (39+15+00)	57 (51+06+00)
Success Index (SI)	0.33	0.34	0.40
Average SI	0.36		
Success Rate	$25 \times \text{Average SI} = 25 \times 0.36 = 9.00$		

4.2.2. Success rate in stipulated period of study (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 actual admitted in 2nd year via lateral entry and separate division, if applicable)

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

Success rate = $15 \times \text{Average SI}$

Table B.4.6 Success rate with backlog

Item	Last Year of Graduate (LYG) (CAYm4) 2016-17	Last Year of Graduate minus 1, LYGm1(CAYm5) 2017-18	Last Year of Graduate minus 2, LYGm2(CAYm6) 2018-19
Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry and separate division, if applicable	147 (121+26+00)	158 (120+38+0)	141 (114+27+0)
Number of students who have graduated in the stipulated period	102 (82+20+00)	105 (75+30+00)	104 (83+21+00)
Success Index (SI)	0.69	0.66	0.74
Average Success Index	0.70		
Success Rate	$15 \times \text{Average SI} = 15 \times 0.70 = 10.45$		

Note: If 100% students clear without any backlog then also total marks scored will be 40 as both 4.2.1 & 4.2.2 will be applicable simultaneously.

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)) × (number of successful students/number of students appeared in the examination)

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

Table B.4.7 Academic Performance in Third Year

Academic Performance	CAYm1 2019-20 (2017-18)	CAYm2 2018-19 (2016-17)	CAYm3 2017-18 (2015-16)
Mean of CGPA or Mean Percentage of all successful students(X)	7.69	6.88	7.35
Total no. of successful students (Y)	99	106	111
Total no. of students appeared in the examination (Z)	99	111	111
API = $x * (Y/Z)$	7.69	6.57	7.35
Average API = $(AP1 + AP2 + AP3) / 3$	7.20		
Academic Performance = $1.5 * \text{Average API}$	$1.5 * 7.20 = 10.8$		

4.4. Academic Performance in Second Year (15)

Academic Performance Level = $1.5 * \text{Average API}$ (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)) $\times$ (number of successful students/number of students appeared in the examination)

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

Table B.4.8 Academic Performance in Second Year

Academic Performance	CAYm1 2019-20 (2018-19)	CAYm2 2018-19 (2017-18)	CAYm3 2017-18 (2016-17)
Mean of CGPA or Mean Percentage of all successful students(X)	7.04	6.40	6.12
Total no. of successful students (Y)	102	99	111
Total no. of students appeared in the examination (Z)	105	114	123
API = $X * (Y/Z)$	6.84	5.56	5.52
Average API = $(AP1 + AP2 + AP3) / 3$	5.97		
Academic Performance = $1.5 * \text{Average API}$	$1.5 * 5.97 = 8.96$		

4.5. Placement, Higher Studies and Entrepreneurship (40)

Assessment Points = 40 × average placement

Table B.4.9 Placement, Higher Studies and Entrepreneurship

Item	CAYm1 2019-20	CAYm2 2018-19	CAYm3 2017-18
Total No. of Final Year Students (N)	106	111	104
No. of students placed in companies or Government Sector (x)	79	84	72
No. of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level Tests, GRE, GMAT etc.) (y)	07	08	15
No. of students turned entrepreneur in engineering/technology (z)	01	02	02
$x + y + z =$	87	94	89
Placement Index : $(x + y + z) / N$	0.82	0.85	0.86
Average placement= $(P1 + P2 + P3)/3$	0.84		
Assessment Points = 40 * Average placement	40 * 0.84 = 33.73		

4.5 (a) Provide the placement data in the below mentioned format with the name of the program and the assessment year:

Table B.4.10 Placement data of the program and the assessment year 2019-20

Civil Engineering- CAYm1 (2019-20)				
Sl. No.	Name of the Student Placed	Enrollment No.	Name of the Employer	Appointment letter reference No. with date
1.	ABHISHEK G S	1SJ16CV003	Samara Civil Consultancy	22/08/2021
2.	ACHYUTHA C A	1SJ16CV004	Veritech Infosystems Pvt Ltd.	VIPL/HR/EMP/02-042021 12/04/2021
3.	ANIL KUMAR R	1SJ16CV008	Noble Infra management Services	20/05/2021
4.	ANKITHA M S	1SJ16CV009	Nisarga Construction and Design	22/08/2021

5.	CHARAN S N	1SJ16CV016	Samvid Buildtech Pvt Ltd	17/06/2021
6.	CHARANRAJ A D	1SJ16CV017	M R Constructions	12/07/2021
7.	FAIZAN ASIF N	1SJ16CV023	Lakshmi Construction	13/08/2020
8.	GEETHANJALI	1SJ16CV024	Infracon Structures	16/05/2021
9.	GOUTHAM B N	1SJ16CV026	Adroit Technical Services Pvt Ltd	22/07/2021
10.	HARISH	1SJ16CV029	HomeLane	02/07/2021
11.	HARITHA G V	1SJ16CV030	Deloitte Consulting India Private Limited	24/08/2021
12.	HARSHA K C	1SJ16CV031	SVT Constructions	14/08/2021
13.	HEMA Y B	1SJ16CV032	Pinnacle Prime Constructions Pvt Ltd	13/04/2021
14.	KALAVA UTHEJ KUMAR	1SJ16CV035	SBC Infrastructure	30/11/2020
15.	KAVANA M	1SJ16CV036	Vinyasa Build Tech	23/07/2021
16.	KEERTHI K M	1SJ16CV038	Nandi Constructions	21/08/2021
17.	KIRAN N	1SJ16CV039	Sri Byraveshwara Enterprises	06/06/2021
18.	KISHOR N	1SJ16CV041	Manjunatha Constructions	18/06/2020
19.	KUSHAL C M	1SJ16CV043	Square Yards Consulting Pvt Ltd	05/10/2021
20.	KUSHAL KUMAR R	1SJ16CV044	Noble Infra management Services	20/05/2021
21.	LAVANYA B L	1SJ16CV046	Bhoomi Constructions	17/06/2021
22.	LAVANYA T	1SJ16CV047	G J Engineers & Contractors	06/09/2021
23.	MADANKUMAR G N	1SJ16CV049	Bremar India Engineering Pvt.Ltd	01/03/2021
24.	MADHANA K B	1SJ16CV050	J K Enterprises	22/10/2021
25.	MADHU T N	1SJ16CV053	Seethibhairaweshwara Enterprises	18/09/2021
26.	MAHANTH KUMAR V	1SJ16CV054	TeamLease Services Limited	03/03/2021
27.	MANOJ KUMAR T S	1SJ16CV058	Shreya Construction	22/05/2021
28.	MANOJ M	1SJ16CV059	ABV Fabrication and Steel	06/08/2021
29.	MANOJ S	1SJ16CV060	Gecon Traffix	08/06/2020
30.	MEGHANA M	1SJ16CV061	Bellissimo Ventures Private Limited	25/11/2020
31.	MOHAMMED TANVEER	1SJ16CV062	Sri Goravanahalli Mahalakshmi Krupa	13/11/2020

32.	MONIKA M	1SJ16CV063	Naveen Consultancy	07/09/2020
33.	NATARAJ G N	1SJ16CV066	Samvid Buildtech Pvt Ltd	17/06/2021
34.	NIHARIKA NAYANA	1SJ16CV067	Noble Infra management Services	20/05/2021
35.	NISARGA D	1SJ16CV071	Exl Service	31/03/2021
36.	NIVEDITHA P M	1SJ16CV072	Global Mastery Consultant and Enterprises	23/08/2020
37.	P SHWETHA	1SJ16CV073	HDB Financial Services Limited	HDBFS/21-22/HRIC252744 21/09/2021
38.	PAVANREDDY S	1SJ16CV074	PWD in KMIO	16/10/2021
39.	PINKY V	1SJ16CV075	Sri Goravanahalli Mahalakshmi Krupa	13/11/2020
40.	PRAVALLIKA B S	1SJ16CV077	Pinnacle Prime Constructions Pvt Ltd	13/04/2021
41.	PRIYANKA	1SJ16CV079	Revathi Enterprises & Civil Contractor	18/02/2020
42.	PRIYANKA T L	1SJ16CV080	Infracon Structures	16/05/2021
43.	RAHUL M	1SJ16CV083	Nandi Constructions	21/08/2021
44.	ROOPA B	1SJ16CV087	GeoCentroid	01/06/2021
45.	S PUNEETH	1SJ16CV089	M R Constructions	12/07/2021
46.	SAGAR L P	1SJ16CV090	Adroit Valuation	15/04/2021
47.	SANDHYA S A	1SJ16CV094	GeoCentroid	19/02/2021
48.	SANKETH GOWDA B S	1SJ16CV095	Global Mastery Consultant and Enterprises	23/08/2020
49.	SHIRISHA K R	1SJ16CV102	Quess Winning Together	QS21701039 22/07/2021
50.	SINDHU R	1SJ16CV103	Sri Byraveshwara Enterprises	06/06/2021
51.	SOUMYA A	1SJ16CV105	KBR Infratech Ltd	05/12/2020
52.	SOUNDARYA S	1SJ16CV106	Pinnacle Prime Constructions Pvt Ltd	13/04/2021
53.	TEJESHWAR H	1SJ16CV112	Naveen Consultancy	07/09/2020
54.	THANUSH VIJAY BABU	1SJ16CV113	Balaji Infrastructure	20/01/2021
55.	VASU A	1SJ16CV114	Bhoo Mapana Kandaya Vyavaste	20/09/2021
56.	VIDYA J V	1SJ16CV115	Axon Technologies	13/09/2021
57.	VINAY KUMAR V	1SJ16CV117	TATA Consultancy Services Limited	15/11/2021
58.	VINOD C	1SJ16CV118	Lakshmi Construction	13/08/2020

59.	VINOTH T	1SJ16CV119	J K Enterprises	22/10/2021
60.	VIPINA M	1SJ16CV120	TurnBim Engineering Services	25/01/2021
61.	VISHNU U K	1SJ16CV121	iTtech Workshop Dataintegration for Healthcare	14/09/2021
62.	ABHILASH A	1SJ17CV401	ZKTeco	24/09/2021
63.	AKSHAY H C	1SJ17CV403	Bhoomi Constructions	17/06/2021
64.	ARUN KUMAR C K	1SJ17CV404	G J Engineers & Contractors	06/09/2021
65.	GAYITHRI K M	1SJ17CV406	Pinnacle Prime Constructions Pvt Ltd	13/04/2021
66.	GEETHA K N	1SJ17CV407	Seethibhairaweshvara Enterprises	18/09/2021
67.	HARSHITHA T	1SJ17CV408	Infracon Structures	16/05/2021
68.	INDRESH C H	1SJ17CV409	Vinyasa Build Tech	23/07/2021
69.	KARAVA SAI KESAVA REDDY	1SJ17CV410	Revathi Enterprises & Civil Contractor	18/02/2020
70.	KARTIK NAINAGALI	1SJ17CV411	HomeLane	29/07/2021
71.	MANJUNATHA K	1SJ17CV414	Gecon Traffix	08/06/2020
72.	NETHRABHINANDAN KUMAR T	1SJ17CV415	Samara Civil Consultancy	22/08/2021
73.	SAGAR V	1SJ17CV417	Shreya Construction	22/05/2021
74.	SANTOSH KUMAR K S	1SJ17CV418	Adroit Valuation	19/07/2021
75.	SWATHI H V	1SJ17CV420	ABV Fabrication and Steel	06/08/2021
76.	VAIBHAV S	1SJ17CV422	LTG Infrastructure Limited	21/09/2020
77.	VARUN DEV K	1SJ17CV423	SVT Constructions	14/08/2021
78.	VENKATESH ANANT ACHARI	1SJ17CV424	Manjunatha Constructions	18/06/2020
79.	VINODKUMAR B L	1SJ17CV425	Nisarga Construction and Design	22/08/2021

Table B.4.11 Placement data of the program and the assessment year 2018-19

Civil Engineering- CAYm1 (2018-19)				
Sl. No.	Name of the Student Placed	Enrollment No.	Name of the Employer	Appointment letter reference No. with date
1.	AKSHAY GUNDAGI	1SJ15CV005	Karnataka State Remote Sensing Applications Centre	12/05/2021
2.	AKSHAY KUMAR	1SJ15CV006	Homzinterio Select Homes Interior Designers Pvt Ltd	01/09/2019
3.	AMRIN TAJ	1SJ15CV007	Noble Infra management Services	10/06/2019
4.	ANUSHA G R	1SJ15CV008	Sanjana Enterprises	01/03/2021
5.	ARCHITHA S	1SJ15CV010	INA Constructions	04/12/2020
6.	ARNAB CHAUDHURI	1SJ15CV011	Pinnacle Prime Constructions Pvt Ltd	06/03/2020
7.	ARUN KUMAR K	1SJ15CV014	Infracon Structures	23/09/2020
8.	ARUN KUMAR S	1SJ15CV015	Prabhodita Services India Private Limited	09102021-01 09/10/2021
9.	BASKARA REDDY B N	1SJ15CV018	New Consolidated Construction Co. Ltd.	12/07/2020
10.	BHAVAN G P	1SJ15CV019	ABV Infrastructure	20/08/2020
11.	BRAMHINI A N	1SJ15CV021	GVS Construction	20/10/2020
12.	CHAITHRA B	1SJ15CV022	Lakshmi Construction	22/07/2019
13.	CHAKRAVARTHI R	1SJ15CV023	Alorica India Private Limited	27/09/2021
14.	DEEPIKA L	1SJ15CV028	Star Infratech	01/09/2020
15.	DHANUSHREE H G	1SJ15CV029	Nandi Constructions	16/08/2020
16.	DIVYA S A	1SJ15CV031	Samara Constructions	03/10/2020
17.	GANESH K N	1SJ15CV032	Vistara Structures	12/03/2020
18.	GOWTHAM G	1SJ15CV033	Sri Byraveshwara Enterprises	19/03/2018
19.	SOSHIL H M	1SJ15CV034	Pinnacle Prime Constructions Pvt Ltd	06/03/2020
20.	HARSHA K	1SJ15CV036	Needs Manpower Support Services Pvt. Ltd	11/10/2021
21.	HARSHITH S R	1SJ15CV037	DS-Max Properties (P)Ltd	APPT/2020/02564 28/01/2020
22.	HARSHITHA M	1SJ15CV038	E I Technologies Pvt. Ltd	2019g.Hrd.Aor.A024 15/07/2019
23.	LINGAM KARTHIK REDDY	1SJ15CV046	Cognizant Technology Solutions India Pvt. Ltd.	18024154 23/10/2021
24.	MANIKAPPA	1SJ15CV050	HomeLane	13/11/2020
25.	MANOJ V	1SJ15CV053	Mathrusree Construction	26/06/2020

26.	MEGHANA A	1SJ15CV054	Populace Infra Constructions Pvt. Ltd	16/08/2021
27.	MOHAMMED JAFFER SADIQ K A	1SJ15CV057	ABC Construction	18/04/2020
28.	NAMRATHA K	1SJ15CV060	Samara Constructions	03/10/2020
29.	NYAMATHPASHA	1SJ15CV064	Bonito Designs	31/08/2020
30.	PALLAVI S N	1SJ15CV065	Design Vedh Architect & Construction	13/10/2020
31.	PAVANKUMAR K	1SJ15CV068	Sri Venkateshwara Irrigation Systems	28/08/2019
32.	POOJA E	1SJ15CV070	ABC Construction	18/04/2020
33.	PRASHANTH P	1SJ15CV073	Fameline Architectural Products Pvt. Ltd	25/10/2021
34.	PUNITHKUMAR S D	1SJ15CV075	D R S Infratech Private Limited	06/04/2021
35.	RANJEETH E	1SJ15CV079	Infra Support Engineering Consultants Pvt.Ltd	06/02/2020
36.	RAVI SAH	1SJ15CV080	Shahari Vikas Tata Bhavan Karyalay	09/12/2076
37.	RIYAKATH M R	1SJ15CV082	Suhas Enterprices	18/05/2020
38.	ROOPA PATTAR	1SJ15CV083	180azimuth Renewal Energy Solution LLP	09/09/2020
39.	RUDRESH YADAV B	1SJ15CV084	Global Service Constructions	18/05/2020
40.	SACHIN M KUMBAR	1SJ15CV086	HomeLane Interiors	05/03/2020
41.	SAHANA A	1SJ15CV087	Pinnacle Prime Constructions Pvt Ltd	06/03/2020
42.	SAI ASHIK A R	1SJ15CV088	Built Environment	15/06/2020
43.	SHIRISHA B	1SJ15CV094	Wistron Infacomm Manufacturing (India) Private Limited	08/02/2021
44.	SHIVA REDDY N V	1SJ15CV095	Design Vedh Architect & Construction	13/10/2020
45.	SHRAVAN KUMAR K N	1SJ15CV096	Ebenus Design Solutions Pvt Ltd	10/03/2021
46.	SWETHA N	1SJ15CV097	Suhas Enterprises	18/05/2020
47.	SUPRIYA N	1SJ15CV108	Gramina Kudiyuva Niru Mattu Nairmalya Vibaga	11/11/2021
48.	SURESH N	1SJ15CV109	Abhiram Constructions & Consultancy	23/05/2021
49.	SURYAKANT C TALAWAR	1SJ15CV111	Noble Infra management Services	10/06/2019
50.	SWAPNA R	1SJ15CV113	Visionet Systems	11/11/2021
51.	SYED OWAIS SULTAN	1SJ15CV116	Design Cubes Designing Aspirations	03/10/2020
52.	TEJASHREE K R	1SJ15CV118	Black Olive Ventures	30/11/2020

53.	VIJAY KUMAR G P	1SJ15CV120	Abhiram Constructions & Consultancy	23.05.2021
54.	YAMUNA R	1SJ15CV124	SMC Environment Services	15/06/2021
55.	YASHASVINI B A	1SJ15CV125	Infracon Structures	23/09/2020
56.	RAGHAVENDRA REDDY C R	1SJ15CV127	N J Technologies	30/03/2021
57.	AJAY KUMAR V	1SJ16CV400	Network Intelligence India Pvt. Ltd	05/07/2021
58.	ANITHA B R	1SJ16CV401	INA Constructions	04/12/2020
59.	ASHOK BABU S	1SJ16CV404	Nandi Constructions	16/08/2020
60.	CHANDRASHEKAR	1SJ16CV406	GVS Construction	20/10/2020
61.	GIRISHBABU	1SJ16CV407	BSR Infratech India Limited	05/07/2021
62.	GURUPRASAD HUGAR	1SJ16CV408	Sri Byraveshwara Enterprises	19/03/2018
63.	HEMANTH KUMAR N	1SJ16CV411	Dxc.Technology	20/05/2020
64.	KEERTHIKUMAR N	1SJ16CV412	Pranav Associates	23/04/2021
65.	LATHASHREE N	1SJ16CV413	Capricot	04/02/2021
66.	MADAN KUMAR V S	1SJ16CV414	Samvid Buildtech Pvt Ltd	25/05/2020
67.	MANJUNATHA V	1SJ16CV415	GVV Constructions(P) Ltd.	AL/2020/0018 13/02/2020
68.	MANORANJAN G P	1SJ16CV416	ABC Construction	12/07/2021
69.	NAGESH BABU N	1SJ16CV417	Infra Support Engineering Consultants Pvt.Ltd	2019-20/069 16/09/2019
70.	NAVEEN G	1SJ16CV418	Fidelity Information Services India Private Ltd	09/09/2021
71.	PRASHANT	1SJ16CV419	Pinnacle Prime Constructions Pvt Ltd	06/03/2020
72.	PULIKESHI M N	1SJ16CV421	G V V Constructions (P) Ltd	AI/2019/0089 10/08/2019
73.	RAGHAVENDRA V	1SJ16CV422	Infracon Structures	23/09/2020
74.	RAJESHA R	1SJ16CV423	K&J Projects Private Limited	Hrd/OI/2021-22/328 12/08/2021
75.	RAKESH B K	1SJ16CV424	Lakshmi Construction	22/07/2019
76.	RANJITH D M	1SJ16CV425	Global Service Constructions	18/05/2020
77.	REVANSIDDAPPA	1SJ16CV426	ABV Infrastructure	20/08/2020
78.	S VENKATESH REDDY	1SJ16CV427	Samvid Buildtech Pvt Ltd	25/05/2020
79.	SANGEETHA S	1SJ16CV428	Mathrusree Construction	26/06/2020
80.	SINDHU P M	1SJ16CV432	Noble Infra management Services	10/06/2019
81.	SRIKANTHA K Y	1SJ16CV434	Pinnacle Prime Constructions Private Limited	22/07/2019

82.	VINAYAK BABU C M	1SJ16CV435	Samara Constructions	03/10/2020
83.	VINODKUMAR H	1SJ16CV436	Vistara Structures	12/03/2020
84.	YASHODHA N B	1SJ16CV437	Capricot	Fy20/1032 12/07/2019

Table B.4.12 Placement data of the program and the assessment year 2017-18

Civil Engineering- CAYm1 (2017-18)				
Sl. No.	Name of the Student Placed	Enrollment No.	Name of the Employer	Appointment letter reference No. with date
1.	ABHILASH H	1SJ14CV001	Sumadhura Infracon Pvt	30/08/2021
2.	ABHISHEK KOUDGAON	1SJ14CV002	Nirmaan constructions	12/11/2021
3.	AKSHATHA G N	1SJ14CV003	Symphonymax Engineering & Detailing (P) Ltd	U74900KA2015PTCO78812, 30/06/2019
4.	ANIL KUMAR A C	1SJ14CV004	Karnataka Gramin Mulabootha Soukarya Abhiruddi Niyamitha	October/2021
5.	ARAVIND S B	1SJ14CV005	Infracon Structures	12/08/2019
6.	ARPITHA S M	1SJ14CV006	Pinnacle Prime Constructions Pvt Ltd	22/07/2019
7.	ASHA M C	1SJ14CV009	Manjunatha Constructions	03/05/2019
8.	DILIP C A	1SJ14CV024	Tech Nirmana Constructions	12/08/2021
9.	DIVYASHREE M	1SJ14CV025	Syban India	12/10/2021
10.	GIRISHREDDY H V	1SJ14CV027	Sashank Construction	12/11/2018
11.	GOWTHAMGOWDA M	1SJ14CV028	Samvid Buildtech Pvt Ltd	03/07/2018
12.	GOWTHAMI T	1SJ14CV029	Revathi Enterprises & Civil Contractor	15/06/2018
13.	HAMSA H S	1SJ14CV031	Nandi Constructions	05/05/2018
14.	KAVYA G	1SJ14CV037	Noble Infra management Services	29/09/2018
15.	C KOTHANDARAMAN	1SJ14CV038	Samruddhi Constructions	Ref.No.SMC/LOA/18-19/005 15/07/2020
16.	MAHENDRA REDDY K B	1SJ14CV043	Vinyasa Build Tech	14/06/2018
17.	MAHESH R	1SJ14CV044	India Shelter Home Loans	26/04/2021
18.	MAITHRA N	1SJ14CV045	ABV Fabrication and Steel	15/06/2020
19.	MALLIKA S	1SJ14CV046	Pinnacle Prime Constructions Pvt Ltd	22/07/2019
20.	MD ZIAUL MUSHTAFA KHAN	1SJ14CV049	Shubh Consultants & Technocrats LLP	08/11/2021

21.	MEGHA M N	1SJ14CV050	Adroit Valuation	13/02/2019
22.	MOHAN KUMAR K S	1SJ14CV052	Brick and Bolt	22/03/2021
23.	MUNENDRA A N	1SJ14CV053	Lakshmi Construction	07/12/2018
24.	NAGARJUN R	1SJ14CV054	M R Constructions	16/06/2018
25.	NAGESH G D	1SJ14CV055	Global Mastery Consultant and Enterprises	17/09/2018
26.	NAYANASHREE N	1SJ14CV056	Naveen Consultancy	18/03/2018
27.	NAYAZ KHAN P M	1SJ14CV057	M R Constructions	16/06/2018
28.	NOOR MOHAMMED	1SJ14CV059	Global Mastery Consultant and Enterprises	17/09/2018
29.	POOJA M G	1SJ14CV062	Pinnacle Prime Constructions Pvt Ltd	22/07/2019
30.	PRAFULA KUMAR G	1SJ14CV063	Gecon Traffix	17/07/2019
31.	PRASANNA KUMAR N	1SJ14CV065	Manjunatha Constructions	03/05/2019
32.	PRIYADARSHINI AKKALKOT	1SJ14CV068	Noble Infra management Services	29/09/2018
33.	RABINDRA GAMI	1SJ14CV070	Rashtriya Punarnirman Pradhikaran	06/06/2076
34.	RAGHUNANDAN S NAYAKA	1SJ14CV072	Naveen Consultancy	18/03/2018
35.	RAHUL KUMAR	1SJ14CV073	Mazuna Technobridge Pvt Ltd	01/09/2020
36.	RANJEEB KARKI	1SJ14CV077	Rashtriya Punarnirman Pradhikaran	Ref. No. 589/075/076 2075/05/28
37.	RANJITH B	1SJ14CV078	Aishwarya Constructions	23/01/2020
38.	RAVIKIRAN B Y	1SJ14CV079	Madhura Constructions	10/08/2018
39.	REVATHI PRABHU	1SJ14CV080	Revathi Enterprises & Civil Contractor	15/06/2018
40.	S HIDAYATHULLA	1SJ14CV081	District Survey And Land Records Ananthapuram Government Of Andhrapradesh	A1/341/2019/DSC-2019 15/12/2019
41.	SADANAND SINGH	1SJ14CV082	Quicon Buildtech India Pvt.Ltd.	U45201KA2012PTC066268 16/07/2019
42.	SAGAR	1SJ14CV083	Gecon Traffix	17/07/2019
43.	SANDESH YADAV	1SJ14CV084	Kranz Eurocenter	27/09/2020
44.	SANKET ADHIKARI	1SJ14CV086	The Kathmandu Housing Company[P] Ltd.	110/075/076 05/11/2075
45.	SARJU SHRESTHA	1SJ14CV088	Jilla Ayojanakaryanyan Ekayi Palpa	175/075/076 2075/10/25
46.	SHANTHALA H R	1SJ14CV089	Infracon Structures	12/08/2019
47.	SHARATH T	1SJ14CV090	V5 Global Services Private Limited	06/02/2020

48.	SHARATH V	1SJ14CV091	Abhynav Associates	01/08/2018
49.	SUDARSHAN S	1SJ14CV099	SVB Infra Projects	30/06/2019
50.	SUPRITHA S	1SJ14CV103	Confident Group	09/05/2019
51.	TAHAVEER KHAN	1SJ14CV108	Sri Goravanahalli Mahalakshmi Krupa	05/10/2019
52.	TANUSHREE B S	1SJ14CV109	Smartminds Engineering Pvt Ltd	25/08/2021
53.	CHANDRA MANI SAH	1SJ14CV118	Kendriya Ayojana Karyanvyan Ekay Tatha Anthargatka Jilla Ayojan	2076/01/03
54.	NABIN THAPA	1SJ14CV120	Gavu Karyapalikako Karyalay	Ref. No.764/076/077 Dated 2076/09/20
55.	UJWAL CHAUDHARY	1SJ14CV121	Rashtriya Punarnirman Pradhikaran	Ref. No.776/076/077 Dated 2075/11/23
56.	SWAROOP REDDY G R	1SJ14CV122	Kalyani Techpark Private Limited	14/11/2018
57.	ANILKUMAR	1SJ15CV400	ABV Fabrication and Steel	15/06/2020
58.	ARJUN NAIK M S	1SJ15CV401	Abhaya Services	Ref. No.OLAB010319SE19 08/07/2020
59.	BASAVARAJ G GUDAGUNTI	1SJ15CV403	Surabhi Constructions	06/07/2020
60.	GURUPRASAD G S	1SJ15CV407	Sri Goravanahalli Mahalakshmi Krupa	05/10/2019
61.	MANJUSHREE B R	1SJ15CV409	Samvid Buildtech Pvt Ltd	03/07/2018
62.	NANDEESHA S B	1SJ15CV411	TJN Construction Pvt Ltd	05/07/2021
63.	NISARGA K	1SJ15CV412	Pinnacle Prime Constructions Pvt Ltd	22/07/2019
64.	PARVATHA K	1SJ15CV414	Klarheit:Valuers & Engineering Services Private Limited	02/08/2021
65.	PEDDANNA B V	1SJ15CV415	IIFL Home Loan	26/07/2021
66.	PRAJWAL H U	1SJ15CV416	Infracon Structures	12/08/2019
67.	SHAHABAZPASHA	1SJ15CV418	Nandi Constructions	05/05/2018
68.	SHASHIKUMAR P	1SJ15CV419	Noble Infra management Services	29/09/2018
69.	SHYLAJA S	1SJ15CV421	Sun Geomatics	12/12/2020
70.	SUSHMA L	1SJ15CV423	Vinyasa Build Tech	14/06/2018
71.	VEENA P	1SJ15CV424	Lakshmi Construction	07/12/2018
72.	VIVEK K R	1SJ15CV426	Yashwanth Engineering And Infrastructures	01/07/2019

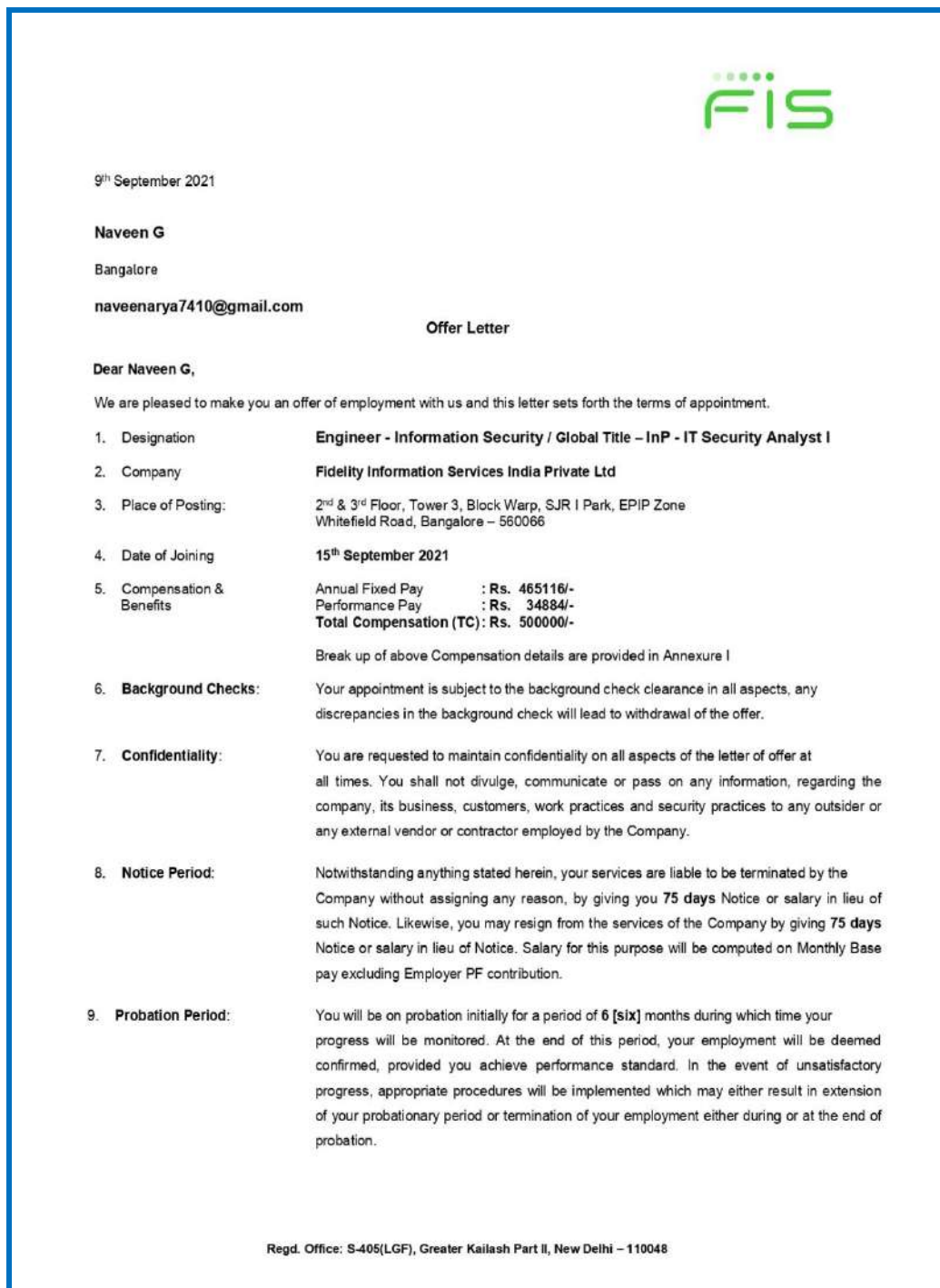


Figure 4.1 Sample Copy of Appointment Letter

4.6. Professional Activities (20)

4.6.1 Professional societies/chapters and organizing engineering events (5)

The following are the professional societies or student chapters exist in the department.

Table B.4.13 Professional Societies or Student Chapters of the Civil Department

Sl. No.	Name of Societies/Chapters	Year of Establishment
1.	Indian Green Building Council (IGBC) Student Chapter	September 2018
2.	Association of Consulting Civil Engineers (INDIA)	April 2017
3.	Indian Concrete Institute (ICI) Student Chapter LM 10288	February 2014



Figure 4.2 Indian Green Building Council (IGBC) Student Chapter

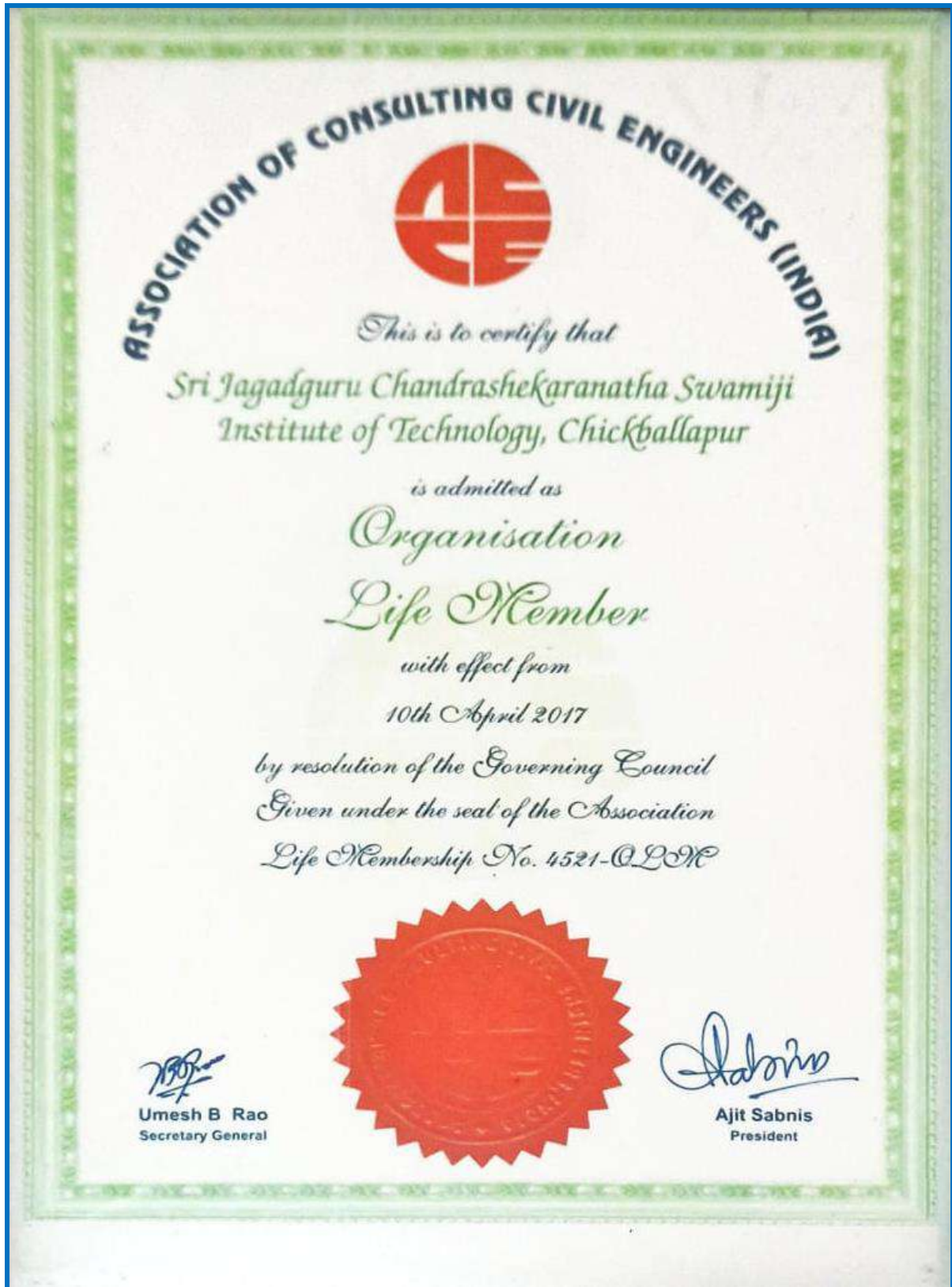


Figure 4.3 Association of Consulting Civil Engineers (INDIA)

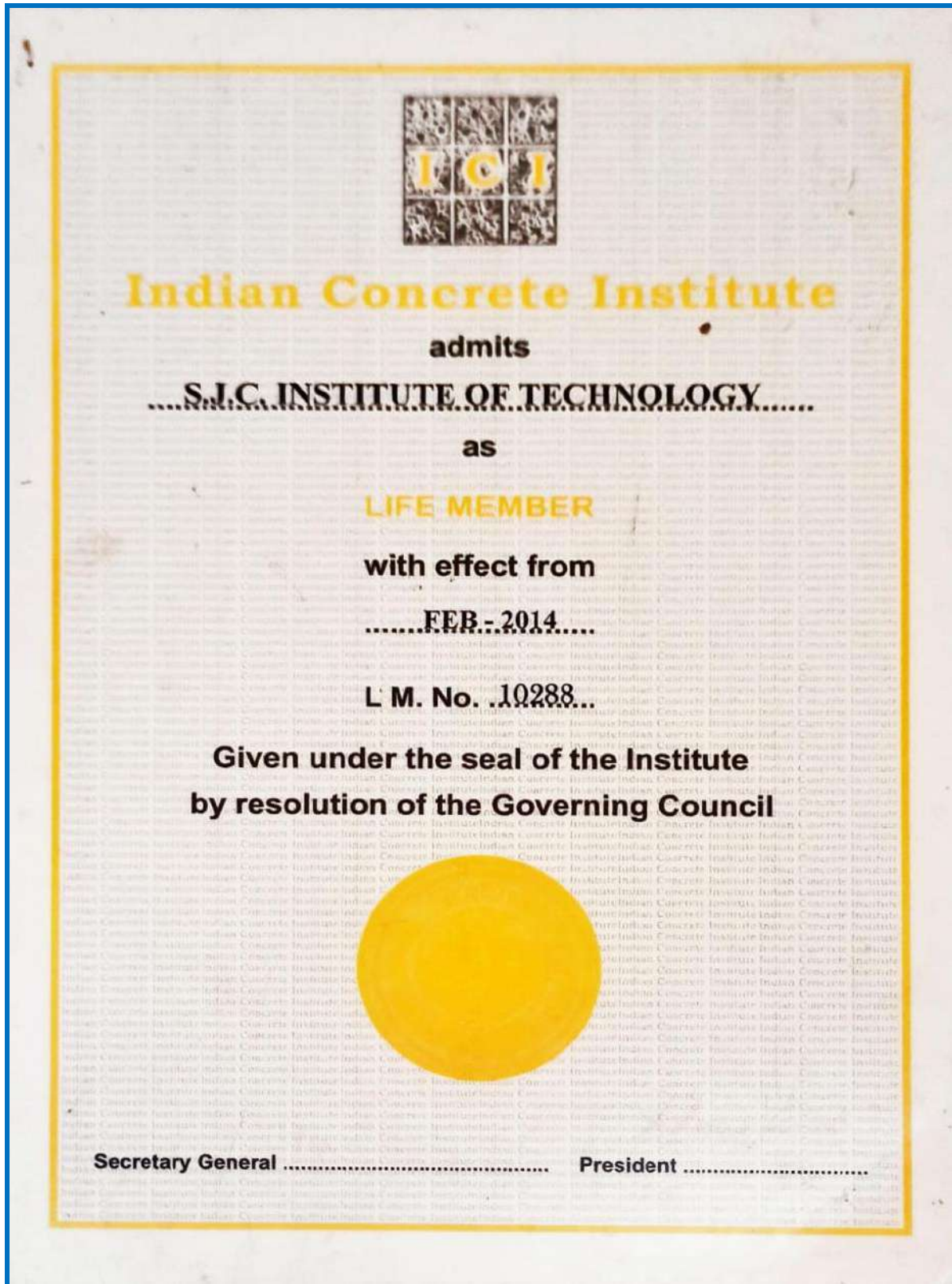


Figure 4.4 Indian Concrete Institute (ICI) Student Chapter

Table B.4.14 Events/Activities Organized by Professional Societies

Sl. No.	Program Name	Program Date	Duration	Professional Societies or Chapters	No. of Students Participated
1.	Building Safety Walk A- Thon	25.11.2021	One Day	ACCE(INDIA) Bangalore Centre & ICI	191
2.	AICTE sponsored DCP on “SBC of Soils & Early Distress of Bridges”	21.09.2021	Five days	ACCE(INDIA) Bangalore Centre & ICI	185
3.	Engineer’s day 2021	15.09.2021	One Day	ACCE(INDIA) Bangalore Centre & ICI	178
4.	MANTHANA-2021 National Conference on “Recent Advances in Civil Engineering”	28.08. 2021	One Day	ACCE(INDIA) Bangalore Centre, ICI & IGBC	172
5.	A Symposium cum Project exhibition (Virtual Mode) organized on “Recent Advances in Engineering Science”	19.07. 2021	One Day	ACCE(INDIA) Bangalore Centre & ICI	96
6.	Webinar on “Opportunities for Civil engineers in Water Sector under Jal Jeevan Mission	10.06.2021	One day	ACCE(INDIA) Bangalore Centre & ICI	77
7.	Online district interaction program (DIP)-ATAL BHU-JALA yojana” in association with Central Ground water board and Zilla panchayath Chickballapur	07.06.2021	One Day	ACCE(INDIA) Bangalore Centre & ICI	95
8.	Webinar on the occasion of world environmental day - 2021 on the topic “Plastic waste management in India”	03.06.2021	One day	ACCE(INDIA) Bangalore Centre & ICI	55
9.	Webinar on “Overview of Geotechnical Investigations With Case Studies”	12.05.2021	One day	ACCE(INDIA) Bangalore Centre & ICI	165
10.	Webinar was organized on “Service Life Prediction of Structures”	04.05.2021	One day	ACCE(INDIA) Bangalore Centre & ICI	119
11.	Webinar was organized on the occasion of Earth Day 2021 on the topic “Global Pandemic: A Boon for Environment and Planet Myth or Reality”	22.04.2021	One day	ACCE(INDIA) Bangalore Centre & ICI	102

12.	Short Term Training Program on “Topographical Survey using Total Station”	15 th to 19 th March 2021	Five days	ACCE(INDIA) Bangalore Centre & ICI	126
13.	Webinar on “Your Study Abroad Journey”	12.11.2020	One day	ACCE(INDIA) Bangalore Centre & ICI	119
14.	Workshop on “Entrepreneurship and innovation on career opportunity”	06.11.2020	One day	ACCE(INDIA) Bangalore Centre & ICI	361
15.	Webinar on “Why Structures fail?”	23.10.2020	One day	ACCE(INDIA) Bangalore Centre & ICI	98
16.	International webinar on “Importance of water proofing in buildings”	07.10.2020	One day	ACCE(INDIA) Bangalore Centre & ICI	85
17.	International webinar on “Contracts and tendering”	30.09.2020	One day	ACCE(INDIA) Bangalore Centre & ICI	79
18.	Webinar on “Entrepreneurship and opportunities”	29.07.2020	One Day	ACCE(INDIA) Bangalore Centre & ICI	91
19.	Webinar was organized on “A Balanced View of Sustainability in Civil Engineering and Construction” On the occasion of Engineers day.	15.09.2020	One day	ACCE(INDIA) Bangalore Centre, ICI & IGBC	138
20.	International conference 2020	19.07. 2020	One day	ICI, ACCE & IGBC	56
21.	Expert lecture on “Recent development in remedial engineering for concrete structures”	14.05.2020	One Day	ACCE(INDIA) Bangalore Centre & ICI	201
22.	INNERVE-2019	17.05.2019	One day	ACCE(INDIA) Bangalore Centre & ICI	123
23.	International conference 2019	17.05.2019	One day	ACCE(INDIA) Bangalore Centre, ICI & IGBC	17
24.	INNERVE - 2018	10.05.2018	One day	ACCE(INDIA) Bangalore Centre & ICI	40
25.	MANTHANA - 2018	10.05.2018	One day	ACCE(INDIA) Bangalore Centre & ICI	46



Figures 4.5 Events/Activities Organized by Professional Societies

4.6.2 Publication in Technical Magazines, Newsletters etc., (5)**Table B.4.15 Publication in Technical Magazines, Newsletters etc.**

Sl. No.	Name of the Student	Name of the Article	Editors	Magazine	Year	Page No.
1.	K S Chitritha Padmaraj S Adarsha J Divya V	Study the Behaviour of Watermelon Seeds and Ferric Chloride as a Coagulant to Treat the Domestic Effluent	Dr. G Narayana Manjunath K A Shashikumar N V	MANTHANA-2021	2021	1
2.	Ruchitha B R Pavithra R Gokarna Y J Harshavardhana C M	Copper Slag as Fine Aggregate Replacement for High Performance Concrete	Dr. G Narayana Manjunath K A Shashikumar N V	MANTHANA-2021	2021	8
3.	Yashaswini C Chirag H N Syeda Saba Kounain Tayappa	Accident Analysis Based on Spot Speed Study	Dr. G Narayana Manjunath K A Shashikumar N V	MANTHANA-2021	2021	16
4.	Ankitha Reddy R Charan M Charan R R Chandana	Development and Experimental Analysis Interlock Bricks	Dr. G Narayana Manjunath K A Shashikumar N V	MANTHANA-2021	2021	25
5.	Pratibha Patil Keshava Murthy Rakshita K A	An Experimental Investigation on Mechanical Properties of Bacterial Concrete	Dr. G Narayana Manjunath K A Shashikumar N V	MANTHANA-2021	2021	32
6.	Chethan Kumar K J Chaithanya K R Kavya Shree G Anil Kumar D V	Experimental Study on SCC with Partial Cement Replacement With GGBS and Fly Ash With the Use of Glass Fibres	Dr. G Narayana Manjunath K A Shashikumar N V	MANTHANA-2021	2021	42
7.	Bhavana T N Sumukh V G Archana B C	Mechanical and Permeability Properties of Porous Asphalt	Dr. G Narayana Manjunath K A Shashikumar N V	MANTHANA-2021	2021	54

8.	Ismail Pinjar Navyashree V A Kanthraj B N Rajesh R A	Experimental Study on Autoclaved Aerated Concrete Blocks	Dr. G Narayana Manjunath K A Shashikumar N V	MANTHANA- 2021	2021	66
9.	Suvek M Purushotham S Bhoomika K R Pruthvi Chandra K N	GIS Application in Visualization of Ongoing and Upcoming Highway Projects in Karnataka	Dr. G Narayana Manjunath K A Shashikumar N V	MANTHANA- 2021	2021	74
10.	Jeevan Kumar G S Yashavanth R Kavya K Kavyashree B V	Identification and Improvement of Accident Black Spots	Dr. G Narayana Manjunath K A Shashikumar N V	MANTHANA- 2021	2021	82
11.	Aliasgar Khoja Dilip G K Bharath Reddy V	Partial Replacement of Cement by Cardboard Ash in Concrete	Dr. G Narayana Manjunath K A Shashikumar N V	MANTHANA- 2021	2021	92
12.	Nischal S Akshay N Hadimani Arun M Harsha T G	Removal of Heavy Metals from Industrial Waste Water Using Low Cost Adsorbents	Dr. G Narayana Manjunath K A Shashikumar N V	MANTHANA- 2021	2021	98
13.	Makun Shah Monish Kumar D N Monika N Yogesh K R	Experimental Investigation on Use of Recycled Aggregates and Reclaimed Asphalt Pavement in Pavement Construction	Dr. G Narayana Manjunath K A Shashikumar N V	MANTHANA- 2021	2021	105
14.	Timmareddy Venkatesh S Thriveni R Varun Gowda M	Experimental Investigation On Clayey Soil by Using Admixture For Road Construction	Dr. G Narayana Manjunath K A Shashikumar N V	MANTHANA- 2021	2021	112
15.	Sachin Jaiswal Viresh Irfan Bashir	Experimental Study Of Plastic Bricks Made From Waste Plastic	Dr. G Narayana Manjunath K A Shashikumar N V	MANTHANA- 2021	2021	129

16.	Pallavi J Arun Kumar T A Praveen M Monica A L	Subgrade Strengthening Of Roads On Clay Soil By Means Of Quarry Dust And Lime	Dr. G Narayana Manjunath K A Shashikumar N V	MANTHANA- 2021	2021	134
17.	Krithi C N Charan Gowda H L Lokesh Aradhya K S	Experimental Investigation On Black Cotton Soil By Using Admixture For Road Construction	Dr. G Narayana Manjunath K A Shashikumar N V	MANTHANA- 2021	2021	143
18.	Deviyani G S Charan K S Chandana K M Mahendra M	Removal Of Heavy Metals From Industrial Waste Water By Electrocoagulation	Dr. G Narayana Manjunath K A Shashikumar N V	MANTHANA- 2021	2021	151
19.	Sushmitha K Kiran Kumar M A Kowshik D	Experimental Investigation On High Performance Concrete By Partial Replacement Of Cement By Fly Ash And Fine Aggregate By Rice Husk Ash	Dr. G Narayana Manjunath K A Shashikumar N V	MANTHANA- 2021	2021	164
20.	Chethan Kumar K J Pallavi J	Newsletter 2019-20	Chethan Kumar K J Pallavi J Prof. Vathsala M N	Newsletter 2019-20	2020	-
21.	Pavithra Ramesh	A poem on Jeevada gelathi	Dr. B N Shobha, P Sudhir Shwetha V	Nandi Taranga	2019	132
22.	Chethan Kumar K J	Drawing	Dr. B N Shobha, P Sudhir Shwetha V	Nandi Taranga	2019	134
23.	Chethan Kumar K J	Drawing	Dr. B N Shobha, P Sudhir Shwetha V	Nandi Taranga	2019	135
24.	Achyutha C A Vinay Kumar V	Newsletter 2018-19	Achyutha C A Vinay Kumar V Sharada S A Chetan G N	Newsletter 2018-19	2019	-

25.	Dhirendra Kumar Yadav	A poem for MOM	Dr. B N Shobha, P Sudhir Shwetha V	Nandi Taranga	2018	6
26.	S Hidayathulla	The teacher who inspired me	Dr. B N Shobha, P Sudhir Shwetha V	Nandi Taranga	2018	11
27.	Vennela K S	A Sibling	Dr. B N Shobha, P Sudhir Shwetha V	Nandi Taranga	2018	12
28.	S Hidayathulla	This Is why you're my best friend	Dr. B N Shobha, P Sudhir Shwetha V	Nandi Taranga	2018	13
29.	Tanushree.B.S	Interesting facts about Saturn	Dr. B N Shobha, P Sudhir Shwetha V	Nandi Taranga	2018	14
30.	S Hidayathulla	Save trees	Dr. B N Shobha, P Sudhir Shwetha V	Nandi Taranga	2018	15
31.	Sadanand Singh	The science of happiness	Dr. B N Shobha, P Sudhir Shwetha V	Nandi Taranga	2018	15
32.	Ziaul Mustafa khan	Things to do for self-improvement	Dr. B N Shobha, P Sudhir Shwetha V	Nandi Taranga	2018	16
33.	Vinay S	Who are Gen-Y?	Dr. B N Shobha, P Sudhir Shwetha V	Nandi Taranga	2018	17
34.	SreeLeha P	I am a Lady!!!	Dr. B N Shobha, P Sudhir Shwetha V	Nandi Taranga	2018	18
35.	Sneha C	Life is not a bed of Roses	Dr. B N Shobha, P Sudhir Shwetha V	Nandi Taranga	2018	19
36.	RevathiPrabhu	Kashmir cries justice for asifa	Dr. B.N Shobha, P Sudhir Shwetha V	Nandi Taranga	2018	20
37.	S Hidayathulla	Indian Army	Dr. B N Shobha, P Sudhir Shwetha V	Nandi Taranga	2018	21
38.	R Hari Krishna	Child labour	Dr. B N Shobha, P Sudhir Shwetha V	Nandi Taranga	2018	22



Figure 4.6 Various Editions of Institute Magazine Nandi Taranga



Figure 4.7 Release of 2017 Edition of Institute Magazine Nandi Taranga



Figure 4.8 Various Editions of Department News Letter



Figure 4.9 Release of Department News Letter 2019-2020



Figure 4.10 Manthana Proceedings of RACE

4.6.3 Participation in Inter-Institute events by the students of the program of Study. (10)

The list of students participated in Inter-Institute events is shown below:

Table B.4.16 Participation in Inter-Institute events by the students in 2020-2021

Sl. No.	Name of the Student	Event	Place	Year	Remarks
1.	Padmaraj S	MANTHANA-2021	SJCIT Chickballapur	2021	Paper Presentation
2.	Pavithra R	MANTHANA-2021	SJCIT Chickballapur	2021	Paper Presentation
3.	Chirag H N	MANTHANA-2021	SJCIT Chickballapur	2021	Paper Presentation
4.	Charan M	MANTHANA-2021	SJCIT Chickballapur	2021	Paper Presentation
5.	Rakshita K A	MANTHANA-2021	SJCIT Chickballapur	2021	Paper Presentation
6.	Chethan Kumar K J	MANTHANA-2021	SJCIT Chickballapur	2021	Paper Presentation
7.	Bhavana T N	MANTHANA-2021	SJCIT Chickballapur	2021	Paper Presentation
8.	Kanthraj B N	MANTHANA-2021	SJCIT Chickballapur	2021	Paper Presentation
9.	Bhoomika K R	MANTHANA-2021	SJCIT Chickballapur	2021	Paper Presentation
10.	Jeevan Kumar G S Yashavanth R Kavya K Kavyashree B V	MANTHANA-2021	SJCIT Chickballapur	2021	Paper Presentation
11.	Aliasgar Khoja	MANTHANA-2021	SJCIT Chickballapur	2021	Paper Presentation
12.	Arun M	MANTHANA-2021	SJCIT Chickballapur	2021	Paper Presentation
13.	Monish Kumar D N	MANTHANA-2021	SJCIT Chickballapur	2021	Paper Presentation
14.	Varun Gowda M	MANTHANA-2021	SJCIT Chickballapur	2021	Paper Presentation

15.	Viresh	MANTHANA-2021	SJCIT Chickballapur	2021	Paper Presentation
16.	Pallavi J	MANTHANA-2021	SJCIT Chickballapur	2021	Paper Presentation
17.	Krithi C N	MANTHANA-2021	SJCIT Chickballapur	2021	Paper Presentation
18.	Chandana K M	MANTHANA-2021	SJCIT Chickballapur	2021	Paper Presentation

Table B.4.17 Participation in Inter-Institute events by the students in 2019-2020

Sl. No.	Student Name	Event	Place	year	Remarks
1.	Sanjay R Charan M Kantharaj B N	Smart House Model Making	AMC Engineering College, Bangalore	23.09.2019	Participated
2.	Madan Kumar G N Akshay H C Harsha C	Technical Treasure Hunt	AMC Engineering College, Bangalore	23.09.2019	Participated
3.	Girija H S Kalava Uthej Kumar AsraFathima	Technical Quiz –Engineers Day 2019	JSSCE Bangalore	25.09.2019	Participated
4.	Dilip G K Jeevan Kumar G S Kanthraj B N Chethan Kumar K J Charan M Chandana K M Bhavana T N Archana B C Ankitha Reddy R Deviyani G S Krithi C N Monika N Rashmi M J	Indian Red Cross Society	SJCIT Chickballapur	7.11.2019	13 members Participated
5.	Yogesh K R M Shashikanth	JVTM-2020 Piezo Smart Roads	Adhichunchanagiri	19.02.2020 & 20.02.2020	Participated
6.	Dilip G K Chethan Kumar K J	JVTM-2020 River cleaning Vehicle	Adhichunchanagiri	19.02.2020 & 20.02.2020	Participated

Table B.4.18 Participation in Inter-Institute events by the students in 2018-2019

Sl. No.	Student Name	Event	Place	Year	Remarks
1.	Syed Owais Sulthan Devraj M Bramhini A N Malathi N Meghana A Chaithra B Amrin Taj Yashoda N B	IGBC's Green Building Congress	Hyderabad	31-10-2019 to 03.11.2019	Participated
2.	Chethan M Namratha Nagesh Babu Shirisha Vinayak Babu Yashaswini Shwetha N	NIRMANA-2019 International Conference	Nimhans Convention Centre Bangalore	10.04.2019, 11.04.2019 & 12.04.2019	Participated
3.	Chethan M	Group dance	Dr. Amberdkar Institute of Technology Bangalore	30.03.2019	Participated
4.	Ziaul Mustsfa Khan Sadanad Singh Vinay S S Hidayatulla	Ideathon Competition	SJCIT Chickballapur	13.03.2018	Participated
5.	Sadhanand Singh S Hidayatulla Rahul Kumar	Buisseness challenge	Atria Bangalore	25.03.2018	Participated
6.	Ranlakhansha Santosh Sah	Teramind	SJCIT Chickballapur	10.05.2018	Participated
7.	Syed Owais Sulthan Sanjay B R Devaraj M	Bridge modelling	SJCIT Chickballapur	10.05.2018	Participated
8.	Nyamath Pasha Sachin M Kumbar Sudarshan D S	Bridge modelling	SJCIT Chickballapur	10.05.2018	Participated

9.	Thanush Mokshith Vishnu	Bridge modelling	SJCIT Chickballapur	10.05.2018	Participated
10.	Abhilash Nayazkhan Anil	Bridge modelling	SJCIT Chickballapur	10.05.2018	Participated
11.	Sagar Basavaraj Priyadarshini	Bridge modelling	SJCIT Chickballapur	10.05.2018	Participated
12.	Praveen Kumar Madhusudhan	Bridge modelling	SJCIT Chickballapur	10.05.2018	Participated
13.	Sharath T Pooja Parvatha Ramesha	Model exhibition	SJCIT Chickballapur	10.05.2018	Participated
14.	Harish Kalava Uthej Kumar	Poster Prasentation	SJCIT Chickballapur	10.05.2018	Participated
15.	Manoj Kumar Kiran N	Poster Prasentation	SJCIT Chickballapur	10.05.2018	Participated
16.	Lakshmi K R Divya S A	Poster Prasentation	SJCIT Chickballapur	10.05.2018	Participated
17.	Harshitha Harsha	Poster Prasentation	SJCIT Chickballapur	10.05.2018	Participated
18.	VinayakBabu Srikanth S	Poster Prasentation	SJCIT Chickballapur	10.05.2018	Participated
19.	Dhirendra Yadav Ashish	Poster Prasentation	SJCIT Chickballapur	10.05.2018	Participated
20.	Charan	Real Estate	SJCIT Chickballapur	10.05.2018	Participated
21.	Lathashree	Real Estate	SJCIT Chickballapur	10.05.2018	Participated
22.	Shree Harsha	Real Estate	SJCIT Chickballapur	10.05.2018	Participated
23.	Sharon M Vipina M Niharika Nayana	Survey Hunt	SJCIT Chickballapur	10.05.2018	Participated

24.	Charan Raj Karthik N Abhishek	Survey Hunt	SJCIT Chickballapur	10.05.2018	Participated
25.	Vaibhav, Praveen Santhosh Kumar	Survey Hunt	SJCIT Chickballapur	10.05.2018	Participated
26.	Manjunath V Sachin M K Sanjay B R	Survey Hunt	SJCIT Chickballapur	10.05.2018	Participated
27.	Basavaraj G Prajwal, Priyadarshini	Survey Hunt	SJCIT Chickballapur	10.05.2018	Participated
28.	Rabin kumarkushwaha Mukesh Kumar Mandal Sarfarazahmadreshi	Survey Hunt	SJCIT Chickballapur	10.05.2018	Participated
29.	Gayathri Harshitha Swathi	Survey Hunt	SJCIT Chickballapur	10.05.2018	Participated
30.	Arun Nagesh Hidayathulla S	Survey Hunt	SJCIT Chickballapur	10.05.2018	Participated



Figure 4.11 IGBC's Green Building Congress at Hyderabad



Figure 4.12 NIRMANA-2019 at Bangalore



Figure 4.13 All India Inter University Tournament at Haryana

Table B.4.19 Awards won by the students in Inter-Institute events

Sl. No	Student Name	Event	Place	Year	Remarks
1.	Shabhaz Vanaja kumari R Sindhu K S	Quiz Competition On Engineer's Day	SJCIT Chickballapur	2021	2 nd Place
2.	Charan M	Paper Presentation	SJCIT Chickballapur	2021	Best Paper Award
3.	Chethan Kumar K J	Paper Presentation	SJCIT Chickballapur	2021	Best Paper Award
4.	Bhoomika K R	Paper Presentation	SJCIT Chickballapur	2021	Best Paper Award
5.	Varun Gowda M	Paper Presentation	SJCIT Chickballapur	2021	Best Paper Award
6.	Shravani K P	Dr. TTIT Virtual Expo-2021	Dr.TTIT K G F	2021	1 st Prize
7.	Asfa Kulsum	Developing soft skills and Personality	NPTEL Online Certification	2021	Elite+Silver
8.	Asfa Kulsum	Body Language: Key to Professional success	NPTEL Online Certification	2021	Elite+Silver
9.	Asfa Kulsum	Glass in Buildings: Design and Applications	NPTEL Online Certification	2021	Elite+Silver
10.	Chetan Kumar K J Jeevan Kumar G S Dilip G K	Smart House Model Making	AMC Engineering College, Bangalore	2019	1 st Place
11.	Indresh C H S Punith	Teramind	SJCIT Chickballapur	2019	1 st Place
12.	Manjunath V Pankaj J	Teramind	SJCIT Chickballapur	2019	2 nd place

13.	Santhosh Kumar K S	Archiepedia	SJCIT Chickballapur	2019	1 st Place
14.	Guruprasad Hugar	Archiepedia	SJCIT Chickballapur	2019	2 nd place
15.	Rajesh R	Survey Hunt	SJCIT Chickballapur	2019	1 st Place
16.	Vaibhav	Survey Hunt	SJCIT Chickballapur	2019	2 nd place
17.	Kusuma M Anitha B R Anushree R S Sindhu P M	“ANAADYA 2018”-Bridge Master, the National Level Techno-Cultural Fest	NMIT Bangalore	2018	1 st Place
18.	Hemanth	Teramind	SJCIT Chickballapur	2018	3 rd Place
19.	Naveen G	Survey Hunt	SJCIT Chickballapur	2018	2 nd place
20.	Lathashree N	Archiepedia	SJCIT Chickballapur	2018	1 st Place
21.	Ranlakhana Sanjip Shah Santosh sah	Bridge Modelling	SJCIT Chickballapur	2018	1 st Place
22.	Prashanth P Sudarshan D S	Bridge Modelling	SJCIT Chickballapur	2018	3 rd Place
23.	Sadanand Singh Hidayatulla ZiaulMustsfa Khan	Bridge Modelling	SJCIT Chickballapur	2018	2 nd Place
24.	Dhirendra Kumar Yadav	Real Estate	SJCIT Chickballapur	2018	1 st Place
25.	Jashwanth	Real Estate	SJCIT Chickballapur	2018	2 nd Place
26.	Girija H	Real Estate	SJCIT Chickballapur	2018	3 rd Place



Figure 4.14 Awards won by the students in Inter-Institute events

Table B.4.20 Prizes won by students in sports

Sl. No.	Student Name	Sports	Place	Year	Remarks
1	Greeshma N	Wrestling	VTU Belagavi	2019-20	Winner
2	Greeshma N	JUDO	VTU Belagavi	2019-20	Third
3	Dilip G K Manoranjan Gowda K P	Volley ball	Brindavan College of Engineering	2019-20	Runner-up in inter college north zone volley ball men competition -2020
4	Greeshma N	Wrestling	Chaudhary Bansilal University Bhiwani Haryana	2019-20	Participated in All India Inter University Tournament
5	Arun K	Kabaddi	Dr. TTIT KGF	2018-19	Winner
6	Bharath Reddy V	Kho-Kho	Acharya Institution of Technology Bangalore	2018-19	Runner-up in inter college zonal tournament
7	Pavan Kumar N V	Kho-Kho	Acharya Institution of Technology Bangalore	2018-19	Runner-up in inter college zonal tournament
8	Manoj Nayaka P	Kho-Kho	Acharya Institution of Technology Bangalore	2018-19	Runner-up in inter college zonal tournament
9	Dilip G K	Volley ball	RLJCIT Doddaballapur	2018-19	Participated
10	Dilip G K	Volley ball	Sairam College of Engineering Bangalore	2018-19	Runner-up in state level Inter Engineering collegiate volley ball Tournament.
11	Tejashree K R	Table tennis	Taluk Level Dasara Sports held at Chickballapura	2017-18	1 st Place
12	Tejashree K R	Table tennis	RLJIT Doddaballapura	2017-18	Represented SJCIT in Inter-Collegiate Zonal Tournament



Figure 4.15 Prizes won by students in sports

Student Projects Sponsorship by External Agencies

Table B.4.21 Projects Sponsorship by External Agencies

Sl. No.	Name of the Students	Guide Name	Project Title	Year	Name of the Sponsor/ Sectors	Sponsored Amount
1.	Priyanka S B Shaik Noor Mohammed Pravallika A K Devaraj gowd	Mr. Ravindra M V	Suitability of Hebbal Nagavara valley treated wastewater for irrigation in Chickballapur district.	2020-21	KSCST	Rs.6000/-
2.	Shravani K P Shashikala M Vinod Kumar Pavan Kumar B O	Mr. Ravindra M V	Soft Application for assessing suitability of water for irrigation	2020-21	KSCST	Rs.6000/-
3.	Priyanka Almaje Niketh Chaudhary Tharu Rabin Kumar Kushwaha Sandeep Wagle	Mr. Ravindra M V	Geospatial analysis of appropriateness of treated Kormangala & Challaghatta (K & C)Valley waste water for irrigation in Kolar.	2019-20	KSCST	4000/-
4.	Mahanth Kumar V Faizan Asif N Madhu T N Manoj Kumar T S	Mr. Kamath G M	Feasibility studies on moringa olifera and alum as an coagulant to treat the domestic effluent and quality of water for agriculture	2019-20	KSCST	4000/-
5.	Kiran N Kalava Uthej Kumar Maale Harish Hema Y B	Ms.Vathsala M N	Treatment of sullage by using natural laterite and chitosan as an adsorbent	2019-20	KSCST	4500/-
6.	Sadanand Singh S Hidayathulla Lathashree N Arshiya Firdose H M Kalava Uthej Kumar	Ms. Vathsala M N	Air Conditioning by Geo- Thermal Heat Pump	2018-19	NAIN	1,88,000/-

7.	Hamsa H S	Mr. Ravindra M V	Design and treatability studies of low cost biofilters in grey water treatment with respect to recycle and reuse in rural areas	2017-18	KSCST	5000/-

CRITERIA 5

Faculty Information and Contributions

CRITERION 5	Faculty Information and Contributions												200

5. Faculty Information and Contributions (200)

Table B 5 .1 List of faculty members for CAY (2020-21)

Name of the Faculty Member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/ Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N) Date of Leaving (In case Currently Associated is ("No"))	Nature of Association (Regular/ Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper Publications	Ph.D . Guidance	Faculty Receiving Ph.D during the Assessment Years		
Dr. G Narayana	Ph.D.	Bangalore university	2012	Yes	Professor & HOD	30/05/2013	15/10/1998	Civil Engineering	Structural. Engineering	3	6	----	Yes	Regular
Dr Sidde Gowda	Ph.D.	VTU, Belgaum	2011	Yes	Professor	30/05/2013	06/02/1991	Civil Engineering	Environmental Engineering	----	5	----	Yes	Regular
Dr Ranganth Gowda G	Ph.D.	Bangalore university	1994	Yes	Associate Professor	01/04/2017	01/07/1996	Civil Engineering	Economic Geology	----	---	----	Yes	Regular
Mr. Ravindra M V	M.E	Bangalore university	2004	Yes	Associate Professor	01/04/2017	09/06/2012	Civil Engineering	Environmental Engineering	2	----	----	Yes	Regular
Mr. Shashikumar A	M.E	Bangalore university	2000	Yes	Associate Professor	01/04/2017	08/07/2011	Civil Engineering	Structural Engineering	4	----	----	Yes	Regular
Mrs. Sharada S A	M.E	Bangalore university	2006	Yes	Assistant Professor	-----	09/06/2012	Civil Engineering	Structural Engineering	----	----	----	Yes	Regular
Mr. Kiran K M	M.E	Bangalore university	2011	Yes	Assistant Professor	-----	29/12/2011	Civil Engineering	Geotechnical Engineering	3	----	----	Yes	Regular
Mr. Manjunath K A	M.E	Bangalore university	2012	Yes	Assistant Professor	-----	17/02/2012	Civil Engineering	Earthquake Engineering	1	----	----	Yes	Regular
Ms. Vathsala M N	M. Tech	VTU, Belgaum	2011	Yes	Assistant Professor	-----	19/09/2011	Civil Engineering	Environmental Engineering	----	----	----	Yes	Regular
Mr. Raghu K	M. Tech	VTU, Belgaum	2008	Yes	Assistant Professor	-----	04/06/2012	Civil Engineering	Industrial Structures	----	----	----	Yes	Regular

Mrs. Chandrakala S	M. Tech	VTU, Belgaum	2012	Yes	Assistant Professor	----	08/08/2012	Civil Engineering	Structural Engineering	----	----	----	Yes	Regular
Mr. Rajeeva S J	M. Tech	VTU, Belgaum	2012	Yes	Assistant Professor	----	08/08/2012	Civil Engineering	Highway Engineering	1	----	----	Yes	Regular
Mr. Arun Kumar C J	M. Tech	VTU, Belgaum	2013	Yes	Assistant Professor	----	01/08/2013	Civil Engineering	Structural Engineering	----	---	----	Yes	Regular
Mrs. Bhavya S	M. Tech	VTU, Belgaum	2012	Yes	Assistant Professor	----	10/02/2014	Civil Engineering	Structural Engineering	----	----	----	Yes	Regular
Mr. Shashikumar N V	M. Tech	VTU, Belgaum	2013	Yes	Assistant Professor	----	21/07/2014	Civil Engineering	Structural Engineering	----	----	----	Yes	Regular
Mr. Ravi Kiran B	M. Tech	VTU, Belgaum	2013	Yes	Assistant Professor	----	02/08/2014	Civil Engineering	Structural Engineering	1	----	----	Yes	Regular
Mr. Manjunath N	M. Tech	VTU, Belgaum	2013	Yes	Assistant Professor	----	04/08/2014	Civil Engineering	Transportation Engineering & Management	2	----	----	Yes	Regular
Mr. Sathish Y A	M. Tech	VTU, Belgaum	2013	Yes	Assistant Professor	----	27/07/2015	Civil Engineering	Highway Engineering	1	----	----	Yes	Regular
Mr. Kamath G M	M. Tech	VTU, Belgaum	2014	Yes	Assistant Professor	----	29/07/2015	Civil Engineering	Environmental Engineering	----	----	----	Yes	Regular
Mr. Ravindranath C	ME	Bangalore university	2012	Yes	Assistant Professor	----	01/08/2015	Civil Engineering	Water Resource	----	----	----	Yes	Regular
Ms. SushmaM	M. Tech	VTU, Belgaum	2015	Yes	Assistant Professor	----	01/08/2015	Civil Engineering	Geo Informatics	1	----	----	Yes	Regular
Mrs. Ankitha V	M. E	Bangalore university	2017	Yes	Assistant Professor	----	01/08/2016	Civil Engineering	Water Resource Engineering	----	----	----	Yes	Regular
Mr. Sushas K B	M. Tech	VTU, Belgaum	2016	Yes	Assistant Professor	----	03/02/2017	Civil Engineering	Construction Technology	1	----	----	Yes	Regular
Mr. Mohan N	M. Tech	VTU, Belgaum	2012	Yes	Assistant Professor	----	09/02/2017	Civil Engineering	Transportation Engineering & Management	----	----	----	Yes	Regular
Mr. Sachin H R	M. Tech	VTU, Belgaum	2016	Yes	Assistant Professor	----	02/02/2017	Civil Engineering	Transportation Engineering & Management	----	----	----	Yes	Regular
Mr. Chethan G N	M. Tech	VTU, Belgaum	2016	Yes	Assistant Professor	----	24/04/2017	Civil Engineering	Infrastructure Engineering & Management	----	----	----	Yes	Regular

Mr. Rakesh M .R	M. Tech	VTU, Belgaum	2015	Yes	Assistant Professor	-----	03/10/2017	Civil Engineering	Structural Engineering	----	----	----	Yes	Regular
Mr. Anjaneya Murthy	M. Tech	VTU, Belgaum	2015	Yes	Assistant Professor	-----	01/02/2017	Civil Engineering	Structural Engineering	----	----	----	Yes	Adjunct

Table B 5.2 List of faculty members for CAYm1 (2019-20)

Name of the Faculty Member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/ Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N) Date of Leaving (In case Currently Associated is ("No"))	Nature of Association (Regular/ Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper Publications	Ph.D. Guidance	Faculty Receiving Ph.D during the Assessment Years		
Dr. G Narayana	Ph.D.	Bangalore university	2012	Yes	Professor & HOD	30/05/2013	15/10/1998	Civil Engineering	Structural Engineering	6	6	----	Yes	Regular
Dr. Sidde Gowda	Ph.D.	VTU, Belgaum	2011	Yes	Professor	30/05/2013	06/02/1991	Civil Engineering	Environmental Engineering	1	5	----	Yes	Regular
Dr. Ranganth Gowda G	Ph.D.	Bangalore university	1994	Yes	Associate Professor	01/04/2017	01/07/1996	Civil Engineering	Economic Geology	---	---	----	Yes	Regular
Mr. Ravindra M V	M.E	Bangalore university	2004	Yes	Associate Professor	01/04/2017	09/06/2012	Civil Engineering	Environmental Engineering	----	----	----	Yes	Regular
Mr. Shashikumar A	M.E	Bangalore university	2000	Yes	Associate Professor	01/04/2017	08/07/2011	Civil Engineering	Structural Engineering	4	----	----	Yes	Regular
Mrs. Sharada S A	M.E	Bangalore university	2006	Yes	Assistant Professor	-----	09/06/2012	Civil Engineering	Structural Engineering	----	----	----	Yes	Regular
Mr. Kiran K M	M.E	Bangalore university	2011	Yes	Assistant Professor	-----	29/12/2011	Civil Engineering	Geotechnical Engineering	2	----	----	Yes	Regular
Mr. Manjunath K A	M.E	Bangalore university	2012	Yes	Assistant Professor	-----	17/02/2012	Civil Engineering	Earthquake Engineering	----	----	----	Yes	Regular
Ms. Vathsala M N	M. Tech	VTU, Belgaum	2011	Yes	Assistant Professor	-----	19/09/2011	Civil Engineering	Environmental Engineering	----	----	----	Yes	Regular

Mr. Raghu K	M. Tech	VTU, Belgaum	2008	Yes	Assistant Professor	----	04/06/2012	Civil Engineering	Industrial Structures	----	----	----	Yes	Regular
Mrs. Chandrakala S	M. Tech	VTU, Belgaum	2012	Yes	Assistant Professor	----	08/08/2012	Civil Engineering	Structural Engineering	----	----	----	Yes	Regular
Mr. Rajeeva S J	M. Tech	VTU, Belgaum	2012	Yes	Assistant Professor	----	08/08/2012	Civil Engineering	Highway Engineering	----	----	----	Yes	Regular
Mr. Arun Kumar C J	M. Tech	VTU, Belgaum	2013	Yes	Assistant Professor	----	01/08/2013	Civil Engineering	Structural Engineering	----	---	----	Yes	Regular
Mrs. Bhavya S	M. Tech	VTU, Belgaum	2012	Yes	Assistant Professor	----	10/02/2014	Civil Engineering	Structural Engineering	----	----	----	Yes	Regular
Mr. Shashikumar N V	M. Tech,	VTU, Belgaum	2013	Yes	Assistant Professor	----	21/07/2014	Civil Engineering	Structural Engineering	2	----	----	Yes	Regular
Mr. Ravi Kiran B	M. Tech	VTU, Belgaum	2013	Yes	Assistant Professor	----	02/08/2014	Civil Engineering	Structural Engineering	----	----	----	Yes	Regular
Mr. Manjunath N	M. Tech	VTU, Belgaum	2013	Yes	Assistant Professor	----	04/08/2014	Civil Engineering	Transportation Engineering & Management	----	----	----	Yes	Regular
Mr. Sathish Y A	M. Tech	VTU, Belgaum	2013	Yes	Assistant Professor	----	27/07/2015	Civil Engineering	Highway Engineering	----	----	----	Yes	Regular
Mr. Kamath G M	M. Tech	VTU, Belgaum	2014	Yes	Assistant Professor	----	29/07/2015	Civil Engineering	Environmental Engineering	----	----	----	Yes	Regular
Mr. Ravindranath C	ME	Bangalore university	2012	Yes	Assistant Professor	----	01/08/2015	Civil Engineering	Water Resource	----	----	----	Yes	Regular
Ms. SushmaM	M. Tech	VTU, Belgaum	2015	Yes	Assistant Professor	----	01/08/2015	Civil Engineering	Geo Informatics	----	----	----	Yes	Regular
Mrs. Ramya B G	M. Tech	VTU, Belgaum	2015	Yes	Assistant Professor	----	03/08/2015	Civil Engineering	Geotechnical Engineering	----	----	----	02/08/2019	Regular
Mrs. Ankitha V	M. E	Bangalore university	2017	Yes	Assistant Professor	----	01/08/2016	Civil Engineering	Water Resource Engineering	----	----	----	Yes	Regular
Mr. Sushas K B	M. Tech	VTU, Belgaum	2016	Yes	Assistant Professor	----	03/02/2017	Civil Engineering	Construction Technology	----	----	----	Yes	Regular
Mr. Mohan N	M. Tech	VTU, Belgaum	2012	Yes	Assistant Professor	----	09/02/2017	Civil Engineering	Transportation Engineering & Management	----	----	----	Yes	Regular

Mr. Sachin H R	M. Tech	VTU, Belgaum	2016	Yes	Assistant Professor	----	02/02/2017	Civil Engineering	Transportation Engineering & Management	----	----	----	Yes	Regular
Mr. Chethan G N	M. Tech	VTU, Belgaum	2016	Yes	Assistant Professor	----	24/04/2017	Civil Engineering	Infrastructure Engineering & Management	----	----	----	Yes	Regular
Mr. Rakesh M .R	M. Tech	VTU, Belgaum	2015	Yes	Assistant Professor	----	03/10/2017	Civil Engineering	Structural Engineering	----	----	----	Yes	Regular
Mr. Anjaneya Murthy	M. Tech	VTU, Belgaum	2015	Yes	Assistant Professor	----	01/02/2017	Civil Engineering	Structural Engineering	----	----	----	Yes	Adjunct

Table B 5.3 List of faculty members for CAYm2 (2018-19)

Name of the Faculty Member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/ Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associate d(Y/N) Date of Leaving (In case Currently Associate d is("No"))	Nature of Association (Regular/ Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper Publications	Ph.D. Guidance	Faculty Receiving Ph. D during the Assessment Years		
Dr. G Narayana	Ph.D.	Bangalore university	2012	Yes	Professor & HOD	30/05/2013	15/10/1998	Civil Engineering	Structural. Engineering	12	6	---	Yes	Regular
Dr. Sidde Gowda	Ph.D.	VTU, Belgaum	2011	Yes	Professor	30/05/2013	06/02/1991	Civil Engineering	Environmental Engineering	----	5	----	Yes	Regular
Dr. Sharmila G V	Ph.D.	VTU, Belgaum	2017	Yes	Professor	01/04/2017	15/07/2016	Civil Engineering	Groundwater	----	----	----	18/07/2019	Regular
Dr. Ranganth Gowda G	Ph.D.	Bangalore university	1994	Yes	Associate Professor	01/04/2017	01/07/1996	Civil Engineering	Economic Geology	---	---	----	Yes	Regular
Mr. Ravindra M V	M.E	Bangalore university	2004	Yes	Associate Professor	01/04/2017	09/06/2012	Civil Engineering	Environmental Engineering	1	----	----	Yes	Regular
Mr. Shashikumar A	M.E	Bangalore university	2000	Yes	Associate Professor	01/04/2017	08/07/2011	Civil Engineering	Structural Engineering	3	----	----	Yes	Regular
Mrs. Sharada S A	M.E	Bangalore university	2006	Yes	Assistant Professor	----	09/06/2012	Civil Engineering	Structural Engineering	1	----	----	Yes	Regular

Mr. Kiran K M	M.E	Bangalore university	2011	Yes	Assistant Professor	----	29/12/2011	Civil Engineering	Geotechnical Engineering	2	----	----	Yes	Regular
Mr. Manjunath K A	M.E	Bangalore university	2012	Yes	Assistant Professor	----	17/02/2012	Civil Engineering	Earthquake Engineering	----	----	----	Yes	Regular
Ms. Vathsala M N	M. Tech	VTU, Belgaum	2011	Yes	Assistant Professor	----	19/09/2011	Civil Engineering	Environmental Engineering	----	----	----	Yes	Regular
Mr. Raghu K	M. Tech	VTU, Belgaum	2008	Yes	Assistant Professor	----	04/06/2012	Civil Engineering	Industrial Structures	----	----	----	Yes	Regular
Mrs. Chandrakala S	M. Tech	VTU, Belgaum	2012	Yes	Assistant Professor	----	08/08/2012	Civil Engineering	Structural Engineering	1	----	----	Yes	Regular
Mr. Rajeeva S J	M. Tech	VTU, Belgaum	2012	Yes	Assistant Professor	----	08/08/2012	Civil Engineering	Highway Engineering	----	----	----	Yes	Regular
Mr. Arun Kumar C J	M. Tech	VTU, Belgaum	2013	Yes	Assistant Professor	----	01/08/2013	Civil Engineering	Structural Engineering	----	----	----	Yes	Regular
Mrs. Bhavya S	M. Tech	VTU, Belgaum	2012	Yes	Assistant Professor	----	10/02/2014	Civil Engineering	Structural Engineering	1	----	----	Yes	Regular
Mr. Shashikumar N V	M. Tech,	VTU, Belgaum	2013	Yes	Assistant Professor	----	21/07/2014	Civil Engineering	Structural Engineering	3	----	----	Yes	Regular
Mr. Ravi Kiran B	M. Tech	VTU, Belgaum	2013	Yes	Assistant Professor	----	02/08/2014	Civil Engineering	Structural Engineering	----	----	----	Yes	Regular
Mr. Manjunath N	M. Tech	VTU, Belgaum	2013	Yes	Assistant Professor	----	04/08/2014	Civil Engineering	Transportation Engineering & Management	----	----	----	Yes	Regular
Mr. Sathish Y A	M. Tech	VTU, Belgaum	2013	Yes	Assistant Professor	----	27/07/2015	Civil Engineering	Highway Engineering	----	----	----	Yes	Regular
Mr. Kamath G M	M. Tech	VTU, Belgaum	2014	Yes	Assistant Professor	----	29/07/2015	Civil Engineering	Environmental Engineering	3	----	----	Yes	Regular
Mr. Ravindranath C	ME	Bangalore university	2012	Yes	Assistant Professor	----	01/08/2015	Civil Engineering	Water Resource	----	----	----	Yes	Regular
Ms. SushmaM	M. Tech	VTU, Belgaum	2015	Yes	Assistant Professor	----	01/08/2015	Civil Engineering	Geo Informatics	----	----	----	Yes	Regular
Mrs. Ramya B G	M. Tech	VTU, Belgaum	2015	Yes	Assistant Professor	----	03/08/2015	Civil Engineering	Geotechnical Engineering	----	----	----	Yes	Regular
Mrs. Ankitha V	M. E	Bangalore university	2017	Yes	Assistant Professor	----	01/08/2016	Civil Engineering	Water Resource Engineering	----	----	----	Yes	Regular

Mr. Sushas K B	M. Tech	VTU, Belgaum	2016	Yes	Assistant Professor	----	03/02/2017	Civil Engineering	Construction Technology	----	----	----	Yes	Regular
Mr. Mohan N	M. Tech	VTU, Belgaum	2012	Yes	Assistant Professor	----	09/02/2017	Civil Engineering	Transportation Engineering & Management	----	----	----	Yes	Regular
Mr. Sachin H R	M. Tech	VTU, Belgaum	2016	Yes	Assistant Professor	----	02/02/2017	Civil Engineering	Transportation Engineering & Management	----	----	----	Yes	Regular
Mr. Chethan G N	M. Tech	VTU, Belgaum	2016	Yes	Assistant Professor	----	24/04/2017	Civil Engineering	Infrastructure Engineering & Management	----	----	----	Yes	Regular
Mr. Rakesh M .R	M. Tech	VTU, Belgaum	2015	Yes	Assistant Professor	----	03/10/2017	Civil Engineering	Structural Engineering	----	----	----	Yes	Regular
Mr. Anjaneya Murthy	M. Tech	VTU, Belgaum	2015	Yes	Assistant Professor	----	01/02/2017	Civil Engineering	Structural Engineering	----	----	----	Yes	Adjunct

5.1. Student-Faculty Ratio (SFR) (20)**Table B 5.4 Student Teacher Ratio (STR)**

Year	CAY (2020-21)	CAY m1(2019-20)	CAY m2(2018-19)
u1.1	120+20=140	120+20=140	120+35=155
u1.2	120+20=140	120+35=155	120+27=147
u1.3	120+35=155	120+27=147	120+38=158
UG1	435	442	460
p1.1	18	18	18
p1.2	18	18	18
PG1	36	36	36
P2.1	18	18	18
P2.2	18	18	18
PG2	36	36	36
Total No. of Students in the Department (S)	S1 = 507	S1 = 514	S1 = 532
No. of Faculty in the department (F)	F1 = 26	F1 = 27	F1 = 28
Student Faculty Ratio (SFR)	$SFR1 = S1/F1 = 507/26 = 19.50$	$SFR1 = S1/F1 = 514/27 = 19.03$	$SFR1 = S1/F1 = 532/28 = 19$
Average SFR	19.18		

5.1.1. Provide the information about the regular and contractual faculty as per the format mentioned below:**Table B 5.5 Regular & Contractual faculty**

Year	Total number of regular faculty in the department	Total number of contractual faculty in the department
CAY (2020-21)	27	01
CAY m1(2019-20)	28	01
CAY m2(2018-19)	29	01

5.2. Faculty Cadre Proportion (25)**Table B 5.6 Faculty cadre proportion**

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY (2020-21)	2	2	5	0	16	23
CAYm1(2019-20)	2	2	5	0	17	24
CAYm2 (2018-19)	2	3	5	0	17	24
Average Numbers	RF1=2	AF1=2.33	RF2=5	AF2=3	RF3=16.67	AF3=23.67

$$\text{Cadre Ratio Marks} = \left[\frac{[AF1]}{[RF1]} + \frac{[AF2 \times 0.6]}{[RF2]} + \frac{[AF3 \times 0.4]}{[RF3]} \right] \times 12.5$$

$$= \left[\frac{2.33}{2} + \frac{0 \times 0.6}{5} + \frac{23.67 \times 0.4}{16.67} \right] \times 12.5 = 22.00$$

5.3. Faculty Qualification (25)**Table B 5.7 Faculty Qualification**

Years	X	Y	F	FQ=2.5 x [(10X +4Y)/F]
CAY (2020-21)	2	24	25	11.60
CAYm1(2019-20)	2	25	25	12.00
CAYm2 (2018-19)	3	25	27	12.50
Average Assessment				12.03

5.4 Faculty Retention (25)**Table B 5.8 Faculty Retention**

	CAY (2020-21)	CAYm1 (2019-20)	CAYm2 (2018-19)
No. of faculties retained	25	26	27
No. of faculties in base year CAYm2 (2018-19)	27	27	27
Percentage of retained	93%	96%	100%
Avg. percentage faculties retention	96.33%		

5.5. Innovations by the Faculty in Teaching and Learning (20)

Table B 5.9 Innovations by the Faculty in Teaching and Learning

ICT/ e-resources	Power Point presentations
	NPTEL videos
	Zoom, Google meet, Microsoft teams etc.,
	IEEE Xplore Digital Library, Elsevier, Science Direct, Springer E-Journals/ E-books, Taylor & Francis Journals/ E-books.
Skill Development	Short term courses
	Faculty development programs
	Workshops
	Guest lectures
	Technical events
Activity Based Learning	Assignments
	Site visits
	Flipped class
	Edmodo
	Laboratories/Demonstration
	Model making
	Seminar
	Internship
	Think aloud pair problem solving (TAPPS)
Peer learning	Group discussion
Project Based Learning	Project exhibition
	Poster Presentation
	Paper Presentation
Competitions	Inter college technical competitions



Figure 5.1 Teaching and Learning process

SHASHI KUMAR N V posted to MASONRY STRUCTURES... Teacher at SJCIT INSTITUTE OF TECHNOLOGY Nov 18, 2019 - 9:45 AM

How was the course content delivered by your friends

Response	Percentage
Very good	68%
Good	42%
Fair	0%
Poor	0%

Do you prefer this method of teaching for other classes

Response	Percentage
Yes	80%
Maybe	47%
No	3%

Figure 5.2 Flip class feedback form

PD(15CV833) A&B M-4 Problem

Assigned To Pavement Design(15CV833) B0 A & B

18 of your students haven't viewed this quiz

Student	Status	Time Submitted	Score
Harchitha T	Graded	May 7, 11:47 AM	49/50
Bipin Anand	Graded	May 7, 11:46 AM	39/50
Nandini B	Graded	May 7, 11:49 AM	39/50
Mahesh Kumar V	Graded	May 7, 11:50 AM	43/50
Morika M	Graded	May 7, 11:51 AM	41/50
Charan Raj AD	Graded	May 7, 11:51 AM	33/50
Madhan K S (15J16CV002)	Graded	May 7, 11:51 AM	9/50
Anusha Anu	Graded	May 7, 11:50 AM	18/50
Madhu Th	Graded	May 7, 11:50 AM	15/50
Pavan Ash N	Graded	May 7, 12:00 PM	8/50
Girija H	Graded	May 7, 12:01 PM	22/50
Meghana M	Graded	May 7, 12:03 PM	48/50
Kumar Uthaj	Graded	May 7, 12:01 PM	24/50
Kushal Kumar R	Graded	May 7, 12:03 PM	36/50
Manasa KV	Graded	May 7, 12:10 PM	48/50
Michaelson Tansage	Graded	May 7, 12:12 PM	9/50
Gowtham Gowtham	Graded	May 7, 12:14 PM	28/50
Kavitha M	Graded	May 7, 12:19 PM	9/50
Parthiv G V	Graded	May 7, 12:19 PM	46/50
Ankitha Lucky	Graded	May 7, 12:24 PM	34/50
Harcha K S	Graded	May 7, 12:28 PM	17/50

Figure 5.3 Quiz marks in Edmodo



Figure 5.4 Technical talk by Experts



Figure 5.5 NPTEL course certificates of faculty members



Figure 5.6 Intercollege technical competitions conducted by Innerve club



Figure 5.7 Students visited Ajmal Flora Valley, Bangalore.



Figure 5.8 Students exhibits models in Jnana Vignana Tantragnana mela – 2020 at Adhichunchanagiri Project exhibition.

5.6. Faculty as Participants in Faculty Development / Training Activities / STTPs (15)**Table B5.10 Faculty participants in faculty development / training activities /STTPs**

Name of the Faculty	Max.5perFaculty		
	CAYm1 (2019-20)	CAYm2 (2018-19)	CAYm3 (2017-18)
Dr G Narayana	3	3	3
Dr Sidde Gowda	3	5	3
Dr G V Sharmila	---	3	---
Mr. Ravindra M V	3	5	5
Mr. Shashi Kumar A	3	3	3
Mrs. Sharada S A	3	5	3
Mr. Kiran K M	3	3	5
Mr. Manjunath K A	5	5	5
Ms. Vathsala M N	3	3	3
Mr. K.Raghu	5	3	3
Mrs. Chandrakala S	3	3	5
Mr. Rajeeva S J	3	3	3
Mr. Arun Kumar C J	3	3	5
Mrs. Bhavya S	3	3	3
Mr. Shashi Kumar N V	3	3	5
Mr. Ravi Kiran B	5	3	5
Mr Manjunath N	5	3	3
Mr. Sathish Y A	3	5	3
Mr Kamath G M	3	3	5
Mr. Ravindranath C	3	3	5
Ms. Sushma M	5	3	5
Mrs. Ramya B G	---	---	5
Mrs. Ankitha V	5	3	3
Mr Suhas K B	5	3	3
Mr. Mohan N	3	3	5
Mr Sachin H R	5	---	---
Mr. ChethanG N	3	3	5
Mr Rakesh M R	3	3	3
RF=Number of Faculty required to comply with 20:1Student-Faculty ratio as per 5.1	25.35	25.70	26.60
Assessment=3×(Sum/0.5RF) (Marks limited to15)	22.25	20.54	23.46
Average assessment over three years (Marks limited to 15) = 22.08			

5.7. Research and Development (30)**5.7.1. Academic Research (10)****Table B 5.11 Patent applied by Research Scholar**

Sl. No.	Name of the Guide	Name of the Student	Title of the research work	Application No.
1	Dr. G. Narayana	Mr. Naveen M P	Manufacturing Process of Geopolymer Aggregate	201741013352

Table B 5.12 List of publications by the faculties in the refereed/SCI Journals, citations

Name of the faculty	Total number of Journal paper published till date	Impact Factor	National/ International	Indexing	citation	H-Index
Dr G Narayana	43	7.3	National/ International	scopus	27	3
Dr Sidde Gowda	26	3.514	National/ International	scopus	---	---
Mr. Ravindra M V	5	2.375	National	Google scholar	14	3
Mr. Shashi Kumar A	16	6.1	International	scopus	40	4
Mrs. Sharada S A	6	6.612	National/ International	Google scholar	6	2
Mr. Kiran K M	17	3.127	National/ International	scopus	---	---
Mr. Manjunath K A	5	6.612	National/ International	Google scholar	---	---
Ms. Vathsala M N	5	1.46	National/ International	Google scholar	---	---
Mr. K.Raghu	6	6.171	International	Google scholar	9	1
Mrs. Chandrakala S	3	1.46	International	Google scholar	37	2
Mr. Rajeeva S J	6	3.54	National/ International	scopus	4	2
Mrs. Bhavya S	5	7.13	International	Google scholar	6	2
Mr. Shashi Kumar N V	13	7.3	National/ International	scopus	9	2
Mr Manjunath N	5	1.46	International	Google scholar	---	---
Mr. Sathish Y A	7	1.419	International	scopus	---	---
Mr Kamath G M	6	3.54	National	Google scholar	3	1
Mr. Ravindranath C	8	3.4	National/ International	scopus	---	---
Mr Suhas K B	2	3.514	International	scopus	---	---
Mr. Mohan N	3	2.54	National	Google scholar	---	---

Table B 5.13 List of paper publications by the faculty members in the CAY (2020-21)

Sl. No.	Author	Title of the Paper/Book Published/ Presented	Name of the Journal /Conference	Vol / Issue/ page no.	ISSN / ISBN no.	Month & Year of Publication	Indexing	DOI/link
1	Dr. G Narayana	Investigation on strength and flexural study of RC Beams with foundry sand used as an alternative material to fine aggregate	European Journal of Molecular and clinical medicine	Volume 07, Issue 08, pp 3058-3068	ISSN 2515-8260	2020-21	Scopus	https://ejmcm.com/article_4820_8e4d2e0a4ee2df84b6e6ccf8ae8b0f1a.pdf
2	Dr. G Narayana	Influence of Metakaolin and Basalt fibers on strength and durability of concrete-an Experimental Approach	European Journal of Molecular and clinical medicine	Volume 07, Issue 08, pp 2757-2767	ISSN 2515-8260	2020-21	Scopus	https://ejmcm.com/article_cf01fe058c7afe2f49af62f4dc03db064787.pdf
3	Dr. G Narayana	Experimental Study on Nano Silica modified concrete	European Journal of Molecular and clinical medicine	Volume 07, Issue 08, pp 2871-2875	ISSN 2515-8260	2020-21	Scopus	https%3A%2F%2Fejmcm.com%2Fpdf_4799_99c409e54d830a44e9609b785a7726ab.html&cflen=286752
4	Mr. Ravindra M V	Software for assessing suitability of water for irrigation	Innovations & recent trends in Civil Engineering	Conference proceedings	Conference proceedings	9/06/ 2021 & 10/06/ 2021	Conference proceedings	
5	Mr. Ravindra M V	Comparison of Mivan formwork with conventional formwork	Innovations & recent trends in Civil Engineering	Conference proceedings	Conference proceedings	9/06/ 2021 & 10/06/ 2021	Conference proceedings	
6	Mr. Shashi kumar A	Effect of Dolomite powder and glass fiber on mechanical strength properties of Concrete	European Journal of Molecular and clinical medicine	Volume 07, Issue 08, pp 3010-3016	ISSN 2515-8260	2020-21	Scopus	
7	Mr. Shashi kumar A	Investigation on strength and flexural study of RC Beams with foundry sand used as an alternative material to fine aggregate	European Journal of Molecular and clinical medicine	vol 07, Issue 08, pp 3058-3068	ISSN 2515-8260	2020-21	Scopus	https://ejmcm.com/article_4820_8e4d2e0a4ee2df84b6e6ccf8ae8b0f1a.pdf

8	Mr. Shashi kumar A	Influence of Metakaolin and Basalt fibers on strength and durability of concrete-An Experimental Approach	European Journal of Molecular and clinical medicine	vol 07, Issue 08, pp 2757-2767	ISSN 2515-8260	2020-21	Scopus	https://ejmcm.com/article_cf01fe058c7afe2f49af62f4dc03db064787.pdf
9	Mr. Shashi kumar A	Feasibility study on strength and flexural behaviour of R C beams with foundry as fine aggregate	AIP conference proceedings	Vol 2204, Issue 01	ISSN 0193-4120	2019-20	Scopus	https://doi.org/10.1063/1.5141557
10	Mr. Shashi kumar A	Study on durability of concrete using foundry sand as an alternative material to fine aggregate	Gradiva review journal	Vol7-Issue 10	ISSN 0363-8057	Nov 2021	Scopus	
11	Mr. Kiran K M	An Experimental Investigation on Inhibiting Chloride Induced Reinforcement Corrosion using Encapsuled Nicotiana Tabacum Extract	Test Engineering & Management journal (Institute of Scholars)	Vol 83, pp 126-131	ISSN 0193-4120	May-June 2020-21	Scopus	https://ssrn.com/abstract=3666935
12	Mr. Kiran K M	The influence of lean planning on trust and time performance in construction projects	Recent advances in Civil Engineering	pp155-163	ISBN 978-1-68576-032-8	28/08/ 2021	Google scholar	
13	Mr. Kiran K M	Experimental investigation on clayey soil by using admixtures for road construction.	Recent advances in Civil Engineering	pp 112-119	ISBN 978-1-68576-032-8	28/08/ 2021	Google scholar	
14	Mr. Kiran K M	Experimental investigation on black cotton soil by using admixtures for road construction.	Recent advances in Civil Engineering	pp 143-150	ISBN 978-1-68576-032-8	28/08/ 2021	Google scholar	
15	Ms. Vathsala M N	Removal of Heavy metals from the industrial waste water using low cost Adsorbents	Recent advances in Civil Engineering	pp 143-150	ISBN 978-1-68576-032-8	28/08/ 2021	Google scholar	
16	Ms. Vathsala M N	Removal of Heavy metals from industrial waste water by Electrocoagulation	Recent advances in Civil Engineering	pp 143-150	ISBN 978-1-68576-032-8	28/08/ 2021	Google scholar	

17	Mr. Shashi Kumar N V	An Experimental Investigation on Inhibiting Chloride Induced Reinforcement Corrosion using Encapsulated Nicotiana Tabacum Extract	Test Engineering & Management journal (Institute of Scholars)	Vol 83, pp 1149-1156	ISSN 0193-4120	May-June 2020-21	Scopus	https://ssrn.com/abstract=3666935
18	Mr. Shashi Kumar N V	Behaviour of vertical Irregular Building in different Seismic zones	European Journal of Molecular and clinical medicine	Volume07, Issue 08, Pp 2925-2939	ISSN 2515-8260	2020-21	Scopus	https://ejmcm.com/article_4805_b678360495e1086b6141b83646d9e735.pdf
19	Mr. Ravi Kiran B	Experimental investigation on High Performance Concrete by Partial replacement of cement by Flyash and Aggregate by Rice husk ash.	Recent advances in Civil Engineering	pp155-163	ISBN 978-1-68576-032-8	28/08/ 2021	Google scholar	
20	Mr. Manjunath N	Traffic Signal Synchronization and simulation using PTV VISSIM	International Journal of future generation communication and networking	Vol.13, Issue 4, pp 164-3171	ISSN 2233-7857	2020-21	Google scholar	
21	Mr. Manjunath N	Traffic impact study of proposed development-case study of port junction on NH17	Vidyabharati international interdisciplinary research journal	Pp2340-2347	ISSN 2319-4979	2021	Google scholar	
22	Mr Suhas K B	A case study on urban heat island and respiratory issues in Bangalore metropolitan city	International Journal of advanced research in Civil Engineering	pp 765-771	2319-4979	10/07/2021	Scopus	

Table B 5.14 List of paper publications by the faculty members in the CAY m1 (2019-20)

Sl. No	Author	Title of the Paper	Name of the Journal / Conference	Vol/ Issue/ page no.	ISSN / ISBN no.	Month & Year of Publication / Presentation	Indexing	DOI/Link
1	Dr. G Narayana	Feasibility study on strength and flexural behaviour of R C beams with foundry as fine aggregate	AIP conference proceedings 2204	Vol 2204 Issue 1	ISSN 0193-4120	10/01/ 2020	Scopus	https://doi.org/10.1063/1.5141557
2	Dr. G Narayana	Investigation on Strength and flexural study of RC beams with Foundry sand used as an alternative material of fine aggregate	European Journal of Molecular & Clinical Medicine	Vol 07, Issue 08, pp 3058-3068	ISSN 2515-8260	19/7/2020	Scopus	https://ejmcm.com/article_4820_8e4d2e0a4ee2df84b6e6ccf8ae8b0f1a.pdf
3	Dr. G Narayana	Influence of Metakaolin & Basalt fibers on Strength and Durability of Concrete –An Experimental approach	European Journal of Molecular & Clinical Medicine	Vol 07, Issue 08,pp 2757-2767	ISSN 2515-8260	19/07/2020	Scopus	https://ejmcm.com/article_cf01fe058c7afe2f49af62f4dc03db064787.pdf
4	Dr. Siddegowda	Urban heat island and Indian metropolitan cities: A Case study of Bangalore city	seventh international urban design conference- ICCPP2019	Special volume	ISSN 2319-4979	14/11/2019 & 16/11/2019	Conference proceedings	
5	Mr. Shashi Kumar A	Feasibility study on strength and flexural behaviour of R C beams with foundry as fine aggregate	AIP conference proceedings 2204	Vol 2204 Issue 1	ISSN 0193-4120	10/01/ 2020	Scopus	https://doi.org/10.1063/1.5141557
6	Mr. Shashi Kumar A	Influence of Metakaolin & Basalt fibres on Strength and Durability of Concrete –An Experimental approach	European Journal of Molecular & Clinical Medicine	Vol 07, Issue 08,pp 2757-2767	ISSN 2515-8260	19/07/2020	Scopus	https://ejmcm.com/article_cf01fe058c7afe2f49af62f4dc03db064787.pdf
7	Mr. Shashi Kumar A	Effect of Dolomite powder and glass fiber on Mechanical strength Properties of Concrete	European Journal of Molecular & Clinical Medicine	Vol 07, Issue 08, pp 3010-3016	ISSN 2515-8260	19/07/2020	Scopus	https://ejmcm.com/article_4813_3d07fc7def4e1341a03c185000e6c9c6.pdf

8	Mr. Shashi Kumar A	Investigation on Strength and flexural study of RC beams with Foundry sand used as an alternative material of fine aggregate	European Journal of Molecular & Clinical Medicine	Volume 07, Issue 08, pp 3058-3068	ISSN 2515-8260	19/07/2020	Scopus	https://ejmcm.com/article_4820_8e4d2e0a4ee2df84b6e6ccf8ae8b0f1a.pdf
9	Mr. Kiran K M	An Experimental Investigation on Inhibiting Chloride Induced Reinforcement Corrosion using Encapsuled Nicotiana Tabacum Extract	Test Engineering & Management journal	Volume 83 Page Number: 126 - 131.	ISSN: 0193-4120	May - June 2020	Scopus	https://ssrn.com/abstract=3666935
10	Mr. Manjunatha K A	A comparative study on strength properties of SCC mixes with cement is partially replaced by flyash and GGBS, fine aggregates by M-Sand, with and without use of glass fibres	International advanced research journals in science, engineering and technology	Vol7, Issue10	ISSN: 2393-8021	Oct 2020	Cross ref	https://dx.doi.org/10.2139/ssrn.3511331
11	Mr. Shashi Kumar N V	An experimental investigation on inhibiting chloride induced reinforcement corrosion using encapsuled nicotiana tabacum extract	Test Engineering & Management journal	Vol 83, pp: 126 - 131.	ISSN: 0193-4120	May - June 2020	Scopus	https://ssrn.com/abstract=3666935
12	Mr. Shashi Kumar N V	Behaviour of vertical irregular building in different systemic zone	Third International conference on Emerging trend in Science and Technologies for Engineering Systems	Vol 7, Issue 8, pp 2982-2939	ISSN: 2515-8260	19/07/2020	Scopus	https://ejmcm.com/article_4805_b678360495e1086b6141b83646d9e735.pdf
13	Mr. Ravindranth C	Water quality in Kunigal taluk by using spatial analysis and interpretation of data	IWRA (India) Journal (Half Yearly Technical Journal of Indian Geographical Committee of IWRA)	Vol 9, Issue-2 PP 36-42	ISSN : 2277-1301	July 2020	Google scholar	https://www.indianjournals.com/ijor.aspx?target=ijor:iwra&volume=9&issue=2&article=007

14	Mr. Ravindranth C	Geo-hydrological behaviour and morphometric analysis using RS and GIS in Kunigal taluk of Tumkur district	W&E international (Water resources section)	Vol 62, Issue 8 PP 51-62	ISSN : 0974-4207	Nov 2019	Google scholar	https://www.indianjournals.com/ijor.aspx?target=ijor:wei&volume=62r&issue=8&article=012
15	Mr. Suhas K B	Urban heat island and Indian metropolitan cities: A Case study of Bangalore city.	seventh international urban design conference- ICCPP2019	Special volume	ISSN 2319-4979	14/11/2019 & 16/11/2019	Conference proceedings	

Table B 5.15 List of paper publications by the faculty members for the CAY m2 (2018-19)

Sl. No	Author	Title of the Paper	Name of the Journal / Conference	Vol/ Issue/ page no.	ISSN / ISBN no.	Month & Year of Publication / Presentation	Indexing	DOI/Link
1	Dr. G Narayana	Dynamic Analysis of Adjacent RCC Buildings for pounding effect	International Research Journal of Engineering & Technology [IRJET]	Vol – 5, Issue-08, pp1254-1258	E-ISSN: 2395-0056, P-ISSN 2395-0072	Aug 2018	Google scholar	https%3A%2F%2Fwww.irjet.net%2Farchives%2FV5%2Fi8%2FIRJET-V5I8214.pdf&chunk=true
2	Dr. G Narayana	Study on Flexural Behaviour of Reinforced concrete beam by incorporating cement bonded fly ash aggregate to natural aggregate	7th Structural Engineering World congress on Architecture & structure: from Past to Future	Conference proceedings	Conference proceedings	24/04/2019 to 26/04/2019	Conference proceedings	
3	Dr. G Narayana	Influence of molarity on fracture behavior in geopolymer concrete beams	Second International Conference on Emerging Trends in Science & Technologies for Engineering System – ICETSE 2019	Vol 7, Issue 6	ISSN 2321-9637	17th and 18th May 2019	Cross ref	https://dx.doi.org/10.2139/ssrn.3510970

4	Dr. G Narayana	Delay analysis for an ongoing multi storied residential apartment building by scheduling with optimization of resource	Second International Conference on Emerging Trends in Science & Technologies for Engineering System – ICETSE 2019	Vol 7, Issue 6	ISSN 2321-9637	17th and 18th May 2019	Google scholar	
5	Dr. G Narayana	Tracking of construction project by EVM using MS project software	Second International Conference on Emerging Trends in Science & Technologies for Engineering System – ICETSE 2019	Vol 7, Issue 6	ISSN 2321-9637	17th and 18th May 2019	Google scholar	https://www.ijrte.org/wp-content/uploads/papers/v8i1/C%2FA10040581C19.pdf&cien=733988&chunk=true
6	Dr. G Narayana	Cost analysis of construction building b earned value method using MS project software	Second International Conference on Emerging Trends in Science & Technologies for Engineering System – ICETSE 2019	Vol 7, Issue 6	ISSN 2321-9637	17/05/2019 & 18/05/2019	Google scholar	https://www.ijrte.org/wp-content/uploads/papers/v8i1/C%2FA10050581C19.pdf&cien=769105&chunk=true
7	Dr. G Narayana	A study on the soil structure interaction of a 15 storey 2×3 Bay building Subjected to Lateral Load (Earthquake load)	International Congress and Exhibition "Sustainable Civil Infrastructures: Innovative Infrastructure Geotechnology" Springer professional	pp 207-219	Conference proceedings	2019	Scopus	https://doi.org/10.1007/978-3-030-01920-4_18
8	Dr. Narayana G	Compressive Strength and flexural test on M20 & M30 Grade of R C Beams	3rd international Conference on recent research emerging trends in mechanical and civil engineering, (ICRRETMCE-2019)	Conference proceedings	Conference proceedings	12th & 13th July 2019	Conference proceedings	
9	Dr. Narayana G	Investigation on strength of flexural study on RC beams with foundry sand used as an	3rd international Conference on recent research emerging	Vol 7, Issue 6	ISSN 2321-9637	17/05/2019 & 18/05/2019	Google scholar	

		alternative material	trends in mechanical and civil engineering”, (ICRRETMCE-2019)					
10	Dr. G Narayana	Feasibility study on strength & flexural behaviour of RC beams with foundry sand fine aggregate	2nd International Conference on emerging research in civil, aeronautical, mechanical engineering	Vol 7, Issue 6	ISSN 2321-9637	17/05/2019 & 18/05/2019	Google scholar	https://doi.org/10.1063/1.5141557
11	Mr. Shashi kumar A	Compressive Strength and flexural test on M20 & M30 Grade of R C Beams	3rd international Conference on recent research emerging trends in mechanical and civil engineering”, (ICRRETMCE-2019)	Conference proceedings	Conference proceedings	12th & 13th July 2019	Conference proceedings	
12	Mr. Shashi kumar A	Investigation on strength of flexural study on RC beams with foundry sand used as an alternative material	3rd international Conference on recent research emerging trends in mechanical and civil engineering”, (ICRRETMCE-2019)	Vol 7, Issue 6	ISSN 2321-9637	17/05/2019 & 18/05/2019	Google scholar	
13	Mr. Ravindra M V	Property Valuation on developing or under construction properties	3rd International Conference on Recent Research Emerging Trends in Civil Engineering	Conference proceedings	Conference proceedings	12th & 13th July 2019	Conference proceedings	
14	Mrs. Sharada S A	Property Valuation on developing or under construction properties	3rd International Conference on Recent Research Emerging Trends in Civil Engineering	Conference proceedings	Conference proceedings	12th & 13th July 2019	Conference proceedings	
15	Mr. Kiran K M	Analysis on cost controlling and tracking of residential building by EVM method using MS Project Software	Second international conference on Emerging trends in science and	Vol 7, Issue 6	ISSN 2321-9637	17th and 18th May 2019	Cross ref	https://dx.doi.org/10.2139/ssrn.3510092

			technologies for engineering system					
16	Mr. Kiran K M	Analysis of tube in tube structures with different size of Inner Tube	International Journal of Technical Innovation in Modern Engineering and Science	Vol 04, Issue 10	ISSN (online)2455-2585.	Oct 2018	Conference proceedings	
17	Mr. Manjunath K A	A comparative study on strength properties of SCC mixes with cement is partially replaced by flyash and GGBS, fine aggregates by M-Sand, with and without use of glass fibres	2 nd International conference on Emerging trend in Science and Technologies for Engineering Systems	Vol 7, Issue 6	ISSN 2321-9637	17th and 18th May 2019	Google scholar	
18	Mrs. Chandrakala S	Analysis on cost controlling and tracking of residential building by EVM method using MS Project Software	Second international conference on Emerging trends in science and technologies for engineering system	Vol 7, Issue 6	ISSN 2321-9637	17th and 18th May 2019	Cross ref	https://dx.doi.org/10.2139/ssrn.3510092
19	Mrs. Bhavya S	Analysis on cost controlling and tracking of residential building by EVM method using MS Project Software	Second international conference on Emerging trends in science and technologies for engineering system	Vol 7, Issue 6	ISSN 2321-9637	17th and 18th May 2019	Cross ref	https://dx.doi.org/10.2139/ssrn.3510092
20	Mr. Shashikumar N V	Analysis on cost controlling and tracking of residential building by EVM method using MS Project Software.	Second international conference on Emerging trends in science and technologies for engineering system	Vol 7, Issue 6 , pp 16-20	ISSN 2321-9637	17th and 18th May 2019	Cross ref	https://dx.doi.org/10.2139/ssrn.3510092
21	Mr. Shashikumar N V	Influence of copper slag on early age properties of cement	Journal of computational and theoretical nanoscience	vol 7, Issue - 2018, pp 3317 to 3323	ISSN 2347-9523	Dec 2018	Scopus	DOI: 10.14419/ijet.v7i4.39.25584
22	Mr. Shashikumar N V	Experimental investigation on SFRC with the partial replacement of cement by	International journal of engineering and technology	vol 7, Issue 11/12 pp 704 to 709	ISSN 2347-9523	Dec 2018	Scopus	

		copper slag and fine aggregate by IOT						
23	Mr. Kamath G M	Experimental study of Moringa Olifera for treating domestic effluent and quality of water for agriculture	Second international conference on Emerging trends in science and technologies for engineering system	Vol 7, Issue11/12,pp 16-20	ISSN 2321-9637	17th and 18th May 2019	Google scholar	https://dx.doi.org/10.2139/ssrn.3510553
24	Mr. Ravindranth C	Water quality assessment using physio-chemical characteristics Jakkur lake in Bangalore	International journal technical innovations in modern engineering and science	Vol4, issue9	ISSN 2455-2585	Sept 2018	Google scholar	

Table B 5.16 List of Ph.D. Guidance

Sl No	Guide	Name of the research scholar	Year of Registration	University	Status		
					Course work completed Y/N	Comprehensive viva voce completed Y/N	Final thesis submitted Y/N
1	Dr. G Narayana	Mr. Shashi Kumar A	2013	VTU	Y	Y	N
		Mr. Rajeeva S J	2015	VTU	N	N	N
		Mrs. Shilpa B R	2015	VTU	Y	Y	N
		Mr. K Raghu	2016	VTU	Y	Y	N
		Mr. Naveena M P	2016	VTU	Y	Y	N
		Mr. Kamath G M	2017	VTU	Y	Y	N
2	Dr. Sidde Gowda	Mr. Sathish Y A	2015	VTU	Y	Y	N
		Mr. Ravindra S L	2015	VTU	Y	Y	N
		Jyothi M R	2018	VTU	Y	Y	N
		Mr Suhas K B	2019	VTU	Y	Y	N
		Pasupula Madan Mohan Reddy	2019	VTU	Y	Y	N

Table B 5.17 Details of Ph.D. pursuance by the department faculties

Sl. No.	Name of the research scholar	Guide	Year of Registration	University	Status		
					Course work completed Y/N	Comprehensive viva voce completed Y/N	Final thesis submitted Y/N
1	Mr. M V Ravindra	Dr. H S Nanda	2012	VTU	Y	N	N
2	Mr. Shashi Kumar A	Dr. G Narayana	2013	VTU	Y	Y	N
3	Mr. Kiran K M	Dr. M B Ananthaiah	2016	VTU	Y	Y	N
4	Mr. Manjunath K A	Dr. S Rajendra	2017	VTU	Y	Y	N
5	Ms. Vathsala M N	Dr. Maya Nayak	2017	VTU	Y	N	N
6	Mr. K Raghu	Dr. G Narayana	2016	VTU	Y	Y	N
7	Mr. Rajeeva S J	Dr. G Narayana	2015	VTU	N	N	N
8	Mr. Arun Kumar C J	Dr. S Rajendra	2016	VTU	Y	Y	N
9	Mrs. Bhavya S	Dr. M B Ananthaiah	2017	VTU	Y	N	N

10	Mr. Shashi Kumar N V	Dr. Gandarappa B M	2015	VTU	Y	Y	N
11	Mr. Sathish Y A	Dr. Sidde Gowda	2015	VTU	Y	Y	N
12	Mr. Ravidranath C	Dr. Veerappa Devaru & Dr Nandish	2013	VTU	Y	N	N
13	Mr. Kamath G M	Dr. Y Ramalinga Reddy & Dr. G Narayana	2017	VTU	Y	Y	N
14	Mr. Mohan N	Dr. Sowmya	2017	VTU	Y	N	N
15	Mr Suhas K B	Dr. Sidde Gowda	2019	VTU	Y	Y	N

5.7.2. Sponsored Research (5)

Table B 5.18 Details of sponsored research for the academic year CAY m1, CAY m2, CAY m3

Sl. No.	Project Title	Funding agency	Year of sanction	Principal Investigator	Sponsored Amount
1	Feasibility studies on morning olifera and alum as an coagulant to treat the domestic effluent and quality of water for agriculture	KSCST	2019-20	Mr. Kamath G M	4,000
2	Geospatial analysis of appropriateness of treated Kormangala & Challaghatta (K & C), Valley waste water for irrigation in Kolar,	KSCST	2019-20	Ravindra M V	4,000
3	Treatment of Sullage by /using Naturaal laterite and chitosan as an adsorbent	KSCST	2019-20	Ms. Vathasala M N	4,500
4	Experimental Study on NANO Silica Modified geopolymer concrete for eacrlly damage reduction in bridge deck pavement	KSCST	2019-20	Dr.G.Narayana	5,000
5	Experimental Study on development of geo polymer sand as replacement to natural sand in cement mortar	KSCST	2019-20	Dr.G.Narayana	5,000
6	Air conditioning by geothermal heat pump	NAIN	2018-19	Ms. Vathasala M N	1,88,000

7	Pradhan Mantri Kaushal Vikas Yojana for Technical Institutes	PMKAY	2017-18	Rajeeva S J	3,54,780
8	Design and treatability studies of low cost biofilters in grey water treatment with respect to recycle and reuse in rural areas	KSCST	2017-18	Ravindra M V	5,000
Total amount sanctioned					5,70,280

5.7.3. Development Activities (10)

➤ Product Development:

1) Feasibility study of GGBS based geo polymer Aggregate

Name of the faculty & student	Name of the product	Description
Dr. G Narayana, Naveen M P	Feasibility study of GGBS based geo polymer Aggregate	Aim: Development of alternative coarse aggregate from use of industrial wastes by Geopolymerazation technique.

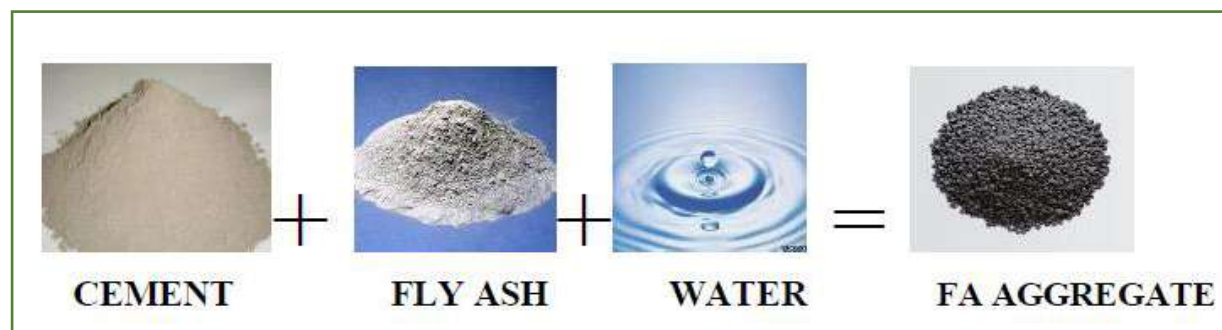


Figure 5.9 Pelletization technique



Figure 5.10 Collection of flyash aggregate from mixer

2) Air conditioning by geothermal heat pump

Name of the faculty & students	Name of the product	Description
Prof. Vathasala M N, Prof. Rajeeva S J, Yashwanth S, Vanajakumari R, Supriya N, Sukrutha S, Sindhu K S, Naphisa Khangie	Air conditioning by geothermal heat pump	Aim: To obtain the adequate information about the properties and features of prospective geothermal system.



Figure 5.11 Model of air conditioning by geothermal heat pump

3) Development & Experimental Analysis of Mortarless Interlock Bricks

Name of the faculty	Name of the product	Description
Prof. Rajeeva S J Ms. Ankitha Reddy R Mr. Charan M Mr. Charan R Ms. R Chandhana	Development & experimental analysis of Mortarless interlock bricks	Aim: To examine the performance of interlocking bricks for construction of walls



Moulds



Interlock block



Interlocking block Prism

Figure 5.12 Mortarless Interlock Bricks

4) Bio gas plant in SJCIT Boys hostel

Name of the faculty & students	Name of the product	Description
Prof. Ravindra M V Ms. Shravani K P Ms. Shashikala M Ms. Priyanka S B Mr. Shaik Noor Mohammed Mr. K Devarajgowd	0.5 MT / Day – 500 Kgs Per Day Capacity - Bio gas plant (SJCIT Boys Hostel)	Aim: To produce biogas of 500kgs/day for cooking purpose in SJCIT Boys hostel



Figure 5.13 0.5 MT / Day – 500 Kgs per day capacity - Bio gas plant (SJCIT Boys Hostel)

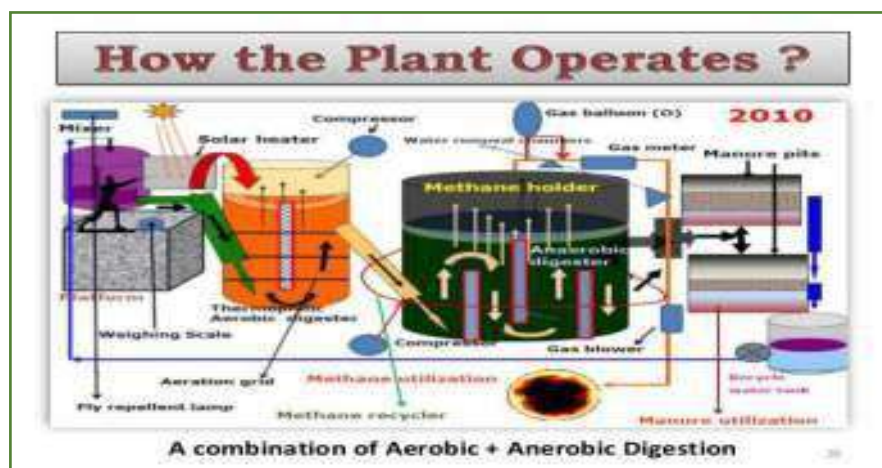




Figure 5.14 Operation of Bio Gas plant



Figure 5.15 Usage of biogas for cooking purpose

5) Rain Water Harvesting at SJCIT boys Hostel

Name of the faculty	Name of the product	Description
Prof. Kamath G M Mr. Mahanth Kumar V Mr. Madhu T N Mr. Faizan Asif N Mr. Manoj Kumar T S	Rain Water Harvesting for SJCIT boys Hostel	Aim: To collect rain water from the college hostel buildings and reuse of water for domestic purpose.



Figure 5.16 Rain water harvesting for SJCIT boys hostel

6) water pond of 35 lakhs liters capacity

Name of the faculty	Name of the product	Description
Dr G Narayana, Prof. Rajeeva S J, Ms. Ankitha Mr. Charan Ms. Chandhana	water pond of 35 lakhs liters capacity	Aim: To recharge the ground water table and surrounding bore wells

**Figure 5.17 Water Pond of 35 lakhs liters capacity**

➤ Research laboratories:

Table B 5.19 Research Laboratories details

Sl. No.	Name of the Lab	Details	Reason for creating facilitate	Utilization	Areas in which students are expected to have enhanced learning
1	R & D Centre	• Digital UTM • Loading frame testing machine • NDT equipments • Shake table equipment	For research scholar to conduct experimental research work	Utilized by research scholars and students	Respective areas of research scholars and supervisors.
2	R & D Centre	• ETABS 16.2.1 • STAAD PRO V8i • STAAD foundation	For research scholar to conduct analytical research work	Utilized by research scholars and students	Respective areas of research scholars and supervisors.
3	Concrete & Highway materials laboratory, Geotechnical Engineering laboratory	• Digital UTM • Electrically operated vane shear testing apparatus • Electrically operated triaxial compression testing apparatus • Electrically operated direct shear testing apparatus	For research scholar to conduct experimental research work. Students can use this laboratories for conduction of their project works, consultancy works.	Utilized by research scholars and students	Respective areas of research scholars, students and supervisors.



Figure 5.18 Digital Compression testing machine



Figure 5.19 Shake Table



Figure 5.20 Marshall Stability



Figure 5.21 Direct Shear Test



Figure 5.22 Triaxial



Figure 5.23 Loading Frame



Figure 5.24 Ultrasonic (NDT)



Figure 5.25 Profometer (NDT)



Figure 5.26 Rebound hammer (NDT)



Figure 5.27 Cad Lab

➤ Instructional materials:

The department maintains the following instructional materials that helps in teaching learning process:

- Hand written /printed lecture notes.
- Printed lab manuals for each lab.
- PPTs.
- In addition to the central library, department have its own departmental library to facilitate easy access to the faculty, students and research scholars.
- Video courses which includes NPTEL, EduSat Link: <http://elearning.vtu.ac.in/elearning> etc.,

➤ Working models/charts/monograms etc.

- Lab Instruction Charts are made available in all the labs. Some sample chart pictures are provided below:

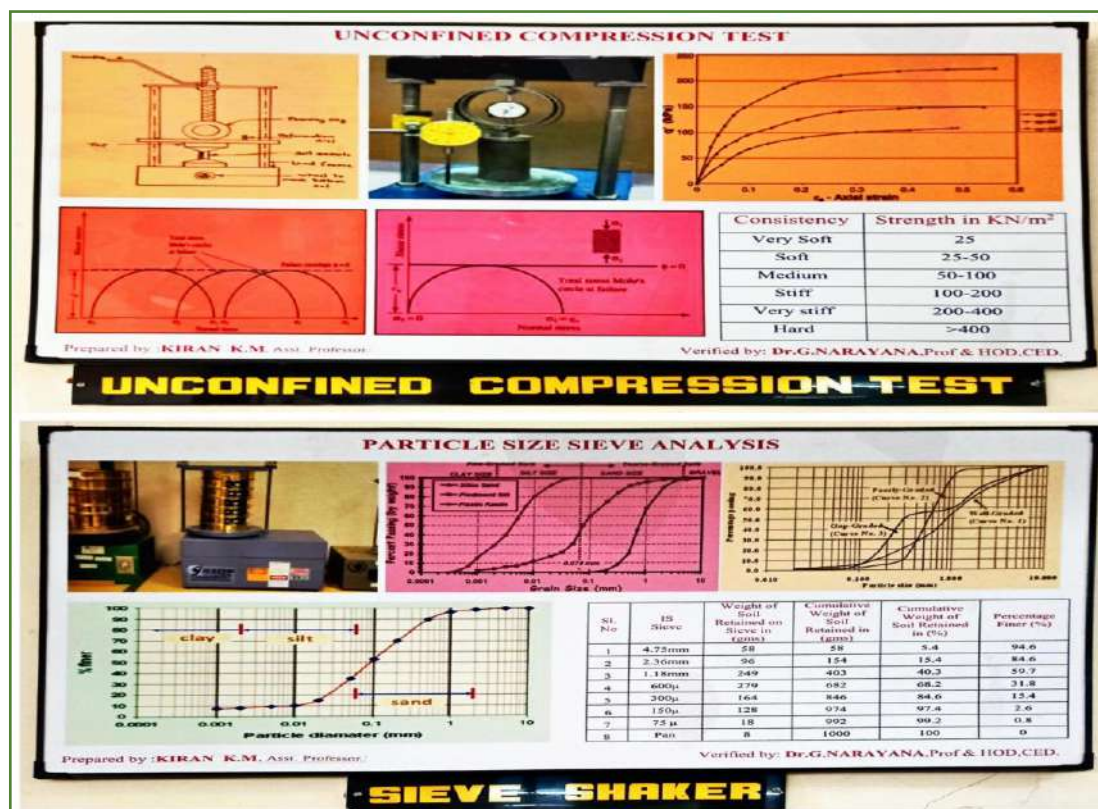


Figure 5.28 Lab instruction charts

- Models are available in the model room. Some of the sample model pictures are provided below:

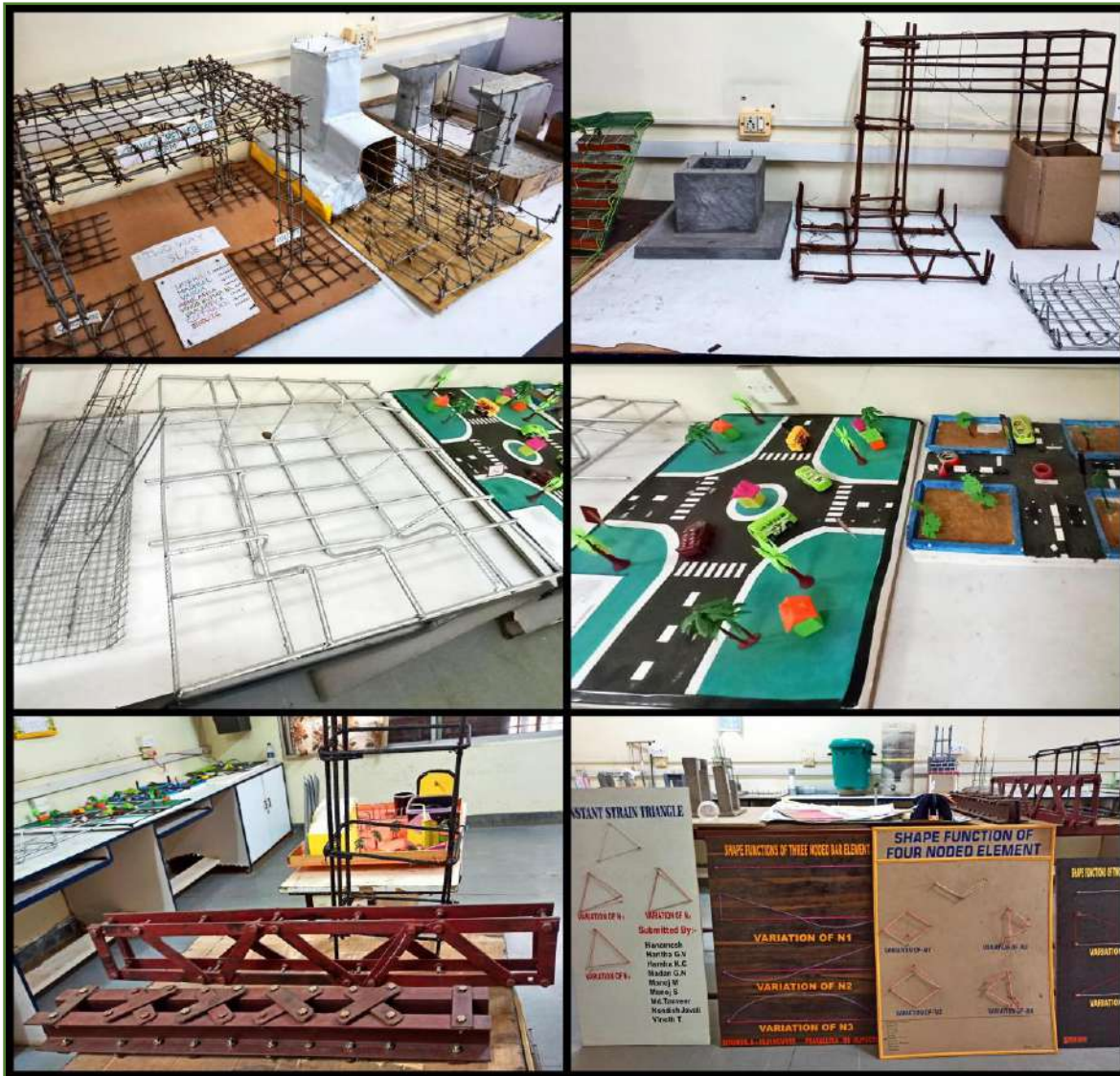


Figure 5.29 Prototypes

5.7.4 Consultancy (From Industry) (5)**Table B 5.20 Consultancy details for the CAYm1, CAYm2, CAYm3**

Sl. No	Details of consultancy works	Agency	Amount in rupees	Year
1	Concrete, steel, soil, water quality tests etc.,	Government/ Private Sectors	7,27,327	2019-20
2	Concrete, steel, soil, water quality tests etc.,	Government/ Private Sectors	12,27,954	2018-19
3	Concrete, steel, soil, water quality tests etc.,	Government/ Private Sectors	9,50,000	2017-18

5.8. Faculty Performance Appraisal and Development System (FPADS) (30)**A well defined system for faculty appraisal for all the assessment years (10)**

The Institution has a well defined faculty performance appraisal and development system. Each staff member submits annually in detail capturing all his/her activities in a prescribed format to the head of the department. At institution level Academic Audit Committee will evaluate the academic performance of every faculty member.

The sample copy of Annual self-appraisal report is as shown below.

In completing the self-assessment, please indicate the extent to which you engage in the listed teaching "best practices". Use the following scale: N - Never, S - Seldom, P - Periodically, C - Consistently

How Often?	Variety and Pacing of Instruction
	Uses a variety of instructional methods
	Allows adequate wait time when asking questions
	Responds to wrong answers constructively
	Draws non-participating students into activities/discussion
	Asks probing questions when student answers are incomplete
	Mediates conflict or differences of opinions
	Uses active learning strategies (group work, paired discussions, polling)
	Allows sufficient time to complete in-class assignments
	Provides opportunities for students to practice what they have learned

How Often?	Organization of Lecture
	Begins and ends class on time
	Relates this and previous class(es), or provides students with opportunity to do so
	Provides and follows an outline or organization for the class session
	Has all necessary materials readily available
	Uses effective transitions between class topics
	Conveys the purpose of each class activity or assignment
	Completes the scheduled topics
	Summarizes periodically throughout and at end of class or prompts students to do so
	Previews by connecting current content to future classes
	Takes attendance throughout the semester

How Often?	Presentation Skills
	Communicates audibly and clearly
	Establishes and maintains eye contact with students
	Varies pace and tone to keep students alert
	Uses positive and appropriate humor
	Incorporates various instructional supports (diagrams, ppt's)
	Responds to changes in student attentiveness
	Handouts (easy to follow)

How Often?	Clarity
	Notes and explains new terms or concepts
	Elaborates or repeats complex information
	Uses examples to explain content
	Makes explicit statements drawing student attention to key ideas
	Pauses during explanations to ask and answer questions
	Relates new ideas to familiar concepts

SJC Institute of Technology, Chickballapur – 562 101
Faculty - Self Appraisal / Evaluation

Name of the Faculty	Designation	Department	Date of Joining	Appraisal Year

What are the Unique Features of SJCIT as noticed/observed by YOU?

- a. _____ e. _____
b. _____ f. _____
c. _____ g. _____

1. Subjects Handled/Currently handling - Statistics (last Two years)

Sl. No.	Subject Code / Title	Class / Section/ Strength	Result (Pass %)	Appraisal (%)
1				
2				
3				
4				
5				
6				

Self-Assessment on Appraisal (Please list the major points in which you are weak)	Action plan for improvement
1. _____	1. _____
2. _____	2. _____
3. _____	3. _____

2. Laboratories Handled so far:

Sl. No.	Laboratory	Pass %	Specific Contributions	Any Steps to Improvement
1				
2				
3				
4				
5				

How Often?	Instructor-Student Interaction
	Attends respectfully to student comprehension
	Asks questions to students that challenge them to think more deeply
	Invites student participation and comments
	Incorporates student responses when appropriate
	Encourages students to respond to their peers throughout the discussions
	Treats students with respect
	Uses positive reinforcement to encourage student participation and
	Encourages students to interact civilly/respectfully with each other
	Addresses potentially disruptive behaviors before they impact learning

What went well in the Classes that you handled?

How might you improve on your current teaching practices?

Please list any Professional Development workshops that you feel would help you improve Your teaching skills.

Describe your involvement in discipline, department, and college activities which may include but are not limited to: evaluation of student performance, curriculum development, sponsorship of co-curricular activities, college or department committee work, faculty meetings, or in-service training or staff development

Signature of the Faculty with date

Signature of HOD

3. Additional Skills/Knowledge Acquired

- a. _____
b. _____
c. _____

4. Specific Contributions to the Department/Institution

1. _____
2. _____
3. _____

5. Inclination towards Creative Thinking and Research

1. _____
2. _____

6. Use of facilities like Library/Digital Library at SJCIT

1. _____
2. _____

7. Use of Black Board and other Teaching aids for effective delivery of Lecture

1. _____
2. _____

8. Any specific Complaints on your performance by Students/Colleagues

1. _____
2. _____

9. Any specific Appreciations on your performance by Students/Colleagues

1. _____
2. _____

10. SWOC Analysis

Strengths (at least THREE):	Weaknesses (at least TWO):
1. _____	1. _____
2. _____	2. _____
3. _____	
Opportunities (at least THREE):	Challenges (at least TWO):
1. _____	1. _____
2. _____	2. _____
3. _____	

11. Attitude (Professional / Personal)

Professional	Personal
1. _____	1. _____
2. _____	2. _____

12. Please rate on the following (on a scale of 1-10):

Loyalty to the Institution	
Loyalty to the Profession	
Involvement in the Profession	
Availability in the Campus	
Availing Leaves	
Satisfaction on working Environment	
Satisfaction on your Performance	
Satisfaction about the Facilities	
Satisfaction on Welfare schemes	
Satisfaction on your Abilities	

Figure 5.30 sample copy of Annual self-appraisal report

Implementation and effectiveness

Overall performance of every faculty member is evaluated once in a year based on the following parameters.

- Student feedback
- Results in the respective subject handled
- Additional duties performed in that particular semester
- Participation in Training Programs / Faculty Development programs / Workshops
- University Examination related work
- Publication in conferences and journals
- Consultancy work
- Involvement in Research work
- Execution of funded projects

The process of performance evaluation is as follows:

- The Faculty fills the appraisal format and submits with necessary documents to the HOD.
- The institution schedules an Academic Performance Index form (Figure 5.32) review meeting once in a year. An Academic Audit committee comprising of Management Representative, Principal and respective HOD of the program will review the academic performance of every faculty member.
- The purpose of Academic Audit Committee is to evaluate the performance of the faculty and appreciate their achievement and give suggestion for further improvements of quality of teaching, research, administrations and curricular/extracurricular activities.
- Every faculty member will present his/her academic performance to the committee.
- Faculty member displays his/her teaching resources like Notes, Assignments, question bank, course file and personal file.
- The committee will evaluate the performance of every faculty member and generate evaluation report is shown in figure 5.33.
- This evaluation report along with the necessary recommendations/actions is submitted to the establishment section.

- The establishment section consolidates and submits the detail report to the principal for further actions.
- The typical recommendations/actions would include deferring in increment.
- The recommendation would be advising the faculty to participate in faculty development programs to enhance knowledge, enhance qualifications, organize programs in the college, and submit project proposals to funding agencies.

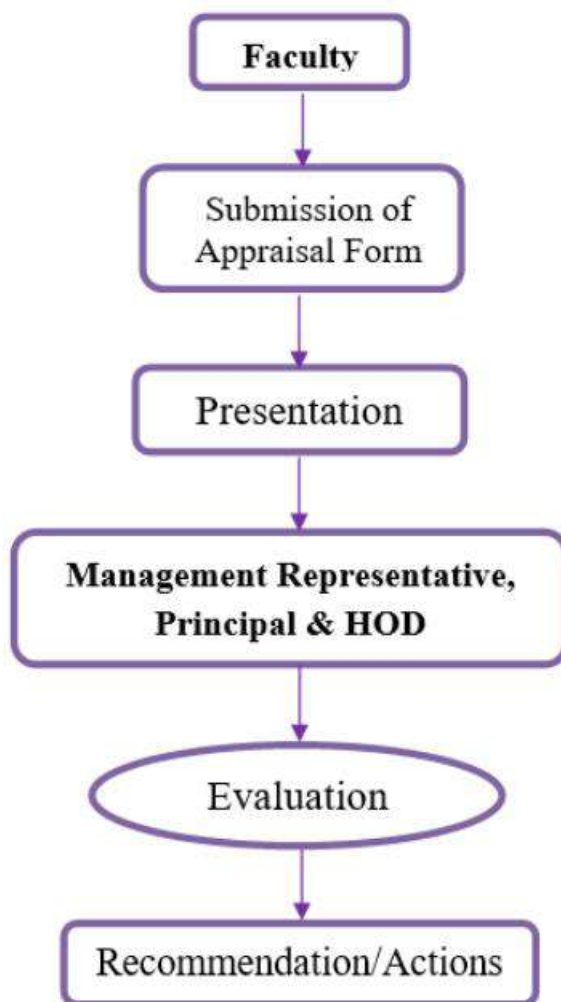


Figure 5.31 Flow chart of Faculty Performance Appraisal and Development System

MTE Guidelines

APP-10

15. Orientation/Refresher Course/ RPTD / VIIU Title ACTE-Sponsored RPTD/TP attached

Title of the Course	Place	Duration	Sponsoring Agency

16. Tick the appropriate (Annual Increment/Promotion/ADP Movement) and mention whether you fill the minimum Academic Performance Requirement, if any, stated therein:

Tick (✓) the Appropriate	Stages of Promotion	Service Requirement	Minimum Academic Performance Requirement	Eligible for Promotion
	Annual Increment	Completed one year of service	(1) One hundred marks in I sem. of the semester (2) At least 70 marks in II sem. of the semester (3) At least 60 marks in aggregate (4) No bar on number of attempts	
	Assistant Professor to Associate Professor (Stage 1 to Stage 2)	Assistant Professor in Stage 1 completed two years of service as P.D or full time position as P.D or full time position as P.D	(1) One hundred marks in I & II semesters (2) At least 70 marks in aggregate (3) At least 60 marks in aggregate (4) No bar on number of attempts	
	Assistant Professor to Associate Professor (Stage 2 to Stage 3)	Assistant Professor in Stage 2 completed three years of service as P.D or full time position as P.D or full time position as P.D	(1) One hundred marks in I, II & III semesters (2) At least 70 marks in aggregate (3) At least 60 marks in aggregate (4) No bar on number of attempts	
	Associate Professor (Stage 3 to Associate Professor (Stage 4)	Associate Professor in Stage 3 completed four years of service as P.D or full time position as P.D or full time position as P.D	(1) One hundred marks in I, II & III semesters (2) At least 70 marks in aggregate (3) At least 60 marks in aggregate (4) No bar on number of attempts	
	Associate Professor (Stage 4 to Professor (Stage 5)	Associate Professor in Stage 4 completed five years of service as P.D or full time position as P.D or full time position as P.D	(1) One hundred marks in I, II & III semesters (2) At least 70 marks in aggregate (3) At least 60 marks in aggregate (4) No bar on number of attempts	
	Professor (Stage 5 to Professor (Stage 6)	Professor in Stage 5 completed six years of service as P.D or full time position as P.D or full time position as P.D	(1) One hundred marks in I, II & III semesters (2) At least 70 marks in aggregate (3) At least 60 marks in aggregate (4) No bar on number of attempts	

Category	Nature of Activity	Start of collaboration	Self appraised JRF Score	Unaided JRF Score by Committee
	Initiated related to curricular, co-curricular, and field based activities	Annual times reported per academic year	Total times Spent	
	(1)	(2)	(3)	(4) - (3)/14 (Max 14)
Major	Technical classes/ RJE course			
	Career counselling			
	Workshop/ Seminar/ Field work			
	Students seminar			
	Quiz/ Debate/ Intra-mural			
	Industry exposure to visiting and placement activities			
	College related survey/work			
	Workshop, Quiz, Intra-mural, seminar/ Seminar			
	Workshop etc.			
	Cultural sports			
Minor	Workshop/ Seminar/ Seminars/ Talks/ Seminars etc.			
	Workshop/ Seminar/ work/ Seminars/ etc.			
	Workshop/ Seminar/ Seminar/ etc.			
	Workshop/ Seminar/ Seminar/ etc.			
	Workshop/ Seminar/ Seminar/ etc.			

Category	Activity	Assistant Professor / equivalent scales (Stage 1 to Stage 2)	Assistant Professor / equivalent scales (Stage 2 to Stage 3)	Associate Professor (Stage 3 to Associate Professor / equivalent scales (Stage 4)	Associate Professor (Stage 4 to Professor / equivalent scales (Stage 5)	Professor (Stage 5 to Professor / equivalent scales (Stage 6)
II	Contributions to computer IIS and management of the department and institution; strategic participations in academic and administrative committees and representation.	50 / Assessment period	50 / Assessment period	50 / Assessment period	50 / Assessment period	100 / Assessment period

According to the above table the teacher is eligible/not eligible in category II. _____

Figure 5.32 Sample copy of Academic Performance Index (API) Form

SJC Institute of Technology
Chickballapur – 562 101

Academic Performance Evaluation Committee (APEC)
Performance Evaluation/Appraisal Form – Annual Increment / Movement of AGP / Promotion to Higher Positions / Regularization of Service

Name of the Faculty: _____ Department: _____ Date: _____

Sl. No.	Parameters/Components	Marks
1.	Competence in the Subjects/Labs handled Basis for assessment: Student Appraisal/Self-Appraisal and Results	/ 5
2.	Lesson Plan and Quality of Lecture notes//Question Bank/Assignments Basis for assessment: Contents of Course file, Personal file, Academic file	/ 5
3.	Systematic Presentation of the Subject in Class Room / Lab Basis for assessment: Communication, Clarity in Explanation, Content planning/Organization	/ 5
4.	Maintenance of Discipline inside the Class Room/Lab	/ 5
5.	Preparedness and Involvement in the Lab - Preparing Lab manual, giving Instructions, monitoring the conduction of experiments, conduction of viva-voce, record correction etc.,	/ 5
6.	Motivation, Cooperation and timely Execution towards the work assigned	/ 5
7.	Loyalty to the Profession, Institution and Higher-ups	/ 5
8.	Attitude towards:	
	Students and associated activities like counseling/mentoring	/ 5
	Room invigilation during Internals / University Exams	/ 5
	Seriousness and Transparency in Correction of Blue Books	/ 5
	Colleagues and Staff during working hours	/ 5
	Making contributions in the development of Department/Institution	/ 5
9.	Availability and Accountability for Department Requirements and Consultation by Students	/ 5
10.	Attending VTU Valuation Work (Mention the # scripts valued _____)	/ 5
	Overall Performance in Interview (APEC Marks, Min Eligibility: 15)	/ 30

Total Marks: _____ / 100

Note: Serial Number 1-10 shall be evaluated by HOD: 5 – Excellent, 4 – Very Good, 3 – Good, 2 – Fair, 1 – Poor

Recommendations of the APEC:

Activity	Recommendations (Please Tick ✓)		Date of Effect
Annual Increment	Recommended	Deferred by 3 Months	
Upward Movement of AGP	Recommended	Deferred by 6 Months	
Promotion to Higher Positions	Recommended	Deferred by 12 Months	
Regularization of Service	Recommended	Deferred by 12 Months	

Signature with Date: _____

HOD

Subject Expert

Registrar

Principal

CAO

Figure 5.33 Sample copy of Academic Performance Evaluation Committee Report

5.9. Visiting/Adjunct/Emeritus Faculty etc. (10)**Table B 5.21 Summary of visiting/Adjunct/Emeritus Faculty**

Sl. No.	Name of the adjunct faculty	Academic Year CAY, CAY m1, CAY m2	Number of hours
1	Mr. Anjaneya murthy	2020-21	50
2	Mr. Anjaneya murthy	2019-20	50
3	Mr. Anjaneya murthy	2018-19	50

Table B 5.22 Details of the adjunct faculty for the CAY (2020-21)

Sl. No.	Name of the adjunct faculty	Designation	Company
1	Mr. Anjaneya murthy	Principal Design Engineer	CES Pvt. Ltd, Bangalore

Table B 5.23 Details of the adjunct faculty for the CAY m1 (2019-20)

Sl. No.	Name of the adjunct faculty	Designation	Company
1	Mr. Anjaneya murthy	Principal Design Engineer	CES Pvt. Ltd, Bangalore

Table B 5.24 Details of the adjunct faculty for the CAY m2 (2018-19)

Sl. No.	Name of the adjunct faculty	Designation	Company
1	Mr. Anjaneya murthy	Principal Design Engineer	CES Pvt. Ltd, Bangalore

CRITERIA 6

Facilities and Technical Support

6.	Facilities and technical support	80

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

The Department of Civil Engineering has adequate number of laboratories with sufficient equipments and softwares for conduction of experiments within the curriculum including project work. The laboratories are also well equipped to undertake training and testing. Every laboratory is supported by technical staff to assist the students.

Table B 6.1 Details of major equipments, weekly utilization and technical man power support

Sl. No.	Name of the Laboratory	No. of students per setup (Batch size)	Name of the important equipment	Weekly utilization status (all the courses for which the lab is utilized)	Technical Manpower support		
					Name of the technical staff	Designation	Qualification
1	Basic Material Testing Lab (15CVL37/17CVL37)	Batch size=20	• Universal testing machine • Brinell's Rockwell and Vicker's metal testing machine • Impact testing machine • Helical spring testing machine • Magnetic base stand with dial gauge • Torsion testing machine • Fatigue testing machine • Shear testing unit	(6 Batches X 3Hours = 18 hrs)	Venu Gopal M N	Asst Instructor	Diploma
2	Basic Surveying	Batch size=20	• Total station • Theodolite • Dumpy level	(6 Batches X 3Hours = 18 hrs)	Premakumari G N	Site Engineer /Foreman	B.E

	Practice (15CVL38/17CV L38)		• Auto level • Plane table set • Prismatic compass • Surveyor's compass				
3	Fluid Mechanics Lab (15CVL47/17CV L47)	Batch size=20	• Pelton, Francis and Kaplan Turbines • Centrifugal pump constant & variable speed • Venture meter • Venture flume • Notches, Weirs • Major & minor Friction losses apparatus • Mouthpiece and orifice • Bernoulli's apparatus • Impact of jet on vanes • Reynolds apparatus • Flow visualization	(6 Batches X 3Hours = 18 hrs)	Nagaraju K V	Mechanic	B.Sc
4	Engineering Geology Lab (15CVL48/17CV L48)	Batch size=20	• Transparent crystal models set of 6 no. • Streak plates Goniometer • Ore specimens • Petrified wood specimen • Polished porphyry specimen • Large amethyst crystal specimen • Three-dimensional model to	(6 Batches X 3Hours = 18 hrs)	Kempenna G M	Welder	7 th Std.

			solve • Bore hole problems • Two-dimensional model to solve thickness problems • A set of six faults models with pin and hole arrangements to show the various types of faults • Magnifiers 2”				
5	Geo-Technical Engineering Lab (15CVL57/17CV L57)	Batch size=20	• Triaxial testing machine • Direct shear testing machine • Unconfined compression test apparatus • Liquid, Shrinkage limit apparatus • Core cutter complete with dolly & rammer • Proctor compaction test apparatus • Vane shear apparatus • Soil hydrometer • Tripple beam balance • Universal permeameter • Auto level consolidometer • Rapid moisture content apparatus	(6 Batches X 3Hours = 18 hrs)	Nagaraju K V	Mechanic	B.Sc

6	Concrete & Highway Materials Lab (15CVL58/17CVL58)	Batch size=20	• Vicat needle apparatus • Air permeability apparatus • Slump test apparatus • Hydraulic compression testing machine • Tensile strength tester hand operated • Vibrating table • Compaction factor apparatus • Vee-Bee consistometer • Hydraulic jack 1000kN capacity • Self-straining loading frame (3050mmX1200mm) • Softening point apparatus • Tripple beam balance • Ductility test apparatus • Flash & fire point apparatus • Field density test by sand replacement apparatus • California bearing ratio test • Aggregate crushing test apparatus with mould & accessories • Abrasion test Deval, Dorry, Los angles abrasion testing machine • Aggregate impact value test	(6 Batches X 3Hours = 18 hrs)	Anandachari	Helper	7 th Std.

7	Software Application Lab (15CVL67/17CVL67)	Batch size=20	• Computers-30 • Projector • AUTOCAD, STADD Pro, • E tabs Softwares.	(6 Batches X 3Hours = 18 hrs)	Geetha Devi K L	Asst Instructor	Diploma
8	Extensive Survey viva voce (15CVL68/17CVL68)	Batch size=20	• Projector • AUTOCAD Software, • Computers	(6 Batches X 3Hours = 18 hrs)	Venu Gopal M N	Asst. Instructor	Diploma
9	Environmental Engineering Lab (15CVL76/17CVL76)	Batch size=20	• BOD incubator • Jackson turbidity meter • Auto calve • Photo electric calorimeter • Muffle furnace • Naptho turbidity meter • Binocular inclined research microscope • Direct reading conductivity meter • Bunson burner • Bacterial colony counter electronic digital display • High volume Air sampler • Jar test apparatus	(6 Batches X 3Hours = 18 hrs)	Ranganath S N	Mechanic	ITI

10	Computer Aided Detailing of Structures Lab (15CVL77/17CV L77)	Batch size=20	• Computers-30 • Projector • AUTOCAD	(6 Batches X 3Hours = 18 hrs)	Geetha Devi K L	Asst Instructor	Diploma

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

The department has established additional facilities to enhance the ability of the students.

Table B 6.2 Details of Additional facilities created for improving the quality of learning experience in laboratories

Sl. 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.	R&D Center	Hardware: HP computers with 4GB RAM, 512GB HDD. Software: OS: Win7. Application: STADD PRO, E-Tabs, Auto CADD	For Research Scholars to conduct experiments related to their Research work	Fully utilized by the research scholars	Respective areas of Research Scholars	PO4, PO5 & PO12. Also PSO1
2.	New Age Incubation Network	Projects are invited to receive funding under this scheme	Cities to promote them as business destination by encouraging local talent towards exciting journey for enterprisers	Research work for UG, PG and Research Scholars	All Engineering Branches	PO4, PO8, PO7, PO11, PO12
3.	Seminar Hall	Fully equipped shared seminar hall with computer, projector, student desk, white board	To present technical talk/project/seminars/research papers/workshops/industry interaction	Throughout the semester	• To bridge the band gap between academic and industry curriculum • To upgrade students to industry standards	PO8, PO12
4.	Models and Charts	Models and charts of Civil Engineering equipments, structural components, Geological cross sections and maps kept in the lab	To give better understanding of the equipment and structural components	By students	In subjects like, Fluid Mechanics, Geotechnical Engineering, Design of RCC and Steel Structures, Engineering	PO1, PO2, PO3, PO8

					Geology, CAD structures and for project work.	
5.	e-Learning	Access to College Website, NPTEL videos.	To enhance Teaching and learning	By students and faculties	All civil engineering domains	PO1, PSO1
6.	Loading Frame Plate and Fixture for mounting and Digital measurement system	• 100 Ton load cells with digital display unit • LVDT's units digital display unit 100mm • Strain indicators • Strain gauges • Data acquisition system • Software for data collection and plotting graphs • Dell/COMPQ/HP-1No • Hydraulic floor crane manual operated 1 ton capacity	To show different Loading operations on structural members	For 8 th semester students & also for conducting research activity	To learn different Loading operations on structural members	PO3, PO5, P08, PSO1, PSO2
7.	Horizontal Shake Table with Eccentric Cam Shake Table Instrumentation	Maximum pay load:30kg • Sliding table dimension: 400mm*400mm • Circular mounting plate dimension: 390mm dia • Motar:1HP • Frequency:0-0.25 Hertz • Amplitude: 0 to 10mm • Resolution:1mm • Accelerometers • Data acquisition system • Vibration analyser software Laptop	To show the process of Seismic analysis of structures	For 8 th semester students & also for conducting research activity	To learn Seismic analysis of structures	PO3, PO5, P08, PSO1, PSO2

8.	Experimental Models Consisting of 12 models	• Three storey frame • Vibration absorber • Vibration isolation model • One storey frame with planar asymmetry torsion building model • Two span simply supported model • Soil model • One storey frame • Liquefaction model • Four storey frame with stiffeners • One storey frame with stiffeners • Four storey frame with stiffeners Water tank.	To show different Loading operations on structural members	For 8 th semester students & also for conducting research activity	To learn different Loading operations on structural member	PO3, PO5, P08, PSO1, PSO2
9.	Department Library	Having collection of Text Books, CDs, Reference Books and Project /seminar reports	• To meet the needs of students • To provide reference facilities • To refer advanced information for seminar, laboratory projects	Throughout the semester	Student learning process	PO10 PSO2
10.	Centralized digital library	Having collection of Online Text Books, eBooks, NPTEL Videos, e-journals	• To meet the needs of students to provide online facilities. • To refer advanced information for seminars, technical projects	Throughout the semester	Student learning process	PO10 PSO2



Figure 6.1 Seminar Hall



Figure. 6.2 Department Library

Laboratories:

Figure 6.3 Compression Testing Machine



Figure 6.4 Fluid Mechanics Lab



Figure 6.5 CAD Lab



Figure 6.6 Display of Charts in Geotechnical Engg. Lab

Structural Engineering lab equipped with Shake table apparatus, digital loading frame equipment, NDT equipments provides opportunity for faculties and students to carryout research.



Figure 6.7 Loading Frame

NDT Equipments:



Figure 6.8 Profometer



Figure 6.9 Ultrasonic Pulse Velocity Test



Figure 6.10 Rebound Hammer



Figure 6.11 Horizontal Shake Table

Models:**Figure 6.12 Roof Truss****Figure 6.13 Plate Girder****Figure 6.14 Soil Profile****Figure 6.15 Aqueduct****NAIN - Project****Figure 6.16 Air Conditioning by Geothermal Heat Pumps**

6.3. Laboratories: Maintenance and overall ambiance (10)

The maintenance and ambiance of all the laboratories in the department of Civil Engineering are carried out in a proper way.

Maintenance:

- Technical Staff are available for maintenance of equipments and softwares. Regular preventive maintenance of equipment is carried out before the commencement of the semester.
- Minor repairs are carried out by the Laboratory instructor.
- Major repairs are outsourced by following the procedure of the institute.
- Laboratory equipments calibration & servicing are done frequently.
- Maintenance register is kept in the laboratories

Ambiance:

- All laboratories are equipped with necessary equipments to meet the requirements of curriculum.
- Laboratories and equipments are kept clean and dust free with regular cleanliness maintenance.
- In all laboratories, sufficient instructional area and teaching place available for staff and students.
- Labs are equipped with sufficient hardware and licensed software to run program specific curriculum.
- Laboratory manual are distributed to students.
- Lighting system is very effective, along with the natural light in every corner of the rooms.
- Labs are furnished with white/black board.
- Research laboratory/department library is available for all faculties and students to carry research work and project.

6.4. Project laboratory (5)

The Department of Civil Engineering has a project laboratory with carpet area of 20sqm equipped with basic resources and softwares for conduction of project works.

Table B 6.4 Details of the available facilities in Project laboratory

Sl No.	Name of the Facilities	Utilization
1.	Basic Material Testing Lab	UG/PG students, Research Scholars and Faculty members utilize for their mini projects, projects, and research activities.
2.	Concrete & Highway Materials Lab	UG/PG students, Research Scholars and Faculty members utilize for their mini projects, projects, and research activities.

3.	Computer Aided Drawing Lab	UG/PG students, Research Scholars and Faculty members utilize for their mini projects, projects, and research activities.
4.	Geo Technical Engineering Lab	UG/PG students, Research Scholars and Faculty members utilize for their mini projects, projects, and research activities.
5.	Environmental Engineering Lab	UG/PG students, Research Scholars and Faculty members utilize for their mini projects, projects, and research activities.
6.	Internet of 100Mbps and Wi-Fi of 35Mbps	UG/PG students, Research Scholars and Faculty members utilize for their mini projects, projects, and research activities.
7.	10KVA UPS 240 VDC along with batteries	Used in case of Power failure in all Labs.
8.	Structure Lab	PG students, Research Scholars and Faculty members utilize for their mini projects, projects, and research activities.

6.5. Safety measures in laboratories (10)

The wiring and electrical installations are checked for leakage and earthing. The safety of equipment and wires are provided by Miniature Circuit Breaker (MCB) and Earth Leakage Circuit Breaker (ELCB). MCB provides protection during short circuits. Fuses provide protection from over currents. Proper earthing is provided, so that it can protect from internal faults.

The safety measures taken in the laboratories are listed below:

- Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students.
- Technical supporting staff monitor the labs at regular times.
- First aid box and fire extinguishers are kept in each laboratory.
- Students are supposed to wear Lab Apron and shoes.
- Damaged equipments are identified and serviced at the earliest.
- Laboratories are maintained in a clean and systematic manner.
- In CAD lab PCs are loaded with antivirus and Firewall softwares.
- Students are restricted from carrying pen drives, CDs or any other storage devices into the laboratories to avoid data misuse and prevent systems from virus attacks.
- Students are restricted from carrying cell phones or any other electronic gadgets to prevent any sort of distraction.

Table B 6.5 Details of safety/disciplinary measures followed in laboratory

Sl. No.	Name of the Laboratory	Safety measures
1	Basic Material Testing Lab	• First Aid box • Fire extinguisher • Safety measures are displayed in the lab • Proper Earthing
2	Surveying Practice Lab	• First Aid box • Fire extinguisher • Safety measures are displayed in the lab
3	Applied Engineering Geology Lab	• First Aid box • Fire extinguisher • Safety measures are displayed in the lab
4	Hydraulics &Hydraulics Machinery Lab	• First Aid box • Fire extinguisher • Safety measures are displayed in the lab • Proper Earthing
5	Computer Aided Design Drawing Lab	• First Aid box • Fire extinguisher • Safety measures are displayed in the lab • Antivirus softwares • USB and CD drives are disabled
6	Geo-Technical Engineering Lab	• First Aid box • Fire extinguisher • Safety measures are displayed in the lab • Proper Earthing
7	Environmental Engineering Lab	• First Aid box • Fire extinguisher • Safety measures are displayed in the lab • Proper Earthing
8	Concrete & Highway Materials Lab	• First Aid box • Fire extinguisher • Safety measures are displayed in the lab • Proper Earthing

CRITERIA 7

Continuous Improvement

CRITERION 7	Continuous Improvement	50

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

POs Attainment Levels and Actions for Improvement (CAYm1 2019-2020)

The targets of average values from criteria 3 for CAYm1 (2019-2020) is presented in Table B 7.1

Table B 7.1 Attainment Levels and Actions for Improvement

POs	Target Level	Attainment Level	Observations
PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO1	2.09	1.79	Observation: Target of about 86% is attained. However, following observations were made: 14% of gap because of students lack of applying knowledge in the subjects strength of materials, Design of RC Structural Elements, Design of Pre-stressed Concrete Elements in solving complex engineering problems.
Action: Attainment level is lesser than target fixed. Efforts are made to improve further. - Arranged expert lecture on “Basic Mechanics of Materials” by Dr. T.Munikenche Gowda, Director R & D centre BGS. - Organized an expert lecture on “Recent development in remedial engineering for concrete structures” in association with ICI, Bengaluru centre, Karnataka, Resource person: Mr. M N Ramesh, Director, Talrak Construction Chemicals Pvt. Ltd., Bengaluru. - Conducted expert lecture on “Analysis of determine structures” by Prof. K T Sathish Chandra.			
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.			
PO2	2.17	1.90	Observation: Target not attained, 12% of gap. However, following observations were made: - Exposure of the students to real world problems is less hence students are not able to visualize and relate to academic subjects. - The problem solving and analyzing skills gained through, primarily, first and second year courses helps the students to apply the principles in real time applications and understand engineering science.

Action: Extra inputs will be given to the students through assignments and expert lectures. - Organized expert lecture on advanced surveying (AS) by Mr. Venugopal T V, CEO, Bharathabhoomi. - Conducted expert lecture on “Design approach towards gantry crane girders” by H T Jagadish, Principal consultant, BSD structural consultants, Bangalore. - An expert lecture on “Applied Geo Technical Engineering – Pile Foundation”, By Mr. Dinesh V P, Technical Director of Civil Material Testing Laboratory, Bangalore.			
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 considerations.			
PO3	2.05	1.78	Observation: Target level slightly higher than attainment level. 13% gap is observed because of students lack in designing solutions for complex problems in the subjects viz Strength of materials, Basic Surveying, Analysis of Determinate Structures and Advance Surveying. Also lack in meeting the societal and environmental considerations.
Action: Through visual aids, site visits and environmental awareness programme. - Conducted an expert lecture on “Design approach towards gantry crane girders” by H T Jagadish, principal consultant, BSD structural consultants, Bangalore. - Organized a webinar on “Work breakdown Structures for a project” was conducted in Association with Prayojana CMTI, Bangalore. - A Webinar was organized on the occasion of Earth Day 2021 on the topic “Global Pandemic: A Boon for Environment and Planet Myth or Reality”. The resource person Er.Ranjith M, Project Engg, Coliban Water works Australia.			
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.			
PO4	1.70	1.61	Observation: Attainment not achieved, 5% gap. However, following observations were made: Students lack in using research based knowledge for analyzing and interpreting data in the subjects Mathematics, Basic Geotechnical Engineering, Design of RC Structural Elements and Water supply and treatment Engineering.
Action: Projects on real time aspects and involving students in project exhibitions. - Organized a webinar on “Service Life Prediction of Structures”, the resource person was Dr. Manjunatha Hegde, Dean Dr. AIT, Bangalore. - Industrial visit to RMC Plant, Vidyanagar cross, Bangalore. - Visit to BMRCL, Metro construction, Near K R Puram, Bangalore and also casting yard (Reach-1A).			

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.			
PO5	2.05	1.93	Observation: Target level is highly accomplished, 6% of gap - Students could not apply and use modern tools in modeling complex activities in the subjects like Strength of materials, Basic Surveying, Concrete Technology and labs. - Use of CADD tools by some students for doing project works as a part of their Degree program.
Action: Introduction of use of modern tools such as Total Station, NDT, design software's have facilitated students to apply modern techniques for development of faster and accurate solutions for real time problems. - Mr. Madassar Mansoor Lane, Business Development Manager, Learning division EDS Technologies Pvt. Ltd. Talk on "online software certification courses". - Industrial visit to RMC Plant to understand the modern equipment usage in the laboratory. - A webinar on "Topographical Survey & Column Marking Work with Live Example Using Total Station". - Modern labs are developed to learn/ demonstrate the use of Modern software tools like E-TAB, AutoCAD, ArcGIS, and Stad Pro etc. to specify fulfilment of requirement in engineering applications in new industrial area. - Technical talk was arranged on "Industry driven and learning education", by Electronic data system (EDS) Technology. - A Technical talk by Mr. Nitish Kumar Reddy form Educadd Jayanagar on modern tool usage (Revit, 3D Max, Etabs)			
PO6: 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.			
PO6	1.85	1.68	Observation: Target not achieved, 9% of gap. However, following observation were made: - The courses of Civil Engineering are addressing the needs of, health, safety and social concerns regarding engineering practices in real life. - The students are found to be less active as far as social activities were concerned also they were unaware about the basic health and safety issues with engineering point of view.
Action: To understand the safety concerns and social aspects, students visited industry to expand their practical knowledge with the effect of improved practices in engineering. Social awareness program and career guidance was organized for Government school students of Dibbur, Village, Chickballapur (T & D) by department in association with ABVP, ICI, ACCE, IGBC.			

- An orientation class was arranged on topic “How to crack GATE” was conducted. Resource person’s / industry experts – Mr. Raghavendra sarala and Mr. Satish from ACE Engineering Academy. - Conducted expert lecture on “Applied Geo Technical Engineering – Pile Foundation”, By Mr. Dinesh V P, Technical Director of Civil Material Testing Laboratory, Bangalore			
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.			
PO7	1.71	1.66	Observation: Target not achieved. 3% of gap, Students could not understand the impact of professional engineering solutions and demonstrate the knowledge of sustainable development. - The issues of global and environmental awareness among the student should be improved.
Action: Visit to water treatment plants to increase the knowledge on need for sustainable development for the course. - Organized E-quiz on the account of World Environmental Day 2020. - Conducted International Conference on “Emerging trends in science and Technologies for Engineering system”, in association with Institute of Scholars. - Seminar on “Construction Management” by Prayojana Construction Management Training Institute. The speaker is Mr. Sriraman V, Executive director, Mr. Ashok kumar and Mr. Narendra, Placement& Training Coordinator.			
PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
PO8	2.08	1.77	Observation: Attainment not achieved, 15%gap. The students are doing better in improving the overall expertise in field of engineering but due to less stress on communications and ethical/moral knowledge, there is some lagging.
Action: Inculcating standards of honesty and integrity with real time engineering examples by experts. - In house Lectures and awareness/ motivational programmes are conducted. Career readiness program, corporate lectures and motivational talks are arranged to overcome the above observations. - 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.			

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
PO9	2.09	2.11	Observation: Target is achieved. Effective involvement of students as individual and as a team was observed.
Actions: Students are encouraged and guided to involve and take part as a team in association with the Departmental activities, Project Exhibition, Sports day and College annual day. • Technical annual events MANTHANA and JVTM has been initiated and organized by the department, which is completely managed by the students. Civil engineering students from various institutions participate in technical events. • Students are encouraged, guided to involve and take part as a team in association with the professional body ICI & ACCE.			
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.			
PO10	1.86	1.86	Observation: Target achieved. • Students could not communicate, present and write reports effectively. • Effective communication and documentation during project and technical seminar presentation has been encouraged.
Action: Guidelines for report writing have been provided to students for effective report writing and documentation. • Weightage for communication, through incorporation of rubrics exclusively for effective report writing and presentation skills, enhanced student's ability for documentation and communication. • An orientation class on "How to crack GATE" was conducted. Resource person's / industry experts – Mr. Raghavendrasarala and Mr. Satish from ACE Engineering Academy. • A technical talk was arranged on "Real estate valuation: An exciting career opportunity for final year students. Expert – Shiv Prasad Singh, MRICS Associate Professor, RICS school of built environment, Amity University, Nodia. Organizer Trilok. • Conducted Expert lecture on "Importance of Quantity survey and costing in construction projects", by Ravinchandra G, Director Pinnacle Prime Construction Pvt. Ltd., Bangalore • An orientation program organized on the topic "Education Aboard" by IDP's Biggest Education Fair.			
PO11: 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.			
PO11	1.79	1.69	Observation: Target not achieved. • 6% gap, students few courses of curriculum give knowledge of Management principle and applying managerial principles to his/her work including financial implications and to manage the project in multidisciplinary environments.

Action: Students will be trained about project management and finance management through software tools. - Organized expert Lecture by Dr. D S Rajendra Prasad, Chief Engineer, Azmeel Contracting Company, Jubail, Saudi Arabia, gave a talk on construction and Quality control in BurjKhalifa. - Funded/Sponsored Projects from funding agencies like KSCST helped students to learn about project management and finance management. - A webinar arranged on “Work breakdown Structures for a project” was conducted in Association with Prayojana CMTI, Bangalore. - Conducted an expert lecture on “Importance of Quantity survey and costing in construction projects”. - A technical talk was arranged on “Real estate valuation: An exciting career opportunity for final year students. Expert – Shiv Prasad Singh, MRICS Associate Professor, RICS school of built environment, Amity University, Nodia. Organizer Trilok.			
PO12: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.			
PO12	1.69	1.51	Observation: Target not achieved. 10%gap, Students could not able to engage in life-long learning. - The pre final year and final year courses of the program are demonstrating the resource for contemporary issues and lifelong learning.
Action: Student chapter of Indian concrete institute (ICI) and ACCE was initiated and students were encouraged to engage in various technical activities such as seminars, workshops, competitions and quizzes etc. - Technical events organized in association with professional bodies like ICI and ACCE motivate students to engage in lifelong learning. - Organized IIC webinar on “Entrepreneurship opportunities”, Resource Person-Abhishek Chandrashekar Co-founder& CEO, Rayal Brother Bike Rentals Bangalore. - A Technical talk by Mr. Nitish Kumar Reddy form EducaddJayanagar on modern tool usage (Revit, 3D Max, Etabs) - A talk by Mr. Rajanish Kumar, Director, Edu CADD, Yelhanka gave an overview of software training and job opportunities for B.E.Civil students			
PSO1: Apply Civil engineering knowledge in analysis, design, laboratory investigation & construction aspects.			
PSO1	1.91	1.63	Observation: 15%gap. It is observed that applications of engineering fundamentals for analysis and design problems need to be strengthened.

Action1: Extra efforts in numerical subjects, enables the students to apply fundamentals of mathematics for advanced analysis of complex civil engineering problems. • An Expert Lecture on Analysis of Determinate Structure by Prof. K T Sathishchandra • A talk by Mr. Rajanish Kumar, Director, Edu CADD, Yelhanka gave an overview of software training and job opportunities for B.E. Civil students • A Technical talk on “Compendious on a service aspects of structural design”, by Mr. D S Anjeneya Murthy, Principal structural Designer. • A technical talk was arranged on “Real estate valuation: An exciting career opportunity for final year students. Expert – Shiv Prasad Singh, MRICS Associate Professor, RICS school of built environment, Amity University, Nodia. Organizer Trilok.			
PSO2: Solve problems in various fields of civil engineering with appropriate construction materials and technology			
PSO2	1.90	1.85	Observation: 2%gap. Opportunities to exhibit better problem solving skills in various fields of civil engineering.
Action: In project work and extensive survey project students are expected to work as a team and also contribute individually incorporating modern tools. • Organized a webinar on the occasion of world environmental day - 2021 on the topic “Plastic waste management in India”, Resource person Mr.Achu R Sekhar, Manager, Sustainable cities and Transport WRT – India			

POs Attainment Levels and Actions for Improvement (CAYm2 2018-2019)

The targets are fixed 90% of average values from criteria 3 for CAYm2 (2018-2019) is presented in Table B 7.2

Table B7.2 Attainment Levels and Actions for Improvement

POs	Target Level	Attainment Level	Observations
PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO1	2.02	1.61	Observation: Attainment level is lesser than the target level.
Action: Bridge classes are conducted to enhance the fundamentals and applying problem solving skills in complex engineering problems. • An Expert lecture on advanced surveying (AS) for 4thsem A & B section students is conducted on 03.05.2019 by Mr. Venugopal T V, CEO, Bharathabhoomi. • Mr. Dinesh V P, Technical Director Civil material testing Laboratory addressed 6th ‘A’ sec students on topic “Soil investigation and behavior” on 19.03.2019.			

Mr. SachinAmarnath, Director, motion Institute of Management studies, Bangalore had interaction with 8th semester students on Topic “Civil engineering, the past, Present and future” on 12.03.2019.			
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.			
PO2	2.10	1.71	Observation: Attainment level is lesser than the target level.
Action: Students are encouraged to observe, their homes and surroundings to gain insight into real life civil engineering problems and think of possible approaches/solutions to these problems. - An Expert Lecture on Analysis of Determinate Structure for 4thSem students is conducted on 30.04.2019 by Prof. K T SathishChandra. - Mr. D S Anjeneya Murthy, Principal structural Designer gave a talk on Compendious on a service aspects of structural design for 6thsem students on 19.03.2019. - A Student interaction session on “Finite element Analysis”, By Prof. Sudhindra Haldadderi, Vice President, Operation, EME, for 7th semester students held on 14.11.2018.			
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 considerations.			
PO3	2.03	1.70	Observation: Attainment level is lesser than the target level.
Action1: Students are motivated to include all standard parameters and constraints according to Bureau of Indian Standards (BIS) and to address environmental concerns.			
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.			
PO4	1.61	1.36	Observation: Attainment level is lesser than the target level.
Action: Students are motivated to attend academic workshops to apply more knowledge interms of conduction of experiments and analysis of results at required level.			
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.			
PO5	2.07	1.72	Observation: Attainment level is lesser than the target level.
Action: Modern labs are developed to demonstrate the use of Modern tools like Total Station, NDT, design software’s to specify fulfillment of requirement in engineering applications.			

Nitish Kumar Reddy from Educadd Jayanagar gave talk on modern tool usage (Revit, 3D Max, Etabs) for 7th semester students on 04th October 2018.			
PO6: 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.			
PO6	1.81	1.42	Observation: Courses which enable students to address societal, health and safety issues relevant to professional engineering practice need to be incorporated in the Curriculum.
Action: Students are encouraged to take up project works in the areas of addressing societal issues such as rain water harvesting, Solid Waste Management, waste water treatment and recycle and reuse of resources.			
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.			
PO7	1.77	1.36	Observation: Attainment level is slightly lesser than the target level.
Action: Students are encouraged to take up project works related to sustainable developments such as rain water harvesting, reuse and recycling of marginal materials. Student mentoring program for 7 th sem students on “Sustainability Assessment” by Dr. Ajit Sabir and “Analysis of structures for natural loads and load combinations” by Mr. Anjaneya Murthy on 19.02.2019			
PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
PO8	2.18	1.60	Observation: Target level is higher than attained level.
Action: Awareness will be created among students on professional ethics and responsibilities through expert lecture.			
PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
PO9	1.89	1.78	Observation: Effective involvement of students as individual and as a team to be enhanced.
Action: Technical annual events MANTHANA and JVTM has been initiated and organized by the department, which is completely managed by the students. Civil engineering students from various institutions participate in technical events. Students are encouraged, guided to involve and take part as a team in association with the professional body.			

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.			
PO10	1.90	1.65	Observation: Attainment is slightly fulfilled.
Action 1: Training given by professional bodies will help students in improving soft skills and personality development. Action 2: Group discussion / debate/ quiz competition at regular intervals. Ms. Sharmila and Mr. Sai Kiran of IDP Education India Pvt. Ltd., - The world's leading student placement service provider and proud co-owner of IELIS examination addressed final year students on 19.03.2019			
PO11: 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.			
PO11	1.87	1.58	Observation: Target level is achieved.
Action: The awareness is created among the student regarding the management principles and managing projects. The relevant courses are revised and upgraded regularly to cater to latest techniques and trends in the area.			
PO12: 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.			
PO12	1.67	1.40	Observation: Target level is slightly higher than attainment level.
Action1: Motivate students to do hand on experiments and project of their own interest. Edu Cadd Jayanagar Branch, Bangalore gave talk on "Carrier building" for 8th sem students, Mr Prakash Babu and Mr Naveen kumar speakers. No. of Participants 71 on 01.04.2019			
PSO1: Demonstrate sound knowledge in analysis, design, laboratory investigations and construction aspects of civil engineering structures, along with good foundation in mathematics, basic sciences and technical aspects.			
PSO1	1.92	1.56	Observation: Students will build confidence in solving real life problems in civil engineering.
Action: Students are encouraged to involve consultancy and research programme.			
PSO2: Inculcating communication skills and leadership attributes towards the team work. Developing critical thinking abilities with competence in modern tool usage.			
PSO2	1.85	1.50	Observation: Attainment level is slightly lesser than the target level.
Action: Students are encouraged to select advanced topics in Civil Engineering as seminar and projects.			

POs Attainment Levels and Actions for Improvement (CAYm2 2017-2018)

The targets of average values from criteria 3 for CAYm2 (2017-2018) is presented in Table B 7.3

Table B7.3 Attainment Levels and Actions for Improvement

POs	Target Level	Attainment Level	Observations
PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO1	2.03	1.52	Observation: The application of knowledge of Mathematics was inadequate to solve problems on Civil Engineering.
Action: More number of problems solving in class & bridge course will enhance engineering knowledge			
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.			
PO2	2.17	1.65	Observation: Identify & problem solving knowledge of students was not satisfactory.
Action : Solving more on analysis related problems in regular classes, additional classes are planned to take clear the problems, & regular assignments			
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 considerations.			
PO3	2.17	1.61	Observation: Solving complex problem of students were not satisfactory.
Action: By using visual aids will help to students to understand the subjects, regular assignments			
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.			
PO4	1.62	1.12	Observation: exposure for students towards synthesis of the information on structural health and safety of civil Engineering components needs to be emphasized on
Action: solving more number of problems will enhance to provide engineering knowledge.			
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.			
PO5	1.80	1.44	Observation: It is observed that Up-gradations of tools and resources are necessary to meet the industry standards and research

Action: Introduction of use of modern survey tools such as Total Station have facilitated students to apply modern techniques for development of faster and accurate solutions for real time problems.			
PO6: 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.			
PO6	1.93	1.19	Observation: Courses which enable students to address societal, health and safety issues relevant to professional engineering practice need to be incorporated in the curriculum.
Action: To understand the safety concerns and social aspects, students visited industry to expand their practical knowledge with the effect of improved practices in engineering.			
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.			
PO7	2.28	1.49	Observation: The issues of global and environmental awareness among the student should be improved.
Action: Students are encouraged to indulge in projects, in which global and environmental issues are improved, with respect to consumption of energy and utilization of renewable energy resources.			
PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
PO8	2.04	1.53	Observation: Few students are not clear about the ethical practices in engineering education.
Action: Students are given real life case studies to debate on ethical decision and judgments.			
PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
PO9	1.85	1.72	Target has not achieved
Action: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
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.			

PO10	1.83	1.60	Observation: Few students are not having good Communication and presentation skills
Action: Classes on English communication, soft skills, analytical aptitude, and technical skills are arranged by the college every year apart from regular classes as per schedule.			
PO11: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.			
PO11	2.27	1.69	Observation: Few students are having less interest in engineering and management principles and their applications.
Action : Students will subsequently enter into project management and financial courses in their coming semesters			
PO12: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.			
PO12	1.88	1.52	Observation: The pre final year and final year courses of the program are demonstrating the resource for contemporary issues and lifelong learning.
Action1 Teaching methodology will include latest development which will thereby enhance learning among students.			
PSO1: Demonstrate sound knowledge in analysis, design, laboratory investigations and construction aspects of civil engineering structures, along with good foundation in mathematics, basic sciences and technical aspects.			
PSO1	1.96	1.39	Observation: Students will build confidence in solving real life problems in civil engineering.
Action: More weightage has to be given to Linear Algebra.			
PSO2: Inculcating communication skills and leadership attributes towards the team work. Developing critical thinking abilities with competence in modern tool usage.			
PSO2	1.83	1.56	Observation: Students will build confidence in solving real life problems in civil engineering
Action: In project work and extensive survey project students are expected to work as a team and also contribute individually incorporating modern tools.			

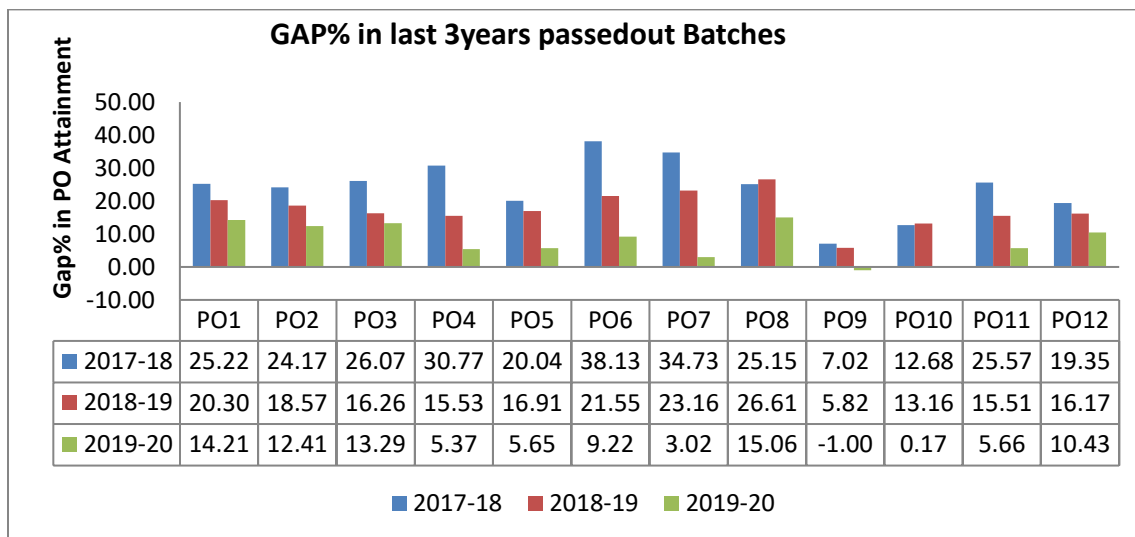


Figure7.1 GAP% in last 3years passed out Batches

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

The Departments of SJCIT are the backbone where trifocal activities such as teaching, research and consultancy services. An academic audit reviews the processes and procedures used by departments to enhance the quality of their Programs in terms of Program Educational Objectives and ensure Program Outcomes (Graduate Attributes) as defined by NBA are achieved against the stipulated targets for which standard practices and processes need to be put in place.

Objective: The primary unit of academic audit is the Department/Program. The main objective of an academic audit is to ascertain departments that have put in place adequate and effective quality assurance mechanisms in terms of strategies, procedures, that ensures quality inputs and consequently quality outputs, their agility in ensuring continuous improvements along with review of available resources, their optimal utilization, additional resource requirements for providing quality education.

SJCIT- IQAC

The institution has established Internal Quality Assurance Cell (SJCIT-IQAC) during 2017-18 in order to conduct academic audit. The SJCIT-IQAC has put in place an institute wide academic quality management framework to gather evidence-based information on the quality of its programmes and graduates and to encourage a culture of continuous self-improvement through self-reflection of processes and best practices of Programme through Academic Audits. The CO, PO and PSO attainments computed are the quality indicators used in the academic audit of the institution. The Management through IQAC coordinator will decide the main guidelines of academic audit indicating special reference to investigation to be made about the various practices being followed by the departments. The emphasis would remain on teaching, research and

services. All attempts will be made to ensure that continuous growth of all major parameters related to quality of education is achieved. The achievement with specific reference to the plan of action related to PEOs and POs/PSOs will be monitored. The IQAC coordinator has authorized SJCIT-IQAC to conduct the audit and collect information through various records that may include the following:

- Department action plan and targets
- Minutes of Departmental meetings of various committees
- Record of content delivery through lectures, practical etc. and
- Result analysis semester (three years) of courses in relation to set targets.
- Results and interpretation of indirect assessment
- Corrective action envisaged
- Recommendations of department Advisory Committee
- Any other evidential material

Roles of SJCIT- IQAC

1. To develop strategies to improve quality.
2. To set quality performance indicators in Teaching, Research and Administration pertaining to departments/programs and other units of the Institution.
3. To develop strategies to evaluate quality performance indicators
 - ✓ To evolve and implement self-evaluation proforma for faculty members
 - ✓ To evolve and implement stakeholders feedback assessment
 - ✓ To facilitate periodic academic and administrative audit

Requirements

- ✓ Involvement of all the stakeholders to evaluate the set quality performance indicators.
- ✓ Feedback collection, analysis and dissemination of relevant information citing concerns where improvement measures should be taken.
- ✓ Facilitate accreditation and review processes involving external agencies-NBA/NAAC

Entities Involved in Continuous Improvement:

Faculty, Course Coordinators, Program Coordinators, HoD, Department Advisory Board, College Advisory Board.

Documents to be submitted for Audit:

The following records of the faculty members are verified during the internal academic audit.

- 1) Calendar of Events
- 2) Appointment order
- 3) Copy of marks cards and degree
- 4) Time Table
- 5) Syllabus
- 6) Lesson Plan
- 7) Lecture notes
- 8) Attendance Register
- 9) Teachers Work Diary
- 10) Assignment Questions

- 11) Question Bank
- 12) Internal Question Paper and Scheme of Evaluation
- 13) Internal Test Marks
- 14) Previous Year Question Papers
- 15) Special Class Records (if conducted)
- 16) Teacher- Appraisal Feedback
- 17) Exam Related Work
- 18) UG/PG Projects guided
- 19) Project Proposals submitted
- 20) Contents beyond Syllabus
- 21) FDPs/STTPs attended or organized
- 22) CO-PO Matrix and COs attainment Levels

In addition, the following parameters are audited with respect to each department.

- Teaching, Learning Process:
 - a) Lesson Plan, Lecture notes Result Analysis & Evaluation
 - b) Counseling& Mentoring
 - c) Co-curricular activities: Seminar/Conference/workshop/Guest Lecture conducted and attended
 - d) Research Activities: Publications
 - e) Value Added Programs
- Results, Placements, Internships, R&D Projects and Higher Studies Statistics

Process:

- ✓ Defining intended Course and Program Outcomes
- ✓ Identifying Curricular Gaps and strategy (actions) to bridge the gaps
- ✓ Designing effective teaching-learning processes
- ✓ Developing evaluation schemes for assessment of COs and POs
- ✓ Analyzing the attainment levels of COs and POs
- ✓ Reviewing of the COs, POs and PEOs
- ✓ Assuring implementation of quality education along with other activities such as research and services, co-curricular and extracurricular to support attainment of POs

Approach

Institution has formed various committees for conduct and review of activities related to academic audit at the institution and department levels. The composition and functions of these committees are as follows:

1. Institution level Academic Audit / Advisory Board (Internal):

Chairman: Dr.G.T.Raju, Principal

External Expert – Academia / Industry

Functions

- ✓ Contribute to preparation of SAR especially information related to institutional and finance.

- ✓ Seek timeline and action plan from each department for Direct and Indirect assessment of COs and POs and ensure their compliance.
- ✓ Interact with employers/industries/alumni for requirements analysis
- ✓ Conduct analysis of results and attainment of COs, POs and PSOs for all Departments
- ✓ Taking corrective actions and additional inputs for meeting COs/POs/PSOs
- ✓ Assessment and revision of COs/PEOs. Review of Departmental Vision and Mission statements
- ✓ Present the analysis of all departments to the Management
- ✓ Develop faculty appraisal system and assess faculty performance annually, report to BOM (Board of Management).

Frequency of Meetings

The committee shall meet once a month, with agenda and action taken record

2. Institution level Academic Audit / Advisory Board (External):

Chairman: Dr. G T Raju, Principal

Members:

Two External Experts – Academia / Industry preferably professors with sufficient academic and administrative back ground.

VTU Nominee

Functions

- ✓ Assessment on institutional achievements and giving corrective actions for meeting POs, PEOs and Mission
- ✓ Review of Institutional Vision and Mission statements

Frequency of Meetings

The committee shall meet once a year, with agenda and action taken record

3. Department Level Committees**a. Department Advisory Board:(DAB)**

Composition:

Chairman: HoD

Convener: Program Coordinator

Members:

Faculty

Current Students

Alumni, Parents

Employers

External Expert – Academia/Industry/Professional Society.

Functions

- ✓ Review on assessment of Course Outcomes and their relationship with POs/PSOs
- ✓ Validating the actions for continuous improvements of COs, POs and PEOs
- ✓ Review on COs, PEOs and Mission statements
- ✓ Presenting report to IQAC with resource and academic requirements

Frequency of Meetings

The committee shall meet once a year, with agenda and action taken record

b. Program Assessment Committee (PAC):

Composition:

Chairman: HoD

Convener: Program Coordinator

Members: Course Coordinators 2 or 3 Senior and Junior Faculty member

(Professors, Associate Professors, Assistant Professors)

Faculty from Other Department

External Expert – Academia/Industry/Professional Society

Functions

- ✓ Prepare and finalize the COs, PSOs, and PEOs in line with the Mission and record the process of development of COs, PSOs and PEOs
- ✓ Assessment of COs, POs and PSOs
- ✓ Recommendations and suggestions to come out with implementable actions for continuous improvements of COs, POs, PSOs and PEOs
- ✓ Conduct assessment of curriculum and resources available to meet the developed COs, PEOs and PSOs, decide additional course contents, electives to bridge the gaps and inform the shortfalls in resources to the Institutional Committee which will evaluate the needs and present the additional requirement to the management
- ✓ Conduct assessment of placement record for ensuring PEOs attainments or revision if required
- ✓ Supervises the COs and their alignment to POs, assignments, tests, quiz, activities, Bloom's Taxonomy and ensures targets set by faculty are realistic.
- ✓ Develop common Performance Indicators for respective Courses aligned to the PO and ensures the faculty develop activities, tests, quiz, assignments related to the common performance indicators as well as for their course specific indicators
- ✓ Monitors progress periodically
- ✓ Develop a description of the process with questionnaires and tools required for continuous assessment
- ✓ Develop faculty self-appraisal questionnaire and student feedback questionnaire
- ✓ Decide frequency of assessment of POs – internal and external
- ✓ Obtain COs from respective faculty for concerned PO along with their alignment with PO, Bloom's Taxonomy and target of expected achievements
- ✓ For direct assessment collects the student results for respective courses aligned to the PO and analyze the average achievement of performance
- ✓ Hold discussions with concerned faculty on shortfalls for the achievement of pre-set targets.
- ✓ Collects recommendations for improvements
- ✓ Prepare and conduct indirect assessment and prepare report
- ✓ Record the results and presents to the IQAC on direct and indirect assessment.
- ✓ Maintain statistics and update on website

Frequency of Meetings

The committee shall meet once a month/semester/year, with agenda and action take record

Reporting:

The purpose of academic audit is not judgmental but to cause development to happen. The SJCIT-IQAC prepares a report that describes the strengths and weaknesses of each department's efforts to improve academic quality of their programs and identify plans for improvements. The main components of the report would be:

- Recognition of Good practices
- Recognition of well performing departments
- Recommendations for improvements

The audit report is presented to the Management and made available to the departments to respond to the issues raised in the report. The responses of the departments are going to be part of the final audit report.

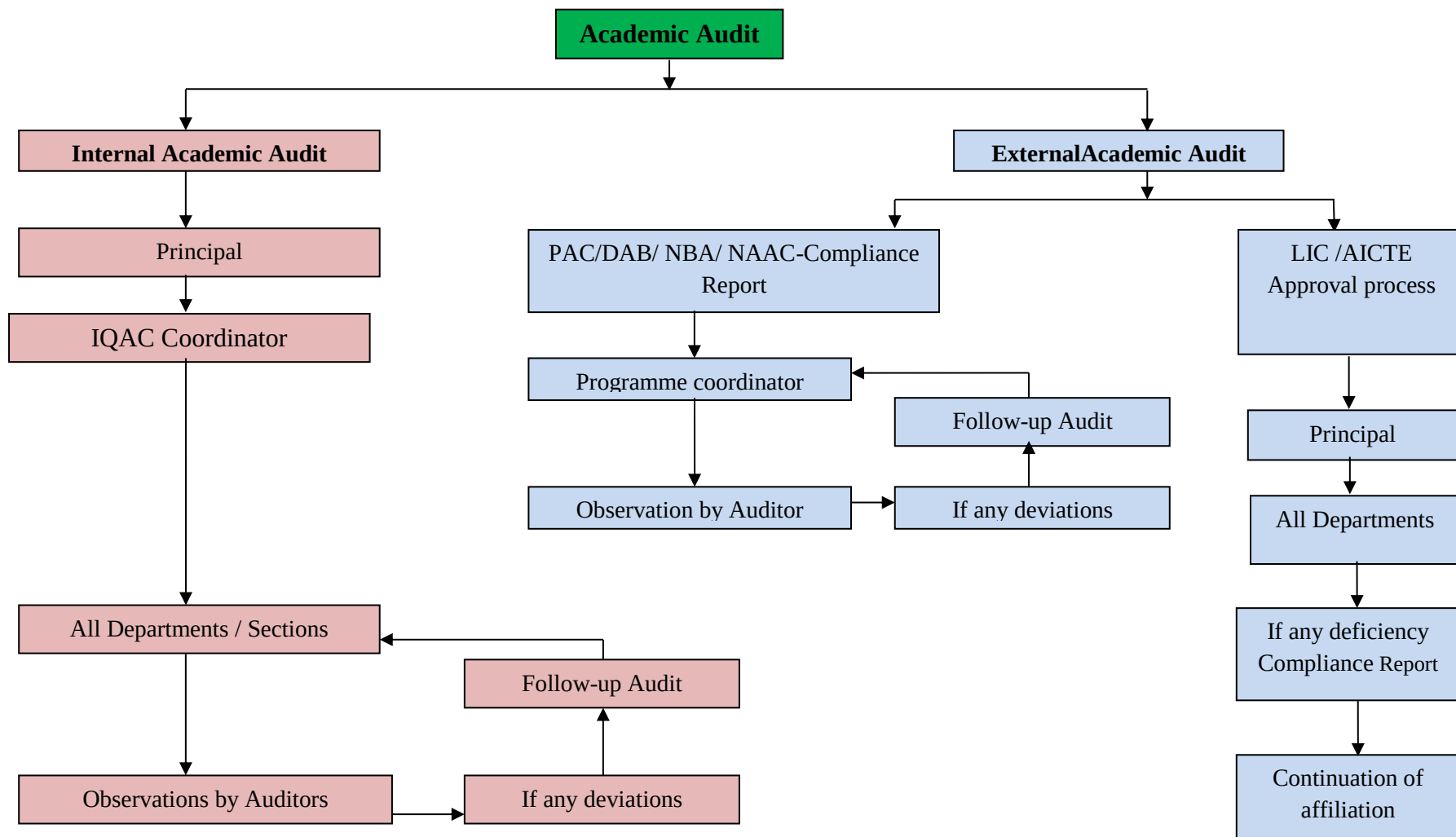


Figure 7.2 Academic Audit Process

GAP Analysis and Actions initiated for attainment of POs and PSOs.

Steps:

1. Target and Attained levels of each subject for each PO is the basis for Gap analysis
2. Average of attained levels called Average Attainment Level (AAL) is computed for each PO. Based on the AAL, we categorize the subjects that are contributing for the attainment of POs. Subjects whose attainment level is below the AAL is considered to be the one's contributing for non-attainment of that PO. Again average of attainment levels of these subjects for that PO is calculated. Finally, subjects whose attainment level is above the average attainment levels are considered to be the one's contributing a lot for non-attainment of that PO.
3. Identify the subjects that are not contributing much for the attainment of POs as per the step 2.
4. Program Assessment Committee would inform the concerned faculty and course coordinator to initiate the actions to reduce the gap.
5. PAC would also bring this to the notice of DAB and SJCIT-IQAC
6. Strict follow-up in this process is ensured by PAC and IQAC.

Example: For PO1 of [2016-2020] Batch

Target: 2.09

Average Attainment Level (AAL): 1.79

Average Attainment = $1.79/2.09 * 100 = 86\%$

For the Subject 15MAT11: Attainment Percentage = $(1.50 / 2.25) * 100 = 67\%$

Now the difference (Average Attainment – Attainment of Subject) is calculated.

i.e., $(86 - 67) = 19\%$ difference and hence 15MAT11 has not attained PO1 and missed the target marginally.

Average of difference of all subjects for each PO and PSO is calculated

Each subject difference percentage is compared with this average difference and finally if each subject difference percentage is greater than average difference then finally that subject has not attained the target.

Similarly, for all the POs and subjects we calculate the AAL and find out the subjects that are really contributing for non-attainment of POs.

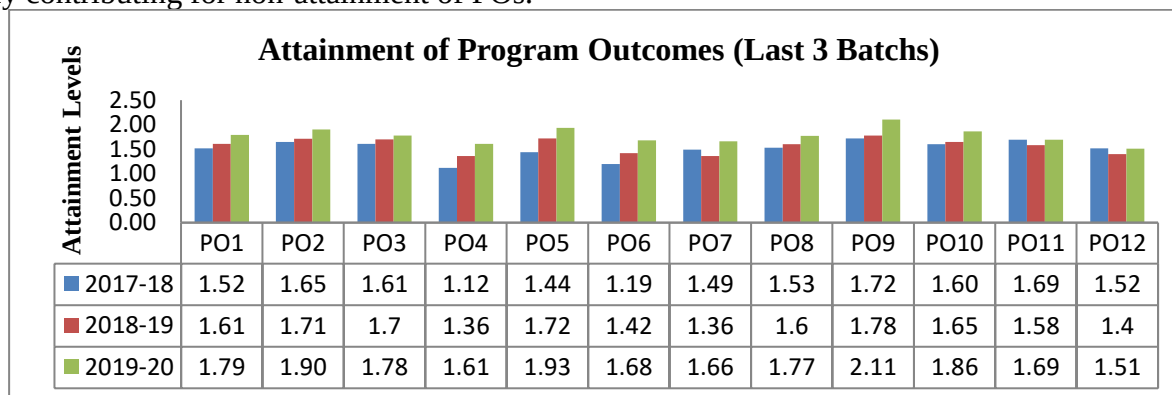


Figure7.3 PO Attainment for all the three passed out batches

For **PO1**, Average Attainment = **70%**

Table B 7.4 Average of PO1 attainment values

SUBJECT	ATTAINED	TARGET	Attainment Percentage (ATTAINED/TARGET)*100	Contributing to PO attainment (Y/N)?	DIFFERENCE	Contributing to PO attainment (Y/N)?
15MAT11	1.50	2.25	66.67	N	3.33	Y
15PHY12	3.0	3.0	100.00	Y	Above AAL	
15CIV13	0.70	2.0	35.00	N	35	N
15EME14	3.0	3.0	100.00	Y	Above AAL	
15ELN15	2.33	2.33	100.00	Y	Above AAL	
15WSL16	3.0	3.0	100.00	Y	Above AAL	
15PHYL17	3.0	3.0	100.00	Y	Above AAL	
15CIV18	1.33	1.33	100.00	Y	Above AAL	

Average Percentage of Gap for PO1 is:15%

For the subject 15CIV13, difference is 35> 15 %. Hence 15CIV13 is contributing a lot for Non-attainment of PO1.

Table B 7.5 of PO1attainment values of all subjects

SUBJECT	ATTAINED PO1	TARGET PO1	ATTAINED/TARGET	PO1- Y/N	DIFFERENCE	PO1 Y/N
C101	1.50	2.25	66.67	N	3.33	Y
C102	3.00	3	100.00	Y		
C103	0.42	2.5	16.67	N	53.33	N
C104	0.70	2	35.00	N	35.00	N
C105	2.60	2.6	100.00	Y		
C106	3.00	3	100.00	Y		
C107	2.80	2.8	100.00	Y		
C108	2.00	3	66.67	N	3.33	Y
C109	2.33	2.33	100.00	Y		
C110	3.00	3	100.00	Y		
C111	2.20	2.2	100.00	Y		
C112	3.00	3	100.00	Y		
C113	0.42	2.5	16.67	N	53.33	N
C114	1.60	2.4	66.67	N	3.33	Y
C115						
C116	1.33	1.33	100.00	Y		
C201	0.73	2.2	33.18	N	36.82	N
C202	1.21	1.6	75.63	Y		
C203	1.81	2.2	82.27	Y		
C204	1.00	1.5	66.67	N	3.33	Y
C205	2.38	3	79.46	Y		
C206	1.37	3	45.52	N	24.48	N
C207	2.84	3	94.81	Y		
C208	1.70	1.75	97.33	Y		

C209	1.10	2.2	50.00	N	20.00	N
C210	0.99	1.6	62.16	N	7.84	Y
C211	0.82	1.2	68.59	N	1.41	Y
C212	1.03	2	51.75	N	18.25	N
C213	0.77	1.5	51.23	N	18.77	N
C214	0.73	1.25	58.40	N	11.60	Y
C215	1.50	1.5	100.00	Y		
C216	1.54	1.75	88.09	Y		
C301	1.88	3	62.67	N	7.33	Y
C302	1.41	1	141.29	Y		
C303	1.04	1.5	69.14	Y	0.86	Y
C304	1.32	1.75	75.55	Y		
C305.E1	0.88	1.25	70.73	Y		
C305.E2	1.76	2	87.93	Y		
C306.E1	1.84	2.5	73.60	Y		
C307	0.98	1	97.73	Y		
C308	0.96	1	96.23	Y		
C309	1.49	1.55	96.13	Y		
C310	0.72	1	71.56	Y		
C311	1.87	2.5	74.80	Y		
C312	2.14	2.75	77.82	Y		
C313.E1	2.19	2.75	79.64	Y		
C314.E1	0.80	2	40.00	N	30.00	N
C314.E2	1.54	1.5	102.87	Y		
C315						
C316	1.61	1.67	96.41	Y		
C401	2.19	2.75	79.64	Y		
C402						
C403	2.06	3	68.67	N	1.33	Y
C404.E1	0.99	1.5	65.74	N	4.26	Y
C405.E1	2.08	2.6	80.00	Y		
C405.E2	1.99	2	99.45	Y		
C406	1.64	1.67	98.20	Y		
C407	0.98	1	98.00	Y		
C408	2	2	100.00	Y		
C409	1.26	1.5	84.00	Y		
C410	1.01	1.5	67.65	N	2.35	Y
C411.E1	1.61	2	80.38	Y		
C411.E2	2.65	3	88.17	Y		
C412	3.00	3	100.00	Y		
C413	3.00	3	100.00	Y		
C414	2	2	100.00	Y		

Target Average PO1	2.09
Final Attainment Avg	1.79
Average Target Attained	86%

Table B 7.6 List of subjects not attained POs and PSOs for [2016-2020] Batch

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	C101	C101	C101	C101	C205	C206	C205			C303	C103
C103	C103	C103	C114	C114	C305.E1	C305.E1	C212			C309	C104
C104	C104	C104	C201	C201	C306.E1	C404.E1	C301			C404.E1	C113
C108	C108	C108	C205	C204	C312	C410	C306.E1				C205
C113	C113	C113	C209	C205	C314.E1	C411.E1	C310				C304
C114	C114	C114	C213	C209	C410		C312				C310
C201	C201	C201	C301	C303			C313.E1				C314.E1
C202	C202	C204	C303	C304			C314.E1				C314.E2
C204	C204	C205	C306.E1	C410			C401				C410
C205	C206	C209	C310				C403				
C206	C209	C211	C311				C410				
C209	C210	C212	C314.E1				C413				
C210	C211	C213	C403								
C211	C213	C214	C404.E1								
C212	C301	C301									
C213	C302	C303									
C214	C303	C305.E1									
C301	C304	C306.E1									
C303	C305.E1	C310									
C304	C306.E1	C311									
C305.E1	C309	C316									
C306.E1	C310	C401									
C310	C311	C403									
C311	C312	C405.E1									
C312	C314.E2	C410									
C313.E1	C403										
C314.E1	C404.E1										
C401	C405.E1										
C403	C410										
C404.E1											
C410											
31	29	25	14	9	6	5	12	0	0	3	9

Actions taken in order to complete the loop:

1. Based on the feedback/suggestions given by the PAC and the Course Coordinators and Subject Lead, the faculty of the concerned subject may execute some of the following steps that are appropriate for the subject in order to reduce the gap.
2. Additional learning materials prepared and distributed to students
3. Assignments may be given to slow learners to improve their understanding.
4. Solving all the examination and exercise problems in the class itself
5. Encouraging students to take up mini-projects wherever possible enabling them to work in team.
6. Arranging Technical talks / Seminars on the specialized topics by experts from academia/industry
7. Participating in FDPs for better understanding and update of subject knowledge.
8. Taking special/extra classes for weaker students.
9. Conducting presentations/exhibitions to motivate students

10. Conducting workshops for students to improve their skills.
11. Encouraging students to prepare reports on the practicing projects and mini-projects in order to improve their communication and presentation skills

7.3 Improvement in Placement, Higher Studies and Entrepreneurship (10)

Assessment is based on improvement in:

- **Placement:** Number, quality placement, core industry, pay packages etc.
- **Higher studies:** performance in GATE, GRE, GMAT, CAT etc., and admissions in premier Institutions.
- **Entrepreneurs**

Table B 7.7 Higher Studies and Entrepreneurship

Item	CAY m (2019-20)	CAY m1 (2018-19)	CAYm2 (2017-18)
Total no. of final year students (N)	106	111	104
No. of students placed in Companies or Government Sector (X)	79	84	72
No. of students admitted to higher studies with valid qualifying scores. (Y)	07	08	15
No. of students turned entrepreneur in engineering/ technology (Z)	01	02	02
Placement Index $(X+Y+Z)/N$	0.821	0.847	0.856
Average placement	0.841		

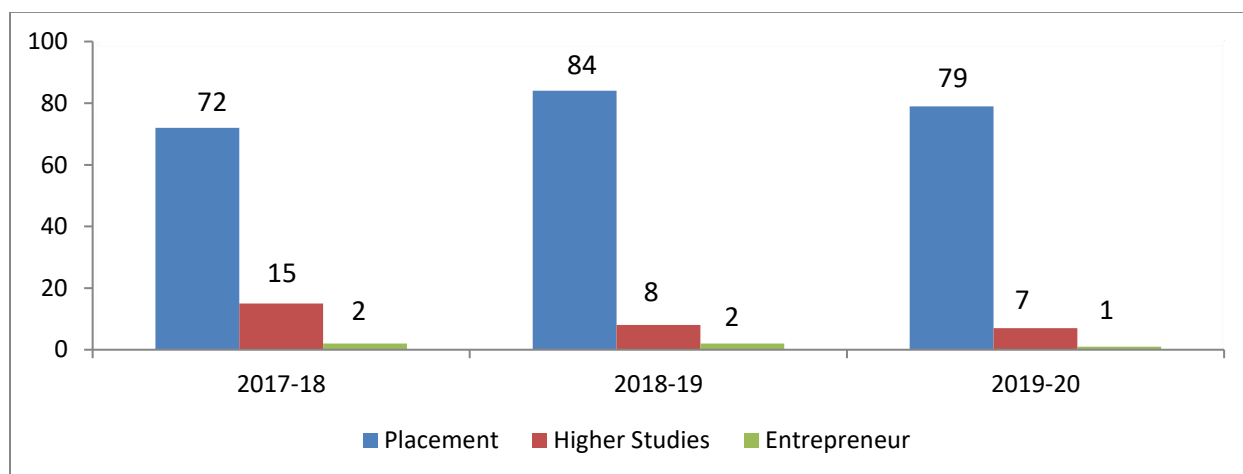


Figure 7.4 Placement, Higher Studies & Entrepreneur statistics

Table B 7.8 Higher Studies: performance in GATE, GRE, GMAT, CAT (2019-2020)

Sl. No	Student name	USN	Year of passing from the institution	Name of Entrance Exam	Degree	University / Institution
1.	Bipin Anand	1SJ16CV014	2020	IELTS	M.S	Northeastern College of Professional Studies Boston, United States
2.	Girija H	1SJ16CV025	2020	NCET	MBA	National Institute of Construction Management and Research Maharashtra
3.	Maale Hareesa	1SJ16CV048	2020	PGCET	M.Tech	SJB Institute of Technology Kengeri, Bangalore
4.	Madhusudan H M	1SJ16CV052	2020	PGCET	M.Tech	Reva College, Bangalore
5.	Manasa K V	1SJ16CV056	2020	PGCET	M.Tech	UVCE, Bangalore
6.	Niharika S	1SJ16CV068	2020	PGCET	MBA	Ramayya College Bengaluru
7.	Sharon P	1SJ16CV100	2020	IELTS	M.Sc	The University of Manchester England

Table B7.9 Higher Studies: performance in GATE, GRE, GMAT, CAT (2018-19)

Sl. No.	Student name	USN	Year of passing from the institution	Name of Entrance Exam	Degree	University / Institution
1.	Manoj Nayaka P	1SJ15CV052	2019	PGCET	M.Tech	Infini Institute of Project Management
2.	Pooja H S	1SJ15CV069	2019	PGCET	M.Tech	SJC Institute of Technology Chickballapur
3.	Prajwal K S	1SJ15CV071	2019	PGCET	M.Tech	NMAM Institute of Technology Karala Taluk Udupi
4.	Sanjay B R	1SJ15CV090	2019	PGCET	M.Tech	M I T Manipal
5.	Srinidhi G	1SJ15CV101	2019	PGCET	M.Tech	ACS College Of Engineering Bangalore

6.	Chethan M	1SJ15CV126	2019	PGCET	M.Tech	Dr. Ambedkar Institute of Technology Bangalore
7.	Arshiya Firdose H M	1SJ16CV403	2019	PGCET	M.Tech	SJC Institute of Technology Chickballapur
8.	Harish gowda H B	1SJ16CV409	2019	PGCET	M.Tech	Sri Venkateshwara College of Engineering Bangalore

Table B 7.10 Higher Studies: performance in GATE, GRE, GMAT, CAT (2017-18)

Sl. No	Student name	USN	Year of passing from the institution	Name of Entrance Exam	Degree	University / Institution
1.	Arshiya Sultana	1SJ14CV007	2018	PGCET	M.Tech	Bangalore Institute of Technology, Bangalore
2.	Ashish	1SJ14CV010	2018	PGCET	M.Tech	SJC Institute of Technology Chickballapur
3.	Asra Fathima	1SJ14CV013	2018	PGCET	M.Tech	SJC Institute of Technology Chickballapur
4.	Dhirendra Kumar yadav	1SJ14CV023	2018	IELTS	M.S	Central Queensland University, Australia
5.	Gunasheela.R	1SJ14CV030	2018	PGCET	M.Tech	SJC Institute of Technology Chickballapur
6.	M.N.Rahul	1SJ14CV041	2018	PGCET	M.Tech	SJC Institute of Technology Chickballapur
7.	Mohamad Taiyab	1SJ14CV051	2018	PGCET	M.Tech	Nagarjuna College of Engineering, Bangalore
8.	Nithin Gowda.C.M	1SJ14CV058	2018	PGCET	M.Tech	VTU Extn. Centre RASTA
9.	Pawan Gowda.J.M	1SJ14CV061	2018	PGCET	M.Tech	Global Academy of Technology, Bangalore
10.	Priyanka.B	1SJ14CV069	2018	PGCET	M.Tech	MVJ College of Engineering, Bangalore
11.	Sneha.C	1SJ14CV092	2018	PGCET	M.Tech	UVCE, Bangalore

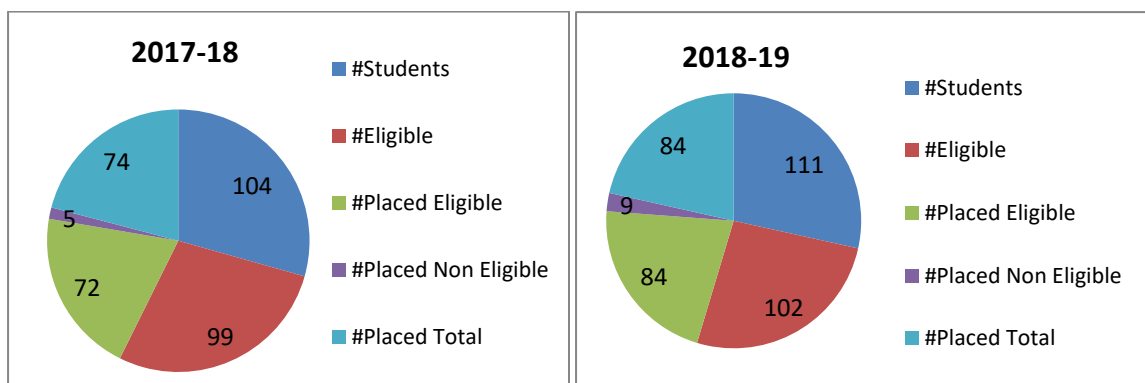
12.	SreeLeha.P	1SJ14CV094	2018	PGCET	M.Tech	Nehru Institute of Technology, Kaliyapuram Coimbatore
13.	Subham Kumar Singh	1SJ14CV097	2018	GATE	M.Tech	Delhi Technological University, Delhi
14.	Vennela.K.S	1SJ14CV114	2018	PGCET	M.Tech	UVCE, Bangalore
15.	Girisha R	1SJ15CV405	2018	PGCET	M.Tech	JSS Science and Technology University

Table B 7.11List of Entrepreneurs

Sl. No	Student name	USN	Year of passing from the institution	Name of the company / organization	Year of starting
1	G Madan Kumar	1SJ17CV412	2020	G L Enterprises	2021
2	Surya G	1SJ15CV110	2019	Surya Agro Tech	2020
3	Srikanth S	1SJ16CV433	2019	Srikanth S Contractor	2020
4	Umraz Khan M	1SJ14CV112	2018	M N Constructions	2019
5	Sandeep P D	1SJ15CV417	2018	D S Construction	2020

Table B 7.12Placement Statistics – in last 3 years

Year	No. of Students	No. of Eligible (E)	No. of Placed Eligible (PE)	No. of Placed Non-Eligible (PNE)	Placed Total (PE+ PNE) / (E+PNE)
2017-18	104	99	72	05	74
2018-19	111	102	84	09	84
2019-20	106	69	79	37	109



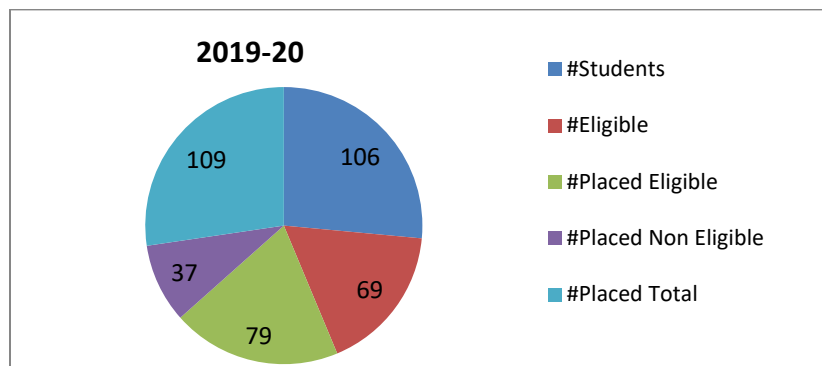


Figure 7.5 Placement Statistics-in last 3 years

7.4 Improvement in the quality of students admitted to the program (10)

Assessment is based on improvement in terms of ranks/score in qualifying state level/national level entrances tests, percentage marks in Physics, Chemistry and Mathematics in 12th Standard and percentage marks of the lateral entry students.

Table B 7.13 Quality of Student Admission

Item			CAY (2020-21)	CAYm1 (2019-20)	CAYm2 (2018-19)
National Level Entrance Examination		No. of Students Admitted	--	--	-
		Opening Score/Rank	--	--	-
		Closing Score/Rank	--	--	-
State/Institution Level Entrance Examination/Others	CET	No. of Students Admitted	24	38	62
		Opening Score/Rank	30866	27359	21506
		Closing Score/Rank	153255	92207	95578
	COMEDK	No. of Students Admitted	Nil	Nil	Nil
		Opening Score/Rank	Nil	Nil	Nil
		Closing Score/Rank	Nil	Nil	Nil
	Manageme nt	No. of Students Admitted	12	16	43
	SNQ	No. of Students Admitted	6	6	6
Lateral Entry Details	Diploma CET	No. of Students Admitted	12	13	29

		Opening Score/Rank	1303	4930	1657
		Closing Score/Rank	16288	15963	19293
Average CBSE/ Any other Board Result of Admitted Students (physics, Chemistry and Mathematics)			66.58%	72.29%	69.99%

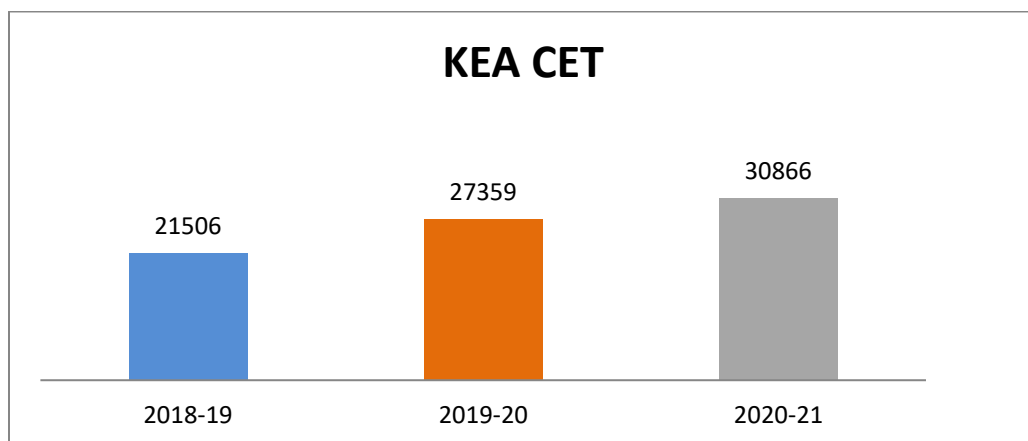


Figure 7.6 Opening Score/Rank through KEA CET for the Assessment Years

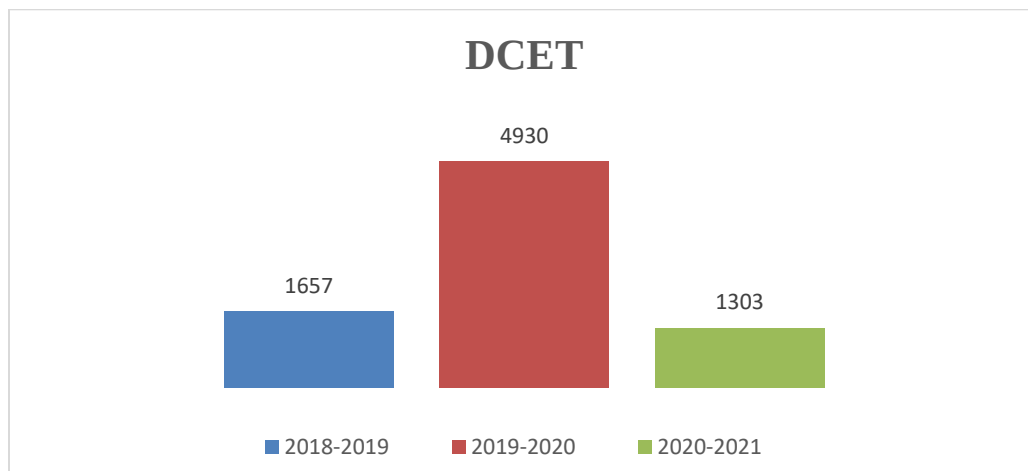


Figure 7.7 Opening Score/Rank through DCET for the Assessment Years

PART B

Institute Level Criteria

CRITERIA 8

First Year Academics

Criterion 8	First Year Academics	50

8. FIRST YEAR ACADEMICS (50)

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

The data related to first year courses namely number of students, number of faculty and the first-year students faculty ratio given in table 8.1.

Table 8.1: First Year Students Faculty Ratio

Year	Number of Students (Approved Intake Strength)	Number of Faculty Members (Considering fractional load)	FYSFR	Assessment= (5 x20)/ FYSFR (Limited to Max. 5)
CAY (2020-21)	840	42	20	5
CAYm1 (2019-20)	840	42	20	5
CAYm2 (2018-19)	720	38	19.0	5
Average	800	40	19.0	5
Average assessment				5.0

8.2. Qualification of Faculty Teaching First Year Common Courses (5)

Assessment of qualification = $(5x + 3y)/RF$, x= Number of Regular Faculty with Ph. D, y = Number of Regular Faculty with Post-graduate qualification RF= Number of faculty members required as per SFR of 20:1.

The qualification details of faculties who are involved in handling first year common courses are given in table 8.2.

Table 8.2: Qualification of Faculty Teaching First Year

Year	X	Y	RF	Assessment of faculty qualification $(5x + 3y)/RF$
2020-21 (CAY)	6	36	42	3.23
2019-20 (CAYm1)	5	37	42	3.38
2018-19 (CAYm2)	6	32	36	3.44
Average Assessment			3.35	

8.3. First year Academic Performance (10)

Academic Performance = ((Mean of 1st Year Grade Point Average of all successful Students on a 10-point scale) or (Mean of the percentage of marks in First Year of all successful students/10)) x (number of successful students/number of students appeared in the examination)

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

Formula used for evaluating academic performance is shown in the below example.

Academic Performance = (Mean of the percentage of marks in First Year of all successful students/10)) x (number of successful students/number of students appeared in the examination)

First year academic performance for the three assessment years are presented in the below table.B.8.3.

Table .8.3 First Year Students Academic Performance for the year 2019-20,2018 -19, 2017-18

Academic Year	Branch	Appeared for Examination	No. Successful Students	Mean of the percentage of marks in First Year of all successful students	Average API
2019-20	Civil Engineering	56	50	5.28	4.73
2018-19		107	85	6.45	
2017-18		84	79	6.59	

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 Outcome of first year is done. (5)

The various assessment methods used to gather the data, upon which the evaluation of Course Outcomes of first year is done are as follows. The course outcomes are defined by faculty. The course contents are delivered both at theory and lab classes. Course Outcome (CO) & Semester End Examination (SEE) targets are fixed for various courses at the department level, based on the earlier performance of the students in the semester end examination. The Evaluation of the students' performance is done through Internal Assessment. In case of theory courses, three Internal Assessment tests are conducted, namely Internal Assessment – 1, Internal Assessment - 2, Internal Assessment - 3 and then the average of three Internal Assessment with Assignment marks are considered for course attainment evaluation. However, in case of lab courses, assessment is done based upon continuous evaluation, which include conduction of experiments, lab record, viva – voce and

lab Internal Assessment.

If Attainment % is $\geq$ CO Target in Internal Assessment test & Attainment % is $\geq$ CO Target in Semester End Examination target is met, then the final course attainment level is calculated giving 40% weightage to marks in Internal Assessment test (theory or lab) and 60% weightage to marks in Semester End Examination.

. If the set target is not attained, action plan will be prepared for the next academic period. Under the action plan various academic activities will be proposed and implemented to achieve set targets.

Assessment tools are categorized into two methods to assess the course outcomes as:

1. Direct method

2. Indirect method

1. Direct methods: The student's knowledge and skills from their performance in the continuous internal assessment tests, semester examinations, seminars, class room and laboratory assignments etc. These methods provide a sampling of what students know and/or can do and provide strong evidence of student learning.

2. Indirect methods: surveys on students learning. They assess opinions or thoughts about the course knowledge or skills and their valued by different stakeholders.

The following table 8.4.1 shows the Direct and Indirect Assessment methods for CO attainment.

Table.8.4.1 Direct and Indirect Assessment methods

Direct Assessment Methods			
Sl. No	Assessment Method	Description	Frequency
1	Internal Assessment Test(IA)	Internal tests are conducted for 30 marks for 2017 scheme & 40 marks for 2018 scheme by covering the course syllabus.	Three times in a semester as per the schedule
2	Semester End Examinations(SEE)	University will be conducting semester end exam as follows • 60 Marks for 2017 scheme • 100 Marks for 2018 scheme	End of the Semester
3	Lab Assessment(Internal)	Lab internals are conducted for 10 marks for 2017 scheme and 25 marks for 2018 scheme by covering the course experiments. Evaluation of lab record is as follows • 30 marks for 2017 scheme • 40 marks for 2018 scheme	Lab Record Evaluation-Weekly • Lab Internal - once per Semester (End of each semester)

4	Practical examinations	As per the university guidelines Lab externals are conducted for 60 marks for 2017 scheme & 100 marks for 2018 scheme by covering the course experiments.	End of the Semester
5	Assignment (Applicable only for CBCS scheme)	Students are assigned with questions relevant to courses and will be evaluated for 10 marks for the 2017 & 2018 scheme.	As per the subject requirement
Indirect Assessment Method			
6	Course Exit Survey	Collecting variety of information about course content delivery from the student end.	End of the semester

The following Flow chart 8.4.1 depicts the process followed for CO attainment using both the assessment methods.

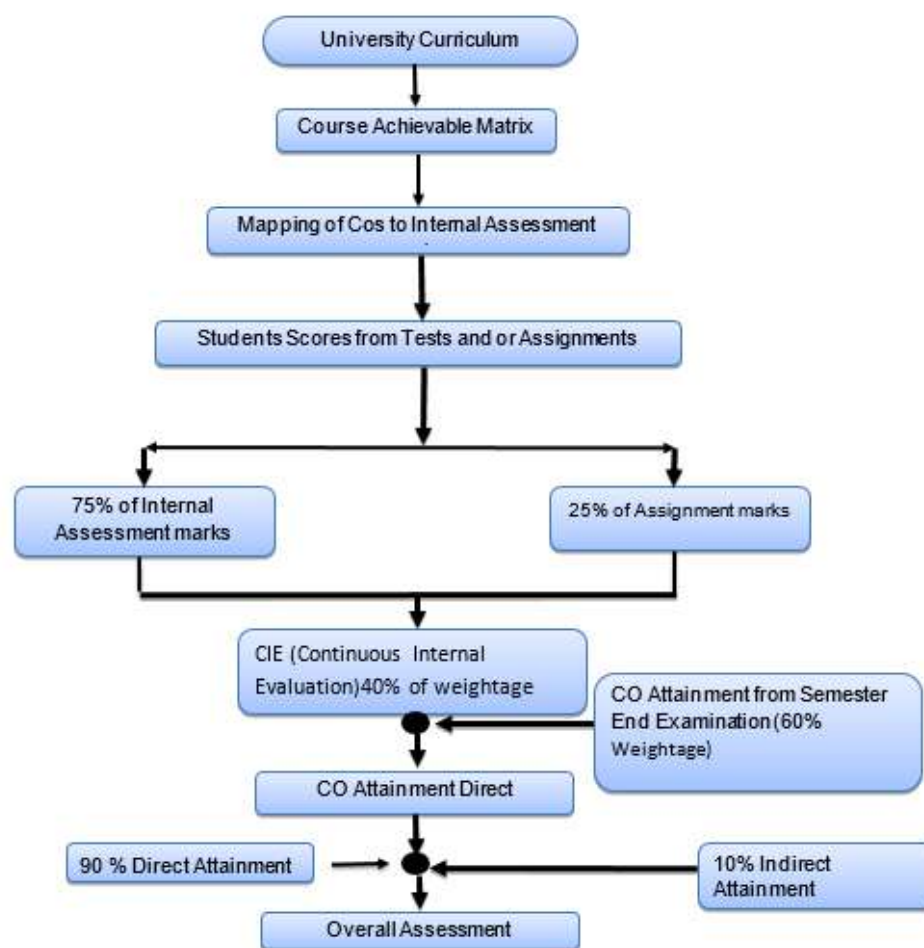


Figure 8.4.1: Flow chart for Assessment process

Direct method

The components used for direct assessment method are Internal Assessment (IA) and Semester End Examination (SEE) with a weightage of 40% and 60% respectively. IA assessment for theory courses is based on marks scored by a student in Tests, Assignment.

CO Attainment through IA

Course Outcome (CO) attainment illustrates the performance of a student in a particular course. CO attainment is calculated based on students score in each assessment tools.

Course Achievable Matrix

The course outcomes for every course are defined based on the Bloom's taxonomy learning levels. The course achievable matrix is derived from the course content. The course coordinator ensures the distribution of COs in each question paper which will be further verified by Program Coordinator.

Test (IA)

CO attainment is calculated by considering the marks of each question in the question paper for all the three tests. Each question in test question papers is mapped with COs. Through this mapping we get the student score for each CO.

Laboratory

Laboratory associated courses contributes to CO attainment through the marks scored in conduction of experiments and laboratory test by the end of each semester.

CO Attainment through SEE

CO attainment through SEE will be derived from the Marks scored by the students in the university examination in that particular course.

Indirect method

Indirect method includes course end survey for particular course in a semester. Feedback will be collected at the end of every course are mapped to COs. All these components contribute to 10% of CO attainment.

8.4.2. Record the attainment of Course Outcomes of all first year courses. (5)

Program shall have set the target levels for all first year courses

Process for the CO attainment: Course Outcome for a course identifies the knowledge and skills gained by the students upon completion of the course. Course attainment is a measure of the course outcomes acquired by the students. The COs are discreetly defined based on the Syllabus of each course.

Expected Attainment: The expected attainment level is the threshold of attainment, which the student has to gain after completion of each course. The expected attainment levels for each course are set based on the previous attainment level for that course or based on class average marks. The students are required to achieve the expected CO attainment level which facilitates the CO attainment of that particular course. If the attainment of the course is not meeting the target level, course coordinators retrospect the reason and recommend for modification of course curriculum or the delivery/assessment method, to improve the CO levels. If the course is introduced for the first time the target level is set based on the inputs from faculty expertise in that course.

Course Outcome Attainment: The process of CO attainment, based on direct and indirect methods is as depicted in Figure below. The CO of every course is mapped with PO as defined by NBA. Question papers of CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) are mapped with CO to arrive at individual CO weightage. CO attainment of each student is calculated based on CIE, SEE, laboratory, assignment and self-study performance. The CO attainment of students is averaged to obtain target attainment level

Course Outcome attainment Target levels for all first year courses 2019-20

Table 8.4.2: Assessment target for Course Outcomes Evaluation (2019-20)

Course outcome Attainment				
Sl. No.	Assessment Method	Maximum Marks	Course outcome Target	
			Percentage	Marks
1	Internal Assessment Test (IA)	40	40%	24
2	Semester End Examinations, (SEE)	60	60%	30
3	Lab Assessment (Internal)	40	40%	24
4	Practical Examinations	60	60%	30

Set attainment level for above course outcomes targets are:

Attainment Level 1: 50% of students scored more than set target level in the final examination.

Attainment Level 2: 55% of students scored more than set target level in the final examination.

Attainment Level 3: 60% of students scored more than set target level in the final examination

Table 8.4.2: Attainment of Course Outcomes of all first year courses for the academic year CAY 2019-20

Attainment of Course Outcomes of all First Year Courses for the Academic Year 2019-20 CV			
Sl. No	Course Code	Title of the Course	CO Attainment
1.	C101	Calculus and Linear Algebra	1.23
2.	C102	Engg. Chemistry	2.54
3.	C103	C Programing for Problem Solving	2.0
4.	C104	Basic Electronics	3
5.	C105	Elements of Mechanical Engg.	3
6.	C106	Engg. Chemistry Lab	3
7.	C107	Computer Programming Lab	2
8.	C108	Technical English I	3
9.	C109	Advanced Calculus and Numerical Methods	2.43
10.	C110	Engg. Physics	2.0
11.	C111	Elements of Civil Engg. & Mechanics	3
12.	C112	Engg. Graphics & Design	3
13.	C113	Basic Electrical Engg.	2.08
14.	C114	Basic Electrical Lab	2.2
15.	C115	Engg. Physics Lab	3
16.	C116	Technical English-2	3

8.5. Attainment of Program Outcomes from first year courses (20)

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

The relevant program outcomes that are to be addressed at first year need to be identified by the institution.

Program Outcome attainment levels shall be set for all relevant POs and/or PSOs through first year courses.

The assessment tools used for CO attainment levels are internal assessment, semester End Examination, continuous evaluation of lab course, assignment indirect assessment.

PO is estimated using the formula (PO average value from CO PO matrix $\times$ Final CO attainment level)/3.

The following flow chart indicates the results of evaluation of each relevant PO

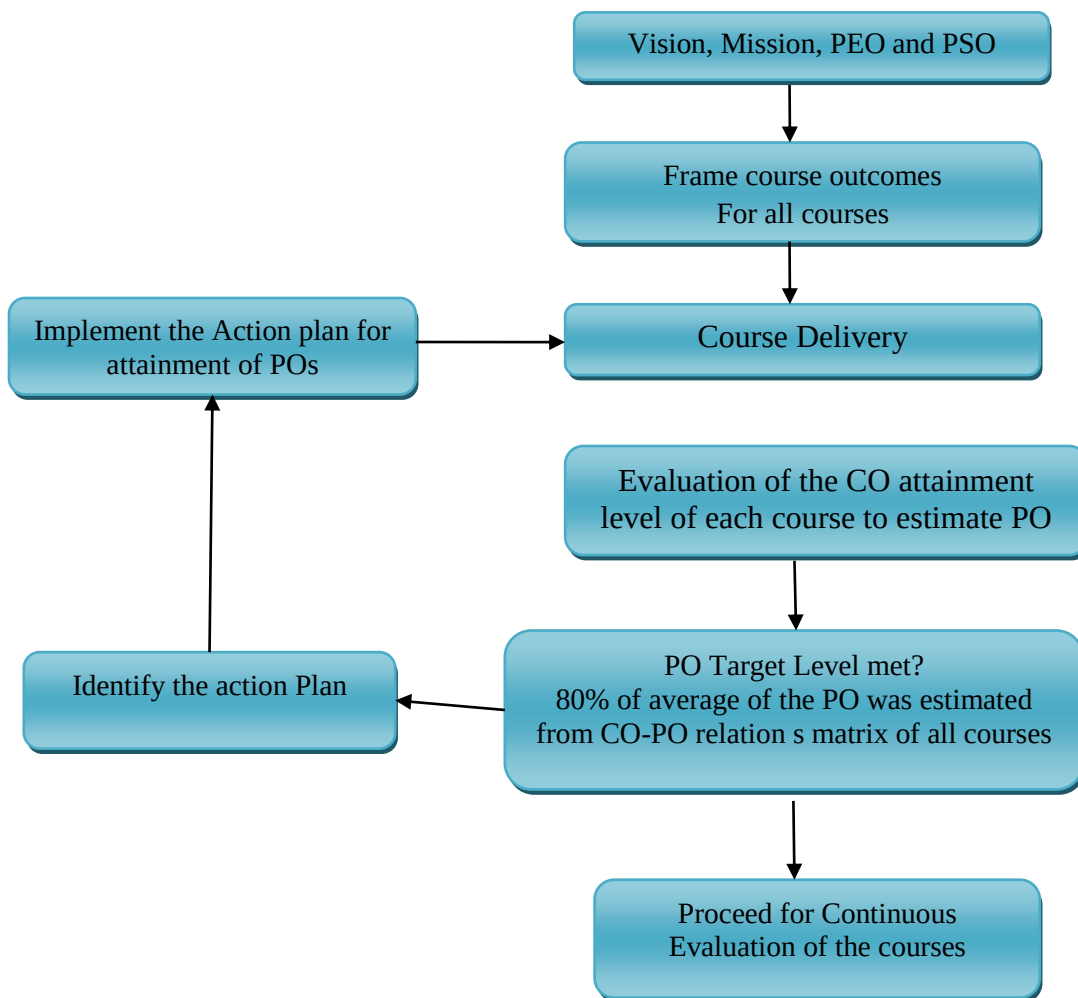


Figure 8.5.1: Results of evaluation of each relevant PO

PO attainments of First year courses of three assessment years**Table B.8.5.1a Course-PO Matrix**

Course-PO Matrix [2019-2020] - CV												
Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101 Calculus and linear Algebra	0.99	0.82	0.72	0.82	0.41	-	-	-	-	-		0.41
C102 Engg. Chemistry	2.54	1.69	-	-	-	-	1.69	-	-	-	-	-
C103 C Programming for Problem Solving	1.50	1.17	1.17	0.67	1.17						1.17	1.00
C104 Basic Electronics	2.50	3.00	2.00	-	-	-	-	-				
C105 Elements of mechanical engineering	3.00	1.00	-	-	1.0	-	1.0	-	-	-	-	-
C106 Engg. Chemistry lab	3.00	1.00	-	-	-	-	-	-	1.00	-	-	-
C107 Comp. Programming lab	1.60	1.60	1.33	1.33	1.33	-	-	-	-	-	-	1.33
C108 Technical English 1	2.00	1.67	1.79	1.50	1.0	2.0	2.00	2.0	1.50	2.33	2.40	2.00
C109 Advanced Calculus and Numerical Methods	2.41	2.33	1.19	1.68	0.96							0.96
C110 Engg. Physics	1.67	1.11	-	-	-	-	-	-	-	-	-	-
C111 Basic Electrical Engineering	2.08	1.39	0.69	-	-	-	-	-	-	-	-	-
C112 Elements of Civil Engg.	1.73	1.50	2.00		1.33					0.67		
C113 Engg. Graphics	3.00	2.00	2.00	1.00				2.00	2.00			
C114 Engg. Physics lab	2.50	1.83	1.66	-	-	-	-	-	-	-	-	-
C115 Basic Electrical Engg. lab	2.20	1.47	1.17	-	-	-	-	-	-	-	-	-

C116 Technical English-2	1.00	2.00	1.60	1.50	0.60	1.00	1.8	1.0	2.00	2.80	1.79	2.40
Actual Average PO Attainment	2.11	1.60	1.53	1.44	0.98	1.50	1.62	1.67	1.70	1.93	1.79	1.30
Over all Attainment												
Expected target Attainment	2.64	2.04	1.81	1.62	1.29	2.10	1.85	1.80	2.00	2.33	1.98	1.67
Actual Average Attainment	2.11	1.60	1.53	1.44	0.98	1.50	1.62	1.67	1.70	1.93	1.79	1.30

8.5.2 Actions taken based on the results of evaluation of relevant POs (5)

PO Attainment Levels and Actions for improvement for CAYm1 (2019-20) Mention for relevant POs.

CAYm1 (2019-20) – CV Branch			
POS	Expected PO Target Level (Avg)	Attained PO Target Level (Avg)	Observations
PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO1	2.64	2.11	PO1 is not achieved. Gap 20%. Students lack in applying knowledge of mathematics, chemistry, C programing, basic electronics, basic electrical engineering & physics in solving complex engineering problems.
Action 1: planned to conduct tutorial, remedial classes. Action 2. planned to conduct Bridge courses, more complex problems are distributed to the students			
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.			
PO2	2.04	1.60	PO2 is not achieved. Gap 21%. Students could not have identified, formulate& analyze complex problems in Mathematics, Chemistry, C Programing, Basic Electronics, Basic Electrical Engineering.
Action1.: Planned to conduct additional classes in order to complex problems coated by the students. Action 2. Higher learning level questions CIE assessment level is increased in all these subjects.			
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 considerations.			

PO3	1.81	1.53	PO3 is not achieved. Gap 15%. Students are lack in designing solutions for complex problems in the subjects
Action 1.: planned to conduct Special classes. Action 2: planned to conduct one extra hour which is more than the university prescribed number of hours.			
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.			
PO4	1.62	1.44	PO4 is not achieved. Gap 11%. Students lack in using ideology-based knowledge for analyzing mathematical problems, Basic electronics, Basic electrical Engineering, Elements of Civil Engineering.
Action 1: planned to counsel the students and advised to attend extra coaching classes beyond the regular planned classes Action 2: Coaching classes were conducted for Programming beyond the regular planned classes			
PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.			
PO5	1.29	0.98	PO5 is not achieved. Gap 24%. students could not apply and use modern tools in modelling complex activities in the subjects like Mathematics, elements of civil engineering, basic electrical engineering.
Action 1: planned to conduct Extra classes, assignments and handouts.			
PO6: 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.			
PO6	2.10	1.50	PO6 is not achieved, Gap 28%. Students could not apply contextual knowledge of in assessing societal safety.
Action 1: planned to conduct various activity to create awareness about the societal life activities through NSS program, induction program etc. Action 2: Planned to organize Special lectures			
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.			
PO7	1.85	1.62	PO7 is not achieved. Gap 4%. Students could not understand the impact of professional engineering solutions.
Action: Planned to conduct various activities to create awareness about environmental issues through NSS program. Action 2: Planned to creating an awareness by conducting orientation programs.			

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice			
PO8	1.80	1.67	PO8 is not achieved. 7% Gap Students could not be able to follow the ethics & fundamentals of subjects.
Action 1: Planned to organize lecture on professional ethics & universal human values			
PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
PO9	2.0	1.73	PO9 is Not achieved. 13 % Gap. Students could not involve as an individual leader in multidisciplinary subjects.
Action 1: Planned to Extra classes are taught during class hours.			
Action 2 : Planned to conduct laboratory experiments , seminars , mini projects .			
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.			
PO10	2.33	1.93	PO10 not is achieved, 17% gap. students could not communicate present & write reports effectively.
Action1: planned to Identifying the students groups to present seminars covering general, science & technical topics			
PO11: 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.			
PO11	1.98	1.79	PO11 is not achieved. 9% Gap. In the first level all the courses are not mapped with PO properly
Action1: planned to conduct workshops on project management to demonstrate knowledge and understanding of the engineering and management principles			
PO12: 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.			
PO12	1.67	1.30	PO12 is not achieved,22% gap. Students could not able to engage in lifelong learning.
Action1: Planned to Encourage students to conduct seminars, literature survey on current trends.			

PSO Attainment Level

Course	PSO1	PSO2
C101 Calculus And Linear Algebra	0.8	0.4
C102 Engg. Chemistry	1.7	0.8
C103 C Programing For Problem Solving	1.3	0.7
C104 Basic Electronics	2.2	1
C105elements Of Mechanical Engg.	1	1
C106 Engg. Chemistry Lab	1	1
C107 Computer Programming Lab	1.3	0.7
C108technical English I	1	-
C109 Advanced Calculus And Numerical Methods	1.6	0.8

C110 Engg. Physics	1.3	0.7
C111 Elements Of Civil Engg. & Mechanics	2	1
C112 Engg. Graphics & Desi Gn	2	1
C113 Basic Electrical Engg.	1.3	0.7
C114 Basic Electrical Lab	0.7	0.7
C115 Engg. Physics Lab	1.5	1
C116 Technical English-2	1	-
Average	1.36	0.82

PSOs Attainment Levels and Actions for Improvement- (2019-20)

PSO	Target Level	Attainment Level	Observations
PSO 1 : Apply Civil Engineering Knowledge in Analysis, Design, Laboratory Investigations and Construction Aspects			
PSO1	1.67	1.36	PSO1 is not Achieved. 18% Gap. Students lack in applying knowledge of Mathematics, Chemistry, C programing for problem, Basic Electronic Engineering, Basic electrical Engineering & Physics in solving complex engineering problems.
Action1: Planned to conduct Extra Classes and assignments are given in the respective subjects. Action2: Planned to conduct additional problems are solved in the class hours.			
PSO 2 : Solve Problems in Various Fields of Civil Engineering with Appropriate Construction Materials & Technology			
PSO2	1	0.82	PSO2 is Not Achieved .18% Gap. Students could not have identified, formulate& analyse complex problems in Mathematics, Chemistry, C Programing, Basic Electronics, Basic Electrical Engineering
Action1: Planned to conduct extra hours to solve complex problems coated by the students. Action2: Planned to give question bank of higher order problems in the respective subjects.			

CRITERIA 9

Student Support Systems

Criterion 9	Student Support Systems	50

9. STUDENT SUPPORT SYSTEMS (50)

9.1 Mentoring System to help at Individual level (5)

The Institution has well defined mentoring process for all the programs. The mentoring system is established with the following objectives.

1. Interact with the students and help them to face challenges.
2. Monitor academic progress
3. Enhance interpersonal skills
4. Understand the student potential and enabling carrier planning.
5. Motivate students to take part in co-curricular and extra-curricular activities.

Through the mentoring system a complete track of the student activities like academic, co-curricular, extracurricular achievements, social activities and the details of parent-teacher meeting are registered.

A standard mentoring register (Proctorial Performa) has been developed and the staff members record the data in the register. Each staff is allocated with 20 students under the mentoring system. The faculties will have a meeting with the students periodically and the frequency of meeting is three times in a semester. The academic progress and all his activities are discussed and recorded. Any discrepancies would be addressed by the mentor. On case to case basis student would be taken up for high level counseling.

The institution has four level mentoring systems. The nature of mentoring at different levels is represented in the Table B.9.1.

Table B.9.1 Different levels of mentoring systems

Sl. No.	Proctor level	Particulars	
1	Level -1 Proctor System	Mentors	Teaching faculty act as Mentor
		No. of students per mentor	20
		Frequency of meeting	Meeting is conducted every month after internal assessment Test (three time in a semester)
		Parents Teachers Interaction	The Parents feedback is collected after every meet by respective mentors

2	Level-2 Proctor System	Proctor Coordinator/HOD counseling	The feedback analysis will be referred by the Proctor Coordinator/HOD for corrective measures based on the need.
3	Level-3 Proctor System	Counseling by the Principal	After the second level of counseling the students would be counseled by the Principal based on the need.
4	Level-4 Proctor System	Professional counseling	After the third level of counseling the students would be counseled by the Professional Counselor based on the need.

The mentoring process has improved the academic performance of the students which intern has reduced the student dropouts.

9.2. Feedback analysis and reward / corrective measures taken, if any (10)

The institution has established feedback process for all the courses. The students give the feedback on the performance of the faculty through teacher appraisal form.

Teacher appraisal feedback form is designed at the institution level by considering different dimensions of the teaching learning process. The objective of this appraisal is to evaluate the performance of the faculty members. This is collected from the students once in a semester. The mode of collecting the feedback is online.

The performance of faculty member is assessed by taking feedback from students on the following ten points.

1. Preparation of the class
2. Stressing on Important ideas and points
3. Communication of the lecturer
4. Response to the Questions and doubts.
5. Coverage of syllabus
6. Availability of Teacher outside the class hours
7. Usefulness of notes given
8. Knowledge gained by attending the class
9. Maintenance of discipline in the class
10. Overall ranking of performance of teacher

Rating Scale

Excellent-A

Good-B

Satisfactory- C

Poor-D

Requirement: $A+B \geq 85\%$

The feedback data is analyzed and the consolidated report is submitted to the respective HOD's for further corrective measures. If a faculty gets below 85% of feedback, detailed analysis would be made by the faculty and analyze the route cause for the low performance. Such faculty would submit explanation report to the HOD. The HOD makes necessary recommendations. Performance rating of faculty through student feedback system is one of the factors in evaluating the annual performance and to release the annual increments. HOD of concern program creates awareness about the feedback systems and its importance among the students and in general about 80% of students participate in the feedback process.

9.3. Feedback on facilities (5)

The objective of institution is to provide best facilities to the students. The Institute has a mechanism for collection of feedback from outgoing students on facilities, curricular activities, co-curricular activities, extra-curricular activities, library facilities, administration and others. The frequency of collecting data is once in a year from outgoing students. Every department analyses the feedback and report is forwarded to the Principal for initiate appropriate actions. The standard format for collecting feedback on facilities is presented in TableB.9.3.

Table B.9.3 Format for collecting feedback on facilities

Sl. No.	Activities	Excellent	Good	Satisfactory	Not Satisfactory
1.0	Curricular activities				
1.1	Quality of Teaching				
1.2	Laboratory Conduction				
1.3	Faculty competency				
1.4	Adequacy of Class Rooms				
1.5	Laboratory Facilities				
1.6	Usage of Teaching Aids				
2.0	Co - Curricular activities				
2.1	Seminars/Workshop's usefulness				
2.2	Industrial Visits				
2.3	Career guidance & entrepreneur activities				
2.4	Placement & Training activities				
3.0	Extra-curricular activity				
3.1	Cultural Activities				
3.2	Sports Activities				

4.0	Library facilities				
4.1	Availability of text/reference books				
4.2	Availability of General/Technical Journals				
4.3	Accessibility to books/journals				
4.4	Staff Assistance				
4.5	Working hours				
5.0	Office and administration				
5.1	Admission procedure				
5.2	Examination Procedures				
5.3	Procedure of distribution of certificates, marks cards etc.				
5.4	Response to enquiries				
6.0	Other facilities				
6.1	Canteen				
6.2	Transportation				
6.3	Hostel				
6.4	Bank				
6.5	General amenities (water, security, common room)				

A sample copy Aeronautical Engineering Department have collected feedback on facilities as follows

S. J. C INSTITUTE OF TECHNOLOGY, CHICKBALLAPUR - 562 101
Student Satisfaction Survey Form - Aeronautical Engg.
8th Semester (2018-19)Batch

No. of Forms = 32
8th Semester AED

Activities	Excellent	Good	Satisfactory	Not Satisfactory
1.0 Curricular activities	%	%	%	%
1.1 Quality of Teaching	14 43.75	16 50.00	2 6.25	0 0.00
1.2 Laboratory Conduction	12 37.50	16 50.00	2 6.25	0 0.00
1.3 Faculty competency	12 37.50	16 50.00	2 6.25	0 0.00
1.4 Adequacy of Class Rooms	15 46.88	11 34.38	5 15.63	1 3.13
1.5 Laboratory Facilities	16 50.00	12 37.50	4 12.50	0 0.00
1.6 Usage of Teaching Aids	16 50.00	10 31.25	6 18.75	0 0.00
2.0 Co - Curricular activities	%	%	%	%
2.1 Seminars/Workshop's usefulness	12 37.50	16 50.00	2 6.25	0 0.00
2.2 Industrial Visits	14 43.75	16 50.00	2 6.25	0 0.00
2.3 Career guidance & Entrepreneurial activities	11 34.38	9 28.13	10 31.25	2 6.25
2.4 Placement & Training activities	5 15.63	15 46.88	6 18.75	6 18.75
3.0 Extra-curricular activities	%	%	%	%
3.1 Cultural Activities	10 31.25	14 43.75	6 18.75	2 6.25
3.2 Sports Activities	10 31.25	13 40.63	4 12.50	5 15.63
4.0 Library facilities	%	%	%	%
4.1 Availability of text/reference books	7 21.88	11 34.38	10 31.25	4 12.50
4.2 Availability of General/Technical Journals	7 21.88	12 37.50	9 28.13	4 12.50
4.3 Accessibility to books/journals	7 21.88	12 37.50	9 28.13	4 12.50
4.4 Staff Assistance	12 37.50	16 50.00	3 9.38	1 3.13
4.5 Working hours	14 43.75	13 40.63	4 12.50	1 3.13
5.0 Office and administration	%	%	%	%
5.1 Admission procedure	8 24.44	15 46.88	3 9.38	6 18.75
5.2 Examination Procedures	8 24.44	13 40.63	5 15.63	6 18.75
5.3 Procedure of distribution of certificates, marks cards etc.	7 21.88	17 53.13	3 9.38	5 15.63
5.4 Response to enquiries	7 21.88	15 46.88	3 9.38	7 21.88
6.0 Other facilities	%	%	%	%
6.1 Canteen	6 18.75	4 12.50	7 21.88	15 46.88
6.2 Transportation	9 28.13	13 40.63	7 21.88	3 9.38
6.3 Hostel	5 15.63	7 21.88	13 40.63	7 21.88
6.4 Bank	8 25.00	4 12.50	13 40.63	7 21.88
6.5 General amenities(water, security, common room)	5 15.63	6 18.75	9 28.13	12 37.50

Received

2018/19


PROFESSOR & HEAD
Department of Aeronautical Engineering
S.J.C. Institute of Technology
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A sample copy Civil Engineering Department have collected feedback on facilities as follows

S. J. C INSTITUTE OF TECHNOLOGY, CHICKBALLAPUR - 562 101
Student Satisfaction Survey Form - Department of CIVIL Engineering
8th Semester (2020-21)Batch

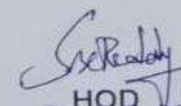
No. of Forms = 97

	Activities	Excellent	Good	Satisfactory	Not Satisfactory				
1.0	Curricular activities								
		%	%	%	%				
1.1	Quality of Teaching	46	47.42	47	48.45	4	4.12	0	0.00
1.2	Laboratory Conduction	45	46.39	48	49.48	3	3.09	1	1.03
1.3	Faculty competency	42	43.30	52	53.61	3	3.09	0	0.00
1.4	Adequacy of Class Rooms	47	48.45	45	46.39	5	5.15	0	0.00
1.5	Laboratory Facilities	41	42.27	52	53.61	4	4.12	0	0.00
1.6	Usage of Teaching Aids	37	38.14	53	54.64	6	6.19	1	1.03
2.0	Co - Curricular activities								
2.1	Seminars/Workshop's usefulness	36	37.11	53	54.64	7	7.22	1	1.03
2.2	Industrial Visits	33	34.02	48	49.48	12	12.37	4	4.12
2.3	Career guidance & entrepreneurial activities	34	35.05	48	49.48	12	12.37	3	3.09
2.4	Placement & Training activities	33	34.02	39	40.21	16	16.49	9	9.28
3.0	Extra curricular activity								
3.1	Cultural Activities	38	39.18	42	43.30	16	16.49	1	1.03
3.2	Sports Activities	37	38.14	43	44.33	16	16.49	1	1.03
4.0	Library facilities								
4.1	Availability of text/reference books	51	52.58	45	46.39	1	1.03	0	0.00
4.2	Availability of General/Technical Journals	43	44.33	48	49.48	5	5.15	1	1.03
4.3	Accessibility to books/journals	48	49.48	42	43.30	6	6.19	1	1.03
4.4	Staff Assistance	43	44.33	50	51.55	4	4.12	0	0.00
4.5	Working hours	43	44.33	50	51.55	4	4.12	0	0.00
5.0	Office and administration								
5.1	Admission procedure	36	37.11	49	50.52	9	9.28	3	3.09
5.2	Examination Procedures	36	37.11	53	54.64	6	6.19	2	2.06
5.3	Procedure of distribution of certificates, marks cards etc	35	36.08	49	50.52	11	11.34	2	2.06
5.4	Response to enquiries	32	32.99	49	50.52	12	12.37	4	4.12
6.0	Other facilities								
6.1	Canteen	34	35.05	54	55.67	7	7.22	2	2.06
6.2	Transportation	37	38.14	54	55.67	6	6.19	0	0.00
6.3	Hostel	36	37.11	52	53.61	7	7.22	2	2.06
6.4	Bank	33	34.02	50	51.55	11	11.34	3	3.09
6.5	General amenities(water, security, common room)	42	43.30	50	51.55	3	3.09	2	2.06


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A sample copy Information Science and Engineering Department have collected feedback on facilities as follows

S.J.C INSTITUTE OF TECHNOLOGY, CHICKBALLAPUR STUDENT SATISFACTION SURVEY FORM									
Course/Branch:Information Science & Engg.						Year:2019			
Number of forms received: 82									
Sl	Activities	Excellent		Good		Satisfactory		Not Satisfactory	
1	Curricular Activities:		%		%		%		%
1.1	Quality of Teaching	45	54.88	30	36.59	7	8.54	0	0.00
1.2	Laboratory Conduction	40	48.78	40	48.78	2	2.44	0	0.00
1.3	Faculty competency	40	48.78	30	36.59	12	14.63	0	0.00
1.4	Adequacy of Class rooms	46	56.10	30	36.59	6	7.32	0	0.00
1.5	Laboratory Facilities	50	60.98	32	39.02	0	0.00	0	0.00
1.6	Usage of Teaching Aids	35	42.68	47	57.32	0	0.00	0	0.00
2	Co-Curricular Activities								
2.1	Seminars/Workshop's usefulness	45	54.88	23	28.05	14	17.07	0	0.00
2.2	Industrial Visits	40	48.78	25	30.49	15	18.29	2	2.44
2.3	Career guidance & entrepreneurial	45	54.88	25	30.49	9	10.98	3	3.66
2.4	Placement & Training activities	40	48.78	28	34.15	9	10.98	5	6.10
3	Extra – curricular Activities								
3.1	Cultural Activities	35	42.68	35	42.68	8	9.76	4	4.88
3.2	Sports Activities	40	48.78	25	30.49	13	15.85	4	4.88
4	Library Facilities								
4.1	Availability of text/reference books	30	36.59	28	34.15	21	25.61	3	3.66
4.2	Availability of General/Technical	35	42.68	25	30.49	18	21.95	4	4.88
4.3	Accessibility to Books/Journals	35	42.68	25	30.49	16	19.51	6	7.32
4.4	Staff assistance	35	42.68	25	30.49	18	21.95	4	4.88
4.5	Working hours	35	42.68	30	36.59	17	20.73	0	0.00
5	Office and Administration								
5.1	Admission procedure	30	36.59	25	30.49	16	19.51	11	13.41
5.2	Examination procedures	30	36.59	32	39.02	20	24.39	0	0.00
5.3	Procedure of distribution of certificates,	35	42.68	35	42.68	12	14.63	0	0.00
5.4	Response to enquiries	35	42.68	31	37.80	16	19.51	0	0.00
6	Other facilities								
6.1	Canteen	14	17.07	12	14.63	28	34.15	28	34.15
6.2	Transportation	30	36.59	30	36.59	12	14.63	10	12.20
6.3	Hostel	20	24.39	31	37.80	30	36.59	1	1.22
6.4	Bank	38	46.34	28	34.15	16	19.51	0	0.00
6.5	General amenities (Water, security,	25	30.49	25	30.49	15	18.29	17	20.73


 HOD
 Prof & Head
 Department of Information Science & Engg.
 SJC Institute of Technology
 Chickballapur-562101.

9.4. Self-Learning (5)

The academic performance of the student enhances through self-learning. It helps the students in gaining knowledge and learning beyond the syllabus. The institute takes maximum care to provide the necessary facilities to ensure self learning. These facilities includes library (at college level, as well as at department level), internet facility, online journal subscription, open access system, Resource for taking competitive exams, repository of university question papers (e-copy), university consortium e-resources, VTU Edusat and others.

Library facility

The institution has well-furnished, spacious central library with reference section, Periodical section, stock area, Internet & Digital library. Presently the center has 86137 volumes of books and subscription of VTU Consortium e-Resources. Apart from this each engineering program has established department library. The department library has Reference Books, Journals and project reports pertaining to the respective domain. Adequate computers with internet facility are available for accessing e-resources.

Library also has collection of newspapers, journals back volumes, competitive exam books, VTU UG/PG previous years e-question papers and syllabus of all the branches. There is a vast array of materials that provides insights and information to enhance overall personality development.

Internet facility

The details of the Internet facility are provided in the following Table B.9.4.2.

- Name of the internet provider: AIRTEL/TATA
- E-learning facility : Yes
- Wi-Fi availability : Yes

Wi-Fi zone enables the students to use the facility any time (even beyond college hours)

Table B.9.4.2 Details of Internet facilities established at the central library

Sl. No.	Details	Remarks
1	Type of Internet connection	Leased LAN1:1
2	Bandwidth of the Institute/Library Network	500 Mbps AIRTEL/TATA
3	IP Address (Static IP Ranges of your College)	103.105.226.242

Digital Library

The Institution has set up Digital Library with 30 computers having adequate internet connectivity. It is collaborated with national information network agencies (VTU Consortium e- resources & DELNET) and also provided with Wi-Fi facility to access required information. It provides access to different kinds of e-Books/e-journals.

NPTEL Online Course

The Institute has established facility to enable the students take up professional courses through NPTEL. The departments educate students about the importance of NPTEL online courses. Details of Staff and Students have registered for the NPTEL online courses are provided in the following Table. B.9.4.3.

Table. B.9.4.3. Details of No. of candidates registered NPTEL Courses

S.L. No.	Year	No. of candidates registered NPTEL Courses
1	2020-21	677
2	2019-20	467
3	2018-19	308

VTU Edusat Program

EDUSAT is satellite-based distance education facility to provide interaction/guidance/feedback tools to learners and act as a facilitator between the experts and the students. This is supported by Visvesvaraya Technological University, Belagavi. An exclusive infrastructure, to take care of Edusat program is available in the Institution. The Students are benefitted from live lectures delivered by subject experts as part of EDUSAT program.

VTU Consortium e-Resources -2019-2020

The students can access e-Books/e-journals through Wi-Fi at defined zones in college campus, hostels and digital library. The Library contains the reference section with variety of resources, study area, office with a photocopier. The collection comprises textbooks, general reference material, question bank and career-oriented resources. The details of e-resources under VTU Consortium are given in the Table B.9.4.6.

Table B. 9.4.6 Details of online journal subscriptions

Sl. No.	Name of the E-Resources	Web Address
1	Elsevier Science Direct E-Journals	www.sciencedirect.com
2	IEEE Proceedings Order Plan (POP)	www.ieeeexplore.ieee.org
3	Springer Nature E-Journals	https://link.springer.com/
4	Taylor & Francis E-Journals	https://www.tandfonline.com/
5	Emerald E-Journals	https://www.emeraldinsight.com/
6	ProQuest- Architecture & Allied branches of Engineering	www.proquest.com/165290
7	Knimbus Platform and Remote Access	https://new.knimbus.com
8	NetAnalytiks Sententia Grammar Writing Tool	https://sententia.online/
9	Turnitin Similarity Check *	www.turnitin.com/

Contents beyond syllabus

The Institution encourages and facilitates students to acquire knowledge beyond the university syllabus. The department addresses the content beyond syllabus in the following forms

1. Case Studies
2. Mini Projects
3. Assignments
4. Technical Paper Presentation
5. Workshops

9.5. Career Guidance, Training, Placement (10)

Career Guidance Cell

The institution has set up Career Guidance Cell (CGC) with an objective of providing information on pursuing higher studies at national and international institutions and information related to competitive examinations. The Placement and Training department initiates and conducts career guidance programs in coordination with the different engineering departments. The details of career guidance program conducted in the previous assessment years are presented in the following Table B.9.5.1.

Table B.9.5.1 Details of Career Guidance related activities

Sl. No.	Academic year	Resource details	Branch	Date	Venue	No of students participated	Program details
1	2020-21	Mr.Joel Noronho	All branches Final year students	13.5.2021	Online	200	Career pathway and study abroad opportunities
2	2019-20	Mr. Supreeth YS (Tequed Labs)	All Pre-Final Years students	14.01.2020	CSE Seminar hall	178	Career Guidance
		Dell company ltd.	Pre-Final year CSE/ISE	19.02.2020	CSE Seminar hall	127	Career Guidance, Technical Profile Building & C 2 C - industry readiness
3	2018-19	Mr. Shubham Agrwal & Deepanshu Singh (NEXT IAS)	1 st Year students	10.12.2018	Auditorium	664	Career in Services
		TCS (Recruitment team)	Pre-Final Year students	21.03.2019	Auditorium	325	Pre-Placement talk
		Videsh consultancy	6 th Sem ECE	10.05.2019	Class Room	49	Career Guidance
		Prasad Chitta (TCS)	Final Year students of CSE/ISE	22.02.2019	CSE Seminar hall	75	Machine Learning

Training and Placement

Training Activities: The training and placement cell of the institute organize training activities for the students on soft skills, aptitude, technical and placement. The structure of training and placement and its content as follows.

- HR Training (1st to 6th Sem): The department of training and placement imparts training programs, which are integrated in the time table and is mandatory for all the students.
- Technical Trainings: These trainings are imparted during the vacations between

3rd and 6th Sem. and culminates with a project.

- Placement Training: Placement focused training is imparted during the vacation period between 6th and 7th Sem. Regular mock tests are conducted to evaluate the students.

The structure and content of training program conducted for semester levels are provided in the following Table B.9.5.2a

Table B.9.5.2a Structure and contents of training program for different semester levels

Sl. No.	Year	Training Program	Contents	
			Soft skills	Verbal
1	1 st year (I & II Semester)	Soft skills Verbal	Resume Building Extempore Speaking Power Presentations Picture Perfect Group Discussions Personal Grooming Personal Interviews Self Inventory Mgmt.	Parts of Speech ,Tenses Subject Verb Agreement Error Spotting Reading Comprehension Essay/Paragraph writing E-mail writing &Etiquettes Logical Reasoning and verbal Ability ,Vocabulary Analogies
2	2 nd year (III & IV Semester)	Soft skills Verbal Basics of Aptitude/ Case studies	Basics of Aptitude/ Case studies Number Theory Percentage, Profit & Loss Ratio's, Proportions & Partnership Alligations & Mixtures Time & Work Time, Speed & Distances Syllogism and set theory Permutation & Combination Probability Geometry Logical Reasoning	
3	3 rd year (V & VI Semester)	Aptitude Soft skills	Basics of Aptitude/ Case studies Number Theory Percentage, Profit & Loss Ratio's, Proportions & Partnership Alligations & Mixtures Time & Work	

			Time, Speed & Distances Syllogism and set theory Permutation & Combination Probability Geometry Logical Reasoning
4	4 th year (VII & VIII Semester)	JANUS training	C & C++ Data Structures Networking Java Microcontroller Microprocessor, Solid Edge, Catia, Auto CAD STAAD, Quality Control

The summary of various training activities conducted by the training and placement department is provided in the following Table B.9.5.2b

Table B.9.5.2b Details of placement related training programs conducted

SL. No	Academic year	Name of the Program	Number of students Trained	Name of Training Institute	Program Details
1	2020-21	JANUS-2020-21	198	ZESTECH Global Pvt. Ltd, Bengaluru	JANUS is a short term vocational training program, conducted mainly to make the students industry ready. This program focused on the final year students of SJCIT, Chickaballapur to enhance their Quantitative Aptitude, Verbal Aptitude and Soft Skills along with Technical Skills.
2		PSET/CLC - Code Like Corporates- 2020-21	NIL	NIL	NIL
3		Pragnyan-2020-21 ODD & EVEN Semesters Except 1st year	1212	ZESTECH Global Pvt. Ltd, Bengaluru	Pragnyan' 18 ODD Semester is a long term training program to develop the students' skills set in Quantitative Aptitude, Verbal Aptitude and Soft Skills. This is mainly focused on 1st, 3rd and 5th Semester B.E. students of SJCIT, Chickaballapur.

1	2019-20	JANUS-2019-20	403	ZESTECH Global Pvt. Ltd, Bengaluru	JANUS is a short term vocational training program, conducted mainly to make the students industry ready. This program focused on the final year students of SJCIT, Chickaballapur to enhance their Quantitative Aptitude, Verbal Aptitude and Soft Skills along with Technical Skills.
2		PSET/CLC - Code Like Corporates- 2019-20	141	ZESTECH Global Pvt. Ltd, Bengaluru	CLC is a Technical Training Program conducted for the pre final year students of SJCIT, Chickaballapur. The program mainly focused on improving the students' skills in Coding in languages like C, JAVA.
3		Pragnyan-2019-20 ODD & EVEN Semesters	1951	ZESTECH Global Pvt. Ltd, Bengaluru	Pragnyan an '18 ODD Semester is a long term training program to develop the students' skill sets in Quantitative Aptitude, Verbal Aptitude and Soft Skills. This is mainly focused on 1st, 3rd and 5th Semester B.E. students as well as 1st and 3rd MBA students of SJCIT, Chickaballapur.
1	2018-19	JANUS	403	ZESTECH Global Pvt. Ltd, Bengaluru	JANUS is a short term vocational training program, conducted mainly to make the students industry ready. This program focused on the final year students of SJCIT, Chickaballapur to enhance their Quantitative Aptitude, Verbal Aptitude and Soft Skills along with Technical Skills.

2		CLC - Code Like Corporates	141	ZESTECH Global Pvt. Ltd, Bengaluru	CLC is a Technical Training Programme conducted for the pre-final year students of SJCIT, Chickaballapur. The programme mainly focused on improving the students' skills in Coding in languages like C, JAVA.
3		Pragnyan	1951	ZESTECH Global Pvt. Ltd, Bengaluru	Pragnyan ¹⁸ ODD Semester is a long term training program to develop the students' skills set in Quantitative Aptitude, Verbal Aptitude and Soft Skills. This is mainly focussed on 1st, 3rd and 5th Semester B.E. students SJCIT, Chickaballapur. JANUS is a short term vocational

Placement activities: The training and placement cell plans campus recruitment drives for all the programs. The placement cell conducts the student registration process through which the entire student data is collected. The department communicates the campus visits schedule with students and conducts the campus drive. The list of companies visiting the Institute for campus recruitment annually is shown in the following Table B.9.5.2c.

Table B.9.5.2c Partial list of Companies visiting the Institute for Campus Drive

Sl. No.	Name of the Company
1	Tata Consultancy Services Limited, Bengaluru
2	Wipro Limited
3	Capgemini Technology Services India Limited
4	Mind Tree Limited
5	NTT Data Global Services Private Limited
6	L & T Infotech Limited
7	Tech Mahindra Limited
8	Amazon
9	Aricent Global Design and Engineering Company
10	Assystems Engineering Services Company

11	Bharath Electronics Limited
12	Brigade Group
13	First American Financial Corporation Company
14	HP India Private Limited
15	Trident Groups
16	Innovative Tools Private Limited
17	Titan Eyewear Private Limited
18	Triveni Turbines
19	TVS Motors Company Limited
20	Mphasis Limited
21	Prime Focus Technologies Private Limited
22	Wissen Infotech
23	Envestnet Yodlee India Private Limited
24	Accord Software & Systems Private Limited
25	Shobha Limited

The number of students placed, companies visited for conducting campus recruitment drive and the percentage placement during last three assessment years is shown in the following Table B.9.5.2d.

Table B. 9.5.2d Summary of Placement details during previous assessment years

Sl. No.	Academic Year	No. of Companies Visited	No. of Students Placed	Percentage of Placement
1	2020-21	58	254	75.15
2	2019-20	32	190	68.0
3	2018-19	42	227	80.10

The training and placement department has got recognitions for the performances.

Achievements:

- Received Excellence in Recruiter's Perception (South) from Dataquest T-School Survey in the year-2015
- Received Exemplary Placement Services award from the Higher Education Review-2016

9.6. Entrepreneurship Cell (5)

The Institution has established formerly called as BGS Research & Incubation Centre for Entrepreneurship (BGS-RICE) now a company formed called as BGS SJCIT INCUBATION FOUNDATION (BGS SIF) to take care of incubation activities.

The objectives of the center is to

1. To inculcate innovation culture within the teaching faculty and students of all educational streams.
2. Establish collaboration with government and non-government funding agencies to enhance research, innovation and entrepreneurial related activities.
3. To motivate and support academic faculty and student community, in converting their ideas and innovative processes into working prototype through mentoring and funding support.
4. To enable commercialization of innovative solutions and IP developed within the academic setup by supporting in taking the products to the market.
5. To generate employment and create a robust entrepreneurial ecosystem.
6. To build a vibrant student entrepreneurial community and provide the required resources for start-ups to contribute in the societal development through innovation activities
7. To conduct workshops, programs, events activities for developing business skills, to make networking events accessible, to impart information related to market opportunities and to create a platform to showcase technological solutions
8. BGS SIF Coordinates with the different departments in the college to initiate related activities. The team member details of this center are presented below.

Table B.9.6.1 BGS Research & Incubation Centre Details

Sl. No.	Name of the Member	Designation	Cell
1	Dr. T. Munikenche Gowda	Director	Team Lead - BGS Research & Innovation center for Entrepreneurship
2	Mr. C. Narendra Babu	Asst. Professor, CSE	Coordinator
3	Mrs Safira Begaum	District innovation Assistant	Innovation Assistant
4	Mr Suresh Kumar	Programmer	Assistant Coordinator

The Entrepreneurship related activities are conducted during the assessment years by BGS SIF are presented in the following Table B.9.6.2

Table B.9.6.2 Entrepreneurship activities conducted during the previous years

Sl. No.	Assessment Year	Program title	Resource Person	Date of Conduction & Venue	Number Students participated
1	2020-21	E-Step Bootcamp	Mr.Vishnu Nagaraj Founder CEO, Carve Startup Labs	24-05-2021 Online	162
		Workshop on Entrepreneurship Awareness	Mr.Nikshep Ramesh Director Ellipses Innovation	10-03-2021 CS seminar hall	140+
		Webinar on “Innovation Ideation and Entrepreneurship”	S. Mukul Manohar Vemana Business Incubation Center Vemana Institute of Technology Bengaluru	24-12-2020 Online	160+
		Webinar on “Innovation and Entrepreneurship in India: An overview”	Mr. A N Manjunath Research Scholar IIM, Bangalore	10-12-2020 Online	565
2	2019-20	Effectual Thinking in Entrepreneurship	Mr. Mr. A N Manjunath, IRS, Deputy Commissioner, Bengaluru South GST Commissionerate, Bengaluru.	12.03.2020 CS seminar hall	203
3	2018-19	Inauguration - Camp Objective, Why Entrepreneurship (general concepts)	Dr. Raman Gujral Regional Head, Entrepreneurship Development Institute of India (EDII), Bengaluru.	23.10.2019 25.10. 2019	93
		Technology - assistance from R&D labs and other institutions on choice of Technology etc.	Prof. Srinivas M. Jamkhandi Project Scientist, Dept. of ESE,IISc., Bengaluru.	CS seminar hall	

		Historical background-Indian values vis - a-vis Entrepreneurship and the present scenario & Creativity and business - the man behind the venture - the behavioral scientist's approach	Prof. Ananda Murthy H V Deputy Director, IISc. - MSME Centre of Excellence, IISc., Bengaluru.		
		How to start a SSI unit (General concept about the Govt. formalities, rules & regulation, location, and different aspect of an industrial venture)	Mr. Rajendran B Asst. Director, MSME Development Institute, Bengaluru.		
		Technical & commercial aspects of SSI unit	Mr. Mohamed Ateequlla Shariff Joint Director, DIC, Chickballapur.		
		Schemes of assistance and Support available from Govt. agencies, banks, financial institutions, SFCs etc	Dr. Vijayalakshmi S. Warad Branch Manager, KSFC, Chickballapur.		
		Identification of Business opportunities and Mechanisms of product selection	Mr. Ranga Prasad S N, Consultant and Former Director, MSME Development Institute, Rajajinagar, Bengaluru.		
		Communication skills for better results in business	Mrs. Rekha Gopal, Managing Director Padmajyothi Industries, Leading Women Entrepreneur.		
		Financial aspects of SSI unit including	Mr. Basavaraja O Lead District Divisional		

	salient features of a project report	Manager, Lead Bank Office, Chickballapur.		
	BOOTCAMP Karnataka Innovation and Technology Society, Department of IT, BT and S&T	Mr.B.Kamal Babu ,Mikrotek Machines Ltd. Mr, Vishnu Nagaraj, Start-up Evangelist	13.08. 2019	127
	Innovation taking place in the field of IOT (internet of things), Cutting edge.	Dr. T. V Prabhakar Principal Research Scientist, DESE, IISc, Bengaluru	11.10.2018- 12.10.2018	57
	Innovation to prototype	Mr. Srinivas M. Jamkhandi Project Scientist, DESE, IISc, Bengaluru		
	MSME schemes supporting MSME's	Mr. Ananda Murthy H. V Deputy Director (Rtd.,)		
	Pre – Hackathon	Mr. SanjeevKoushik General Management Program, IIMB Mr. Nayaz Ahmed COOJU incubator	05.10.2018	65

Incubation Activities at Centre

Proposals Approved by Karnataka innovation and Technology Society (KITS), Department of Electronics, IT, BT and S&T Government of Karnataka.

Table B.9.6.3 Sanctioned entrepreneurship ideas in the academic year 2018-19

Sl. No.	IDEAS	Branch	Amount in Lakhs
1.	Coconut and Areca Nut Harvesting Drone	AE	2,50,000
2.	Sustainable Power Project To Remote Areas	ECE	2,50,000
3.	Automation in Cars to Alert Drivers	CSE	2,31,000
4.	Controlled Use of Water For Irrigation and Fertilisers in Farming	CSE	2,41,000
5.	Air Conditioning By Geothermal Heat Pump	CE	1,88,000
6.	Brain Computer Interface For Patients With Disorder Of Consciousness And Stroke	ECE	2,40,000
7.	Smart Traffic Handling System	ISE	2,50,000
8.	A-Drishti-A Step Towards Alternate Vision	ECE	2,22,000

9.	Smart Helmets For Bikes	TCE	2,30,000
10.	Design and Fabrication of Road Cleaning Machine	ME	2,10,237
11.	Poorni-The Public Assistant	CSE	2,17,513
12.	Virtual SIM	ISE	2,37,250
13.	An Application To Pay Fine For Traffic Rules Violation	CSE	2,33,000
Total			30,00,000

Table B.9.6.4. Ideas approved during academic year 2020-21

Sl. No.	IDEAS	Department	Amount in INR
1.	Academeasy- Your Academic Friend	CSE	1,46,000
2.	Exo-Skeleton	ME	2,30,000
3.	Andriod Based Intelligent Smart Vehicle for Disables Using Brain Computer Interface and Voice Assistant	CSE	2,45,000
4.	Book Market Inside the Campus	CSE	1,67,890
5.	Design and Development of Semi-Automatic Manhole Cleaning Machine	ME	2,73,900
6.	Tissue culture - A Helping Hand in Agriculture	ME	2,65,730
7.	Automated Overhead Tank Cleaning System	ME	2,56,650
8.	Innovative and Effective Use of Resources Along with Advanced Home Automation System	CSE	2,27,000
9.	Notatia - The Solution of The People	CSE	2,78,000
10.	Low Cost Manually Operated Seed Sowing Machine	ME	2,65,000
Total			23,55,170

Technology Business Incubator (TBI) – A Scheme for Promotion of Innovation, Rural Industries and Entrepreneurship (ASPIRE), Sanctioned by Ministry of Micro, Small and Medium Enterprises, Government of India.

DAE - Technologies Display and Dissemination Facility DDF)

Sanctioned by:

Baba Atomic Research Center (BARC), Mumbai, Government of India

Technologies sanctioned are

1. Tissue Culture
2. Nisargruna Bio-Gas Plant
3. Fluoride Detection Kit for Ground Water (FDK)
4. Soil Organic Carbon Detection Kit (SOCDK)
5. On-line Domestic Water Purifier Based on Ultrafiltration Polysulfone Membrane
6. Foldable Solar Dryer (FSD)

9.7. Co-Curricular and Extra-Curricular Activities (10)

Students are engaged in co-curricular and extracurricular activities through student coordinators and forums, which provide opportunities for students to explore new fields of interest, cultivate leadership skills, and learn teamwork. In this regard institution has framed various committees for participating and organizing the cultural and sports activities. The following are the co-curricular and extracurricular activities that are conducted on regular basis in the college.

Co-Curricular Activities	Extra-Curricular Activities
Industry interaction	NCC
Industrial Project tour	NSS
Guest lecture	Cultural fest
Paper presentation	Sports
Project exhibition	Societal activities

Co-Curricular Activities (Technical talks/paper presentations/project exhibition/ visits to various public and private sector/ Industrial Project tour)

Industry interaction

Academic year	Programs			TOTAL
	AE	Civil	ISE	
2020-21	0	8	0	8
2019-20	5	5	0	10
2018-19	1	7	01	9

Experts invited to college /Guest lecture

Academic year	Programs			TOTAL
	AE	Civil	ISE	
2020-21	4	2	06	12
2019-20	2	7	1	10
2018-19	3	12	5	20

Industrial Project tour

Academic year	Programs			TOTAL
	AE	Civil	ISE	
2020-21	0	0	00	0
2019-20	0	0	00	0
2018-19	0	11	00	11

Paper presentations

Academic year	Programs			TOTAL
	AE	Civil	ISE	
2020-21	1	24	07	32
2019-20	2	0	02	4
2018-19	5	04	03	12

Student Papers awarded as Best Papers (Civil Engineering)

Sl. No.	Student Name	Guide Name	Presented at	Year
1	Shravani K	Ravindra M V	Dr. TTIT Virtual Expo-2021	2020-21
2	Krithi C N	Mr. Kiran KM	Manthana-2021	2020-21
3	Mallika B S	Mr. Manjunath K A	Manthana-2021	2020-21
4	Chethan Kumar K J	Mr. Rajeev S J	Manthana-2021	2020-21
5	Bhoomika K R	Ms. Sushma M	Manthana-2021	2020-21
6	Shwetha M	Ravindra M V	MANTHANA-2018	2017-18

Project exhibition

Academic year	Programs			TOTAL
	AE	Civil	ISE	
2020-21	6	1	3	10
2019-20	5	4	2	7
2018-19	4	4	4	12

All the engineering departments regularly conduct the co-curricular activities. The college encourages the students to take part in these activities. The number of co-curricular activities conducted by the engineering departments is shown in the following TableB.9.7.1a

Table B.9. 7.1a Summary of number of co-curricular activities conducted by the departments

Academic year	Summary of number of co-curricular activities conducted by the departments			TOTAL
	AE	Civil	ISE	
2020-21	11	35	16	62
2019-20	14	16	5	35
2018-19	13	38	13	64

Extra-Curricular Activities

The Institution organizes various extracurricular activities. Apart from the regular activities, the college has units like National Cadet Cops & National Service Scheme initiates various activities. The cultural events and sports events are organized on annual basis.

National Cadet Cops (NCC): The institute has established National Cadet Corps (NCC) unit in the academic year 2016-17. Mr. Umesh Chougla, Assistant Professor, Mechanical Engineering department is the NCC Coordinator. The NCC unit has number: COY 135/A, 8 KAR BN NCC BGLR. The NCC provides exposure to the cadets in a wide range of activities, with a distinct emphasis on Social Services, Discipline and Adventure Training. The statistics of student enrolment for the NCC unit and the activities conducted by the NCC unit is presented in the following Table B. 9.7.2a and 9.7.2b.

Table B.9. 7.2a Statistics of student Enrolment for NCC unit

Sl. No.	Particular	Target Regiment Group (TRG)														
		Academic Year 2018-19					Academic Year 2019-20					Academic Year 2020-21				
		I	II	III	IV	Total	I	II	III	IV	Total	I	II	III	IV	Total
1	SD (Senior Division)	12	10	8	--	30	10	10	10	--	30	12	10	10	--	32
2	SW (Senior Wing)	08	6	7	--	21	8	8	4	--	20	7	6	6	--	19
	Total	51					50					51				

Table B.9. 7.2b Details of activities conduct by the NCC unit

Sl. No.	Events organized	Attended	Venue	Date
1	Combined Annual Training Camp(Catc)	21	Delhi Public School Bangalore	01.04.2018
2	International Yoga Day	40	SJCIT	21.07. 2018
3	Independence Day	30	SJCIT	15.08.2018
4	National Unity Day	35	SJCIT	31.10. 2018
5	Kannada Rajyotsava	35	SJCIT	01.11.2018
6	Republic Day	40	SJCIT	26.01.2019
7	Awareness To Reduce Blindness Camp	150	SJCIT	01.03.2019
8	B And C Certificate Exams At SJCIT	120,96	SJCIT	01.04.2018
9	Talk On CDS And SSB Exam Procedure	60	SJCIT	10.04.2019
10	International Yoga Day	250	SJCIT	21.07.2019 (5KAR Bn NCC)
11	School Bell Event	25	Marenahalli	21,22.09.2019

12	Sri M V Birth Anniversary	35	SJCIT	15.09.2019
13	Independence Day	30	SJCIT	15.08.2019
14	Kannada Rajyotsava	30	SJCIT	01.11.2019
15	Thalasainik Camp (TSC) Total 50 Days	1	Delhi Public School Bangalore	July to September 2019
16	Catc Pre Rdc Camp	1	Delhi Public School Bangalore	05,14.09.2019
17	Combined Annual Training Camp (Catc)	11	Delhi Public School Bangalore	09 to 18.09.2019
18	Combined Annual Training Camp (Catc)	05	Delhi Public School Bangalore	22to 31.10.2019
19	B Certificate Exams	283	SJCIT	16.02.2020
20	C Certificate Exams	84	SJCIT	23.02.2020
21	Covid-19 Duties	20	SJCIT	26.04.2020
22	World Environment Day	10	SJCIT	05.06.2020
23	Ncc Enrolment Process	150	SJCIT	22.01.2021
24	Republic Day	25	SJCIT	26.01.2021
25	Cadre Camp	150	SJCIT	01 to 05.02.2021
26	B Certificate Exams	330	SJCIT	21.02.2021
27	C Certificate Exams	160	SJCIT	28.02.2021

NATIONAL UNITY DAY:

Rashtriya Ekta Divas (National Unity Day) was introduced by the Government of India. The intent is to pay tribute to SARDAR VALLABHBHAI PATEL Who was instrumental in keeping India is united. it is to be celebrated on 31 October every year as an annual commemoration of birthday of the iron man of India Sardar Vallabhbhai Patel, One of the founding leaders of Republic of India.

The National Unity Day celebrates the birthday of Patel because, during his term as Home Minister of India, he is credited for the integration of over 550 independent princely states into India from 1947-49. He is known as the “BISMARCK of India.



Figure 9.1 Rastriya Ekta Divas (National Unity Day) celebrated on 31 October 2019

KANNADA RAJYOTSAVA:

Kannada Rajyotsava is also known as Karnataka Formation day, is celebrated on 1 November of every year. This was the day in 1956 when all the Kannada language-speaking regions of South India were merged to form the state of Karnataka.



Figure 9.2 Kannada Rajyotsava celebrated on 1st November 2019

REPUBLIC DAY:

Republic day honors the date on which the Constitution of India came into effect on 26 January 1950 Replacing the Government of India Act (1935) as the governing document of India. The Constitution was Adopted by the Indian Constituent Assembly on 26 November 1949, and came into effect of 26 January 1950 with a Democratic Government system, Completing the country' transition towards becoming An Independent Republic.



Figure 9.3 Republic day celebrated on 26th January 2019

The ‘B’ CERTIFICATE EXAMINATION:

B Certificate examination is a culmination of NCC training for NCC cadets who are in the second year of NCC. The certificate has been recognized and those who successfully obtained it can get some benefits if they try to find jobs in the security forces.



Figure 9.4 B Certificate examination for the second year NCC cadets

THE ‘C’ CERT EXAMINATION:

C Certificate examination is a culmination of NCC training for NCC cadets who are in the Third year of NCC. The certificate has been recognized and those who successfully obtained it can get some benefits if they try to find jobs in the security forces.



Figure 9.5 C Certificate examination for the third year NCC cadets

AVOIDABLE BLINDNESS CAMP:

Avoidable blindness is defined as blindness which could be either treated or prevented by known, cost-effective means. In Today’s generation one of the major diseases is blindness so it is very important for each and everyone to know about the causes of the blindness and how to avoid the blindness. So for the awareness of blindness we have conducted one day camp about “AVOIDABLE BLINDNESS” in SJCIT College on March 2019. Some of the eye diseases are Ageing and the eye, cataract, childhood blindness, diabetic retinopathy, glaucoma, low vision etc. Some of the Protective measures for eye disease are as follows.

1. Avoid smoking
2. Eat healthy foods
3. Stay active
4. Control your blood pressure
5. Protect your eyes from the sun

SAKSHAM is a National Organization catering to the needs of all section of disabled persons.

SAKSHAM has taken up a project CAMBA (Cornea AndhatvMukt Bharat Abhiyan) in Bengaluru Rural District consisting of four Taluks viz., Hoskote, Devanahalli, Doddaballapur and Nelamangala, wherein we will make a survey of about 100 villages reaching every home and recording the number of persons suffering from any avoidable blindness [cornea, cataract, pterygium, glaucoma, squint, uncorrected refractive errors etc.].

INTERNATIONAL YOGA DAY

International Yoga Day is celebrated on 21st June throughout the world. For the first time it was celebrated on 21 June, 2015. As, we all know environment is changing and the world is becoming more competent yoga help us to deal with this type of environment and also makes us healthy. This article deals with the theme, objectives of International Yoga Day, why it is celebrated on 21st June etc.



Figure 9.6 International Yoga Day is celebrated on 21 June 2019

SCHOOL BELL EVENT

Most of the social activities outside the school are free of charge. These events are a great way to practice your English outside of your lessons. It is also an opportunity to make friends and chat to teachers away from the classroom. Your teacher will let you know about the next social activity in your lessons, or you can look on our social activity calendar on the first floor or check social media.



Figure 9.7 Renovation work and painting in Govt. Schools under the school bell event.

Thala Sainik Camp (TSC)

Thala Sainik Camp is a camp which gives a Army NCC cadet no. of opportunities. It's main purpose is to produce more and more cadets who'd be able to represent their group, contingent, and directorates in inter NCC competitions. there are several competitions.

For Thal Sainik Camp for 50 days, a cadet is trained in eight subjects.

- Obstacle race-individual and group
- shooting-snap and advanced
- Judging distance
- Health and hygiene
- Field signals
- Map reading
- Tent pitching
- Line area

CATC COMBINED ANNUAL TRAINING CAMP(CATC)

Combined annual training camp (CATC)/Annual training camp (ATC) are held within the state. Basically, these camps help us to build stamina that to within 10days of training. These camps are meant to introduce the cadets into the regimental environment. These camps are meant to introduce the cadets into the regimental environment.



Figure 9.8 Photographs of CATC combined annual training camp (CATC) and thala sainik camp (TSC)

Now coming to the activities which are held at the CATC.

1. Daily morning and evening PT.
2. Marching and drill competition.
3. Firing competition
4. Football.



Figure 9.9 COVID-19 Duties (26-04-2020)



Figure 9.10 Cadre Camp (1st Feb to 5th Feb 2021)



Figure 9.11 Photographs of B and C Certificate Exam-Feb 2021

National Service Scheme (NSS)

The Institution has established National Service Scheme Cell. Mr. Shashi Kumar, Assistant Professor, Civil Engineering department is the NSS Program Officer. The Cell conducts regular NSS activities and special camping programs. The Institution has been conducting various Community service programs like Blood Donation Camps/Awareness programs and activities from time to time. In a concrete attempt to make the campus relevant to the needs of the community and with a view to developing healthy contacts between the students and teachers [on a voluntary basis] on one hand and establishing a constructive linkage between the campus and the community on the other hand, the institution has established a NSS [National Service Scheme] unit. The unit conducts regular NSS activities and special camping programs. The institution has been conducting various community service programs like blood donation camps/awareness programs and activities from time to time thereby discharging its societal commitment.

Table B.9.7.2c Details of Programs conducted by NSS unit

Sl. No	Event Description
1.	Independence Day celebration
2.	NSS orientation Programme
3.	NSS Day celebration
4.	Awareness rally on say no to crackers and yes to life
5.	Blood Donation Camp
6.	vigilance awareness week
7.	International women's week
8.	Blood Donation Camp
9.	Free health checkup camp
10.	Tree plantation program
11.	11 Government school renovation done at Chickballapur and kolar districts
12.	19 days Technology barrier reduction program conducted at SJCIT campus for Government school students.
13.	Five thousand seed balls prepared and distributed to various GPs at Bagepalli taluk
14.	580 samplings distributed to students under one student one tree campaign
15.	Free health camps for adopted villages
16.	Conducted household and village survey for adopted villages and submitted to local governance
17.	Organized two residential camps and one special camp at adopted villages.

As a participating institution the college has adopted five villages under NSS & Unnat Bharath Abhiyan 2.0 and completed village and house hold survey in Kanivenarayanapura of Muddenahalli GP, Chickballapur, Taluk and other adopted villages with the help of all the Gram Panchayath & Village members and identified Some of the common problems which are observed in village and house hold survey in all the villages as follows

- Scarcity of water for drinking and irrigation
- Know how on precision farming techniques is lacking



Figure 9.12 Photographs of House hold survey in the villages

Village sanitation and health issues

- Knowledge about digital literacy is lacking
- Pollution due to dust and mining activities
- Some percentage of villagers is still following conventional cooking using firewood.
- Very less student's strength found in Govt. Schools.
- Depletion of Plantation area.

After successful completion of gram sabha and discussed about the above mentioned problems the college had taken some of the immediate action plans those are

- Provide door to door awareness about sanitation and its impact on health
 - Under NSS & Unnat Bharath Abhiyan 2.0 Gram Sabha meeting were at Kondikonda village of M.Nallaguttalapalli GP, Bagepalli, Taluk and briefed about precision farming techniques and shared some of the photographs and study materials collected from Dr. M.K.Tiwari, school of water resources, IIT Kharagpur during Two Days Workshop on Water Management held 26th & 27th April 2019 at IIT Kharagpur
- As the direction NSS & Unnat Bharath Abhiyan and IIT Delhi student volunteers conducted door to door awareness about plastic free village campaign in adopted villages and collected plastic waste.

As per the direction of UBA & VTU NSS, about swachhata Hi Sewa Campaign, Our College student volunteers are actively participated in Swachsharath activates in the adopted villages.



Figure 9.13 Awareness about plastic free villages Campaign

- Under NSS Unit SJCIT & Unnat Bharath Abhiyan 2.0, student's volunteers done renovation work such as cleaning, painting etc. of Govt. Schools to attract the student strength in few adopted villages in association with NGO called campus to community, Bengaluru.



Figure 9.14 Swach Bharath Activities at adopted villages

As per the direction of UBA & NSS VTU about swachhata Hi Sewa Campaign, Our College student volunteers are actively participated in Swach Bharath activates in the adopted villages.



Figure 9.15 Swachh Bharath Activities at adopted villages

As the direction Unnat Bharath Abhiyan and IIT Delhi and NSS VTU student volunteers conducted door to door awareness about plastic free village campaign in adopted villages and collected plastic waste.

- Under Unnat Bharath Abhiyan 2.0 & National Service Scheme [NSS] student volunteers & villages peoples are planted more than 2300 saplings and sown 5000 seed balls surroundings of Kondikonda village M.Nallaguttalapalli GP, Bagepalli, Taluk to improve green and the forest area in association with local forest department and GP offices.



Figure 9.16 Under Unnat Bharath Abhiyan 2.0, AICTE and NSS VTU conducted awareness camp on one student one tree campaign at our campus.



Figure 9.17 Under Unnat Bharath Abhiyan 2.0 & National Service Scheme[NSS] student volunteers are planted more than 2300 sampling.

As per the direction of UBA about Jal Shakti campus and Jal Shakti village, our student volunteers are done some paintings regarding conservation of water at Govt. Schools premises.



Figure 9.18 Painting Under Unnat Bharath Abhiyan 2.0 & National Service Scheme [NSS]

As per the direction of UBA and NSS VTU about Jal Shakti campus and Jal Shakti village, our student volunteers are done some paintings regarding conservation of water at Govt. Schools premises at kolar and Chickballapur districts.

As per the direction of UBA and NSS VTU about Jal Shakti campus and Jal Shakti village, our student volunteers are done some paintings regarding conservation of water at Govt. Schools premises Malur taluk, Kolar district.



Figure 9.19 Painting Under Unnat Bharath Abhiyan 2.0 & National Service Scheme [NSS]

Under VTU NSS and Unnat Bharath Abhiyan 2.0, student's volunteers done renovation work such as cleaning, painting in 12 Govt. Schools to attract the student strength in few adopted villages in association with NGO called campus to community, Bengaluru, at kolar and Chickballapur districts in the year 2019-20.



Figure 9.20 Painting Under Unnat Bharath Abhiyan 2.0 & National Service Scheme [NSS]

Under Unnat Bharath Abhiyan 2.0 and AICTE conducted awareness camp on one student one tree campaign at our collages and brief more about UBA and its activities to involve more students and faculties.

Societal activities:

B G S Rotary club: Rotary International is an international service organization whose stated purpose is to bring together business and professional leaders in order to provide humanitarian

services, encourage high ethical standards in all vocations, and to advance goodwill and peace around the world. The purpose of a Rotary club is to connect people who then work together to serve the community. In view the B G S Rotary club is established in the year 2017 and Rotary Dist. 3190.

➤ Mega donation blood camp:

The Rotarians of BGS Club jointly organized with Rotary Vijayapura actively participated in the blood donation camp which was part of Guinness World record and we have collected almost an average of **400** units and we bagged **3rd** Position for the Mega Blood Donation Camp.

TALK ON IMPORTANCE OF BLOOD DONATION

Dr. PANINDRA given talk on importance of blood donation What are the criteria for blood donation, benefit to donor & beneficiaries Following NSS CO-ORDINATORS from various department attended session

Sl. No.	NAME	USN	BRANCH/SEM
1.	Rakshitha M R	1SJ20BA040	MBA 3 RD SEM
2.	Tejas Gowda C	1SJ20BA051	MBA 3 RD SEM
3.	Pooja R	1SJ20BA032	MBA 3 RD SEM
4.	Adbullah	1SJ20BA022	MBA 3 RD SEM
5.	Nitish Kumar N	1SJ20BA030	MBA 3 RD SEM
6.	Uday Kiran J	1SJ20EC162	ECE 3 RD SEM
7.	Tejas G S	1SJ20EC152	ECE 3 RD SEM
8.	Hemanth R K	1SJ19EC062	ECE 5 TH SEM
9.	Darshan S R	1SJ19EC041	ECE 5 TH SEM
10.	Bharath B P	1SJ19EC016	ECE 5 TH SEM
11.	Manjusri N	1SJ20CS082	CSE 3 RD SEM
12.	Meghana R	1SJ20CS087	CSE 3 RD SEM
13.	Kishaore G D	1SJ20CS071	CSE 3 RD SEM
14.	Radhika	1SJ18EC126	ECE 7 TH SEM
15.	Prapulla M S	1SJ18EC120	ECE 7 TH SEM
16.	Nirmala	1SJ18EC106	ECE 7 TH SEM
17.	Kiran Kumar B C	1SJ18CV052	CIVIL 7 TH SEM
18.	Abhishek T S	1SJ18CV004	CIVIL 7 TH SEM



Figure 9.21 Digital banking awareness program



Figure 9.22 Digital banking awareness program

Program for B Com students of BGSIMS was held on 28th sept.2021at civil seminar hall More than 100 students attended

➤ National voters day

Report on election commission of Karnataka in view of celebration of national voters day 2022 events are organized at college on 2nd November 2021 at 11.00am in civil seminar hall conducted easy writing competition

EASY WRITING					
Winner	Name	Sem/Sec	Phone No:	Mail Id	Department
1	RAKSHA A (1SJ19EC132)	5 TH C	8088239963	rakshaamurthy@gmail.com	ECE
2	NAVYASHREE A G (1SJ19IS075)	5 TH B	8431984279	nsag146@gmail.com	IS
POSTER DESIGN					
1	NANDEESH N (1SJ19EC408)	7 TH A	9902004479	nandigowda475@gmail.com	ECE
2	CHANDAN GOWDA S (1SJ18EC025)	7 TH A	9071120115	chandangowda2701@gmail.com	ECE



Figure 9.23 Essay Writing Competition

Vaccination drive is organized by NSS TEAM SJCIT in association with ROTARY BGS CHIKKABALLAPURA at 11:30 AM in Academic Block ground floor all the beneficiaries are requested to reap the Benefit of the program on 8/9/2021.



Figure 9.24 1st Vaccination drive

Organized by NSS TEAM SJCIT, CHIKKABALLAPURA at 10:30 AM in Admin Block ground floor, program on 29/10/2021 Friday. Registration link address: <https://forms.gle/o24dHFweWe8NwwPb7>

Total vaccination: 110



Figure 9.25 2nd Vaccination drive

Swachh Chickballapur Abhiyana:

Swachh Chickaballapur Abhiyana in the mark of our Swachh Bharath. This initiative has been taken from the local Web world Infotech Pvt Ltd along with the Rotary Chickballapur BGS to clean the city and give awareness to all the locality of Chickballapur. Event was held at June 4th 2017 and the same event will continue every month of 1st Sunday in Chickballapur from July 2017. Photographs of the event are presented.



Figure 9.26 Swachh Chickballapur Abhiyana



Figure 9.27 Photo graphs of Swachh Chickballapur Abhiyana

Wash in Schools:

- Wash IN Schools (WINS) program was been conduct on 6th June 2017 from Rotary Chickballapur BGS. WashIn Hands program means giving an Awareness Program to the school students to be Hygienic and clean the hands before & after having Food and after using the toilets.
- Rotary Chickballapur BGS Conducted Wash In hands Program for 3 Schools in Chickballapur and more than 3000 Students along with the Principals & Faculties Members of Schools took part and we also gave a demo for all the students and made them to wash their hands using Hand wash and water.
- Rotary Chickballapur voluntarily took initiative in providing the sanitary for Wash In Hands Program and made it to wash all the individual students of all the 3 schools by using the sanitary available on June 6th 2017.



Figure 9.28 Wash In Hands Program



Figure 9.29 Wash In Hands Program

In association with Shikshana Foundation, Hitachi power grids, Distributed Free laptops for Meritorious SEVEN Girls students and TEN Thousand Scholarship through cash on 16.08.2021



Figure 9.30 Free laptops Distribution to Meritorious SEVEN Girls Pictures and paper cutting Vijayavani on 17.08.2021

College fest:

Sambhrama is a Cultural fest and it is an annual Techno-cultural extravaganza successfully conducting since establishment of this Institution. Sambhrama has been setting the stage for students community to showcase their talents, Innovations and creativity with zeal and zest. Ethnic day is celebrating every year.

Events conducted in the SAMBHRAMA

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

Sports Facilities and Activities:

The Institution supports sports activities and has provided the various sports facilities to meet the students need for both indoor and outdoor games. The sports facilities meet the national standard. There is a well-equipped gym encouraging students maintain physical fitness. Students are encouraged to participate in various zonal and inter-zonal tournaments. Students participate in inter collegiate and university tournaments. Sports day is celebrated with various sports events like Athletics, Long Jump, Cricket, Volleyball, Kabbadi, Hockey, Basket Ball, Throw Ball, Football, Kho-Kho, Ball Badminton, Badminton, Table Tennis, Chess, and Carom etc.

Table B.9.7.2d. shows details of Sports Facilities available in the Institution.

Sl. No.	Sports / Games	Facilities	Facilities
A. Outdoor Games			
1	Athletics	400mts, 8 lane tract of International standard with facilities for all field & tract events	
2	Cricket	Cricket Field	
3	Foot Ball	Foot Ball Field	
4	Hockey	Hockey Field	
5	Basket Ball	Basket Ball concrete court	01
6	Volley Ball	Volley Ball courts.	03

7	Kho - Kho	Kho – Kho Court	01
8	Kabbadi	Kabbadi Court	01
9	Throw Ball	Throw Ball Court	01
10	Lawn Tennis	Lawn Tennis Court	01
B. Indoor Games			
1	Badminton	Badminton Court	02
2	Table Tennis	Table Tennis Boards	03
3	Chess & Carrom	Chess & Carrom	01 room
4	Billiards	Billiards Table	01
		Billiards Sticks	04
		Billiards Q. Ball	02
5	Gymnasium – Multi Gym	Multi Gym	12 stations
		Power Ball	01
		Stepper	02
		Rowing Machine	03
		Cycle	04
		Bench Press	04
		Jogger Manual	04
		Dumbles Stand	01
		Dip Stand	5 pairs
		Dumbles	1000Kg
		Weights	1000Kg
		Weight Lifting Bars	15 Nos.

List of important sports events conducted by the college during assessment years are presented in the following Table B.9.7.2e.

Table B.9.7.2.d Details of Indoor and Outdoor sports facilities at the Institution

Sl. No.	Academic year	Events Organised	Date
1	2020-21	Nil	Nil
2	2019-20	VTU inter collegiate Bangalore north zone and inter zone Cricket tournament men and Cricket selection trails	15 th March to 17 th April 2019
		VTU inter collegiate Bangalore north zone HOCKEY tournament (Men)	16 th May 2019
		VTU Single Zone Judo & Wrestling (Men & Women) Competition 2019	06 th to 07 th August 2019
3	2018-19	VTU inter collegiate Bangalore zone hand ball women tournament	19 th March 2018
		VTU inter collegiate Bangalore north zone and inter zone Kho-Kho and selection trails men tournament	06 th to 10 th April 2018
		21 st VTU inter collegiate ATHLETIC MEET	26 th to 29 th October 2018

The following section shows photographs of the various sports activities organized by the Institution.



Figure 9.31 Kabaddi team participated and secured 2nd Place in VTU Inter Collegiate Kabaddi tournament (women) which was held at Sai Ram College, Bangalore



Figure 9.32 VTU Inter Collegiate Throw Ball tournament (Women) participated and secured 2nd Place at Sai Vidya College, Bangalore



Figure 9.33 VTU Inter Collegiate Bangalore north zone Cricket (Men) Tournament during 19th to 29th March 2017

Achievements:

SJCIT has received a meritorious Institution cash prize award of rupees one lakh for the academic year 2016-17 from VTU, Belagavi.



Figure 9.34 Photograph displaying receipt of Institution Cash Award at VTU, Belagavi

- Our college Throw Ball team participated in VTU Inter Collegiate Bangalore north zone and inter zone Throw ball (Women) Tournament during 6th to 10th Oct 2017 at NMIT Bengaluru Team won 2nd Place.
- Our college Kabaddi team participated in Inter Collegiate Kabaddi tournament 2018 (woman) which was held at Sai Ram College, Bangalore. They secured 2nd Place.
- Our college kabaddi team participated in VTU Inter Collegiate Bangalore North Zone and Inter Zone kabaddi Tournament (Men) 2018 which was held at Zone at Dr TTIT KGF Kolar, They secured 1st Place .Inter Zone at VCET PUTUR, and inter zone they secured 3rd Place.
- Our college Volley Ball team participated in VTU Inter Collegiate Volley Ball tournament (Men) which was held at Acharya IT, Bangalore. They secured 2nd Place.
- Our college staff participated in state level cricket Tournament held at PES Bangalore on 19th to 20th November 2018.
- Our college students participated in VTU state level Wrestling & Judo (men & women) Competition at Sapthagiri CE On 9th and 10th November 2018 Men-wrestling 2nd place, 3rd place. Judo 1st Place, 2nd place. Women - wrestling 1st place, 2nd place and 3rd place, Judo 1st Place, 2nd place and was also selected for Nationals.
- Our college Table Tennis team participated in VTU Inter Collegiate Table Tennis tournament (Women) which was held at Vijay Vitala It Bengaluru. On 3rd to 4th September 2018 Secured 2nd Place.

- Our college kabaddi team participated in VTU Inter Collegiate Bangalore Zone and Inter Zone kabaddi Tournament (Women) 2019 which was held on Zone level at SVIT Bengaluru, They secured 1stPlace. And Inter Zone on VSMSRKIT NIPANI. They secured 2nd Place.
- Our college students participated in VTU state level Wrestling & Judo (men &women) Competition at SJC INSTITUTE OF TECHNOLOGY On 6th to 7th September 2019.
- SJCIT Women team have grabbed VTU Wrestling Champion Trophy with 3 Gold Medals and 3 silver Medals with 2 Bronze Medals.
- SJCIT Men team have grabbed VTU Wrestling Runner Trophy with 2 Gold Medals and 1 silver Medals with 2 Bronze Medals.
- SJCIT Women team have grabbed VTU judo Runner Trophy with 1 Gold Medals and 1 silver Medals with 1 Bronze Medals.

NSS Student Coordinator for Sports Division Level “BGS Memorial Sports Championship-2021

Sl. No.	Name	Department	Sem/Sec
1	Hemanth R K	ECE	5 th /A
2	Ganesh K	ECE	5 th /A
3	Darshan S R	ECE	5 th /A
4	Tejas	ECE	3 rd /C
5	Punith	ECE	3 rd /B



Figure 9.35 Photograph BGS Memorial Sports Championship-2021

CRITERIA 10

**Governance, Institutional
Support and Financial
Resources**

CRITERION 10	Governance, Institutional Support and Financial Resources	120

10. GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES (120)

10.1 Organization, Governance and Transparency (40)

10.1.1. State the Vision and Mission of the Institute (5)

Vision of the Institute

Preparing competent Engineering and Management Professionals to Serve the Society

Mission of the Institute

- Providing students with a sound knowledge in fundamentals of their branch of study
- Promoting excellence in Teaching, training, research and consultancy
- Exposing students to emerging frontiers in various domains enabling continuous learning
- Developing entrepreneurial acumen to venture into innovative areas
- Imparting value based professional education with a sense of social responsibility

10.1.2. Governing body, Administrative Setup, and Functions of Various Bodies, Service Rules, Procedures, Recruitment, And Promotional Policies (10)

The Governing Body:

The Governing Council of the college is the main administrative body. It is constituted as per the guidelines framed by All India Council for Technical Education, affiliating University and government of Karnataka. The main objective of the governing council is to offer quality education in the best possible means to ensure that the graduates are employable and socially acceptable. The Governing Council is guided by the spiritual and religious leaders of the Sri Adichunchanagiri Mahasamsthana Mutt. The Council is headed by His Holiness Jagadguru Sri Sri Sri Dr. Nirmalanandanatha Mahaswamiji, President, Sri Adichunchanagiri Shikshana Trust® and comprises of eminent personalities in the society, Academicians, and Industry experts. The distinguished members are drawn from different cross-sections of the society as shown in Table B.10.1.2a.

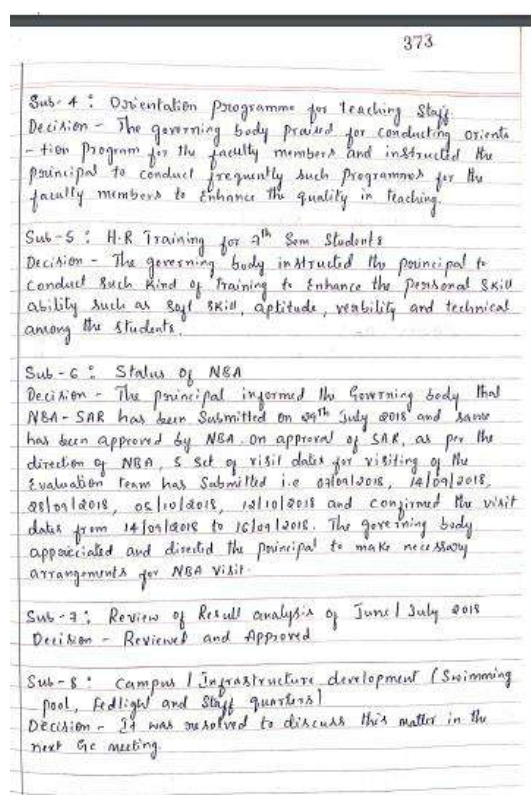
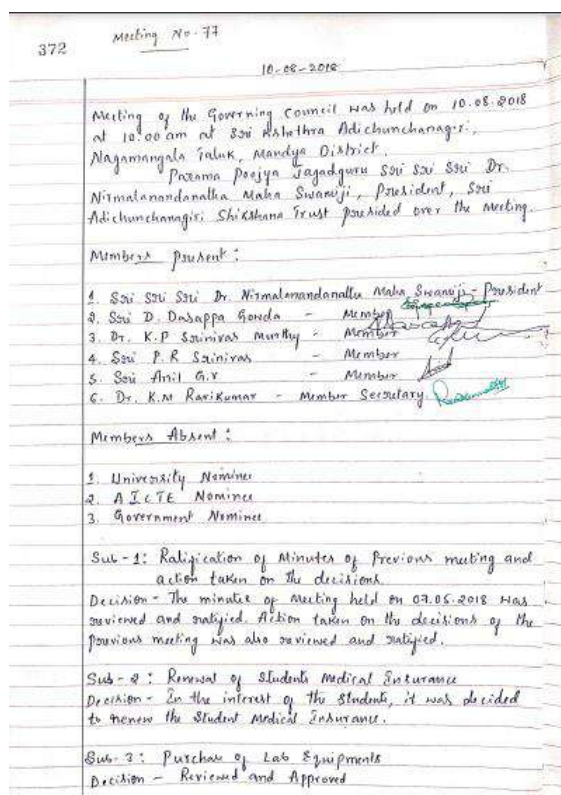
Table B.10.1.2a: Structure of Governing Council of SJCIT

Sl. No	Name of the Member	Profession	Designation
1	Sri Sri Sri Dr. Nirmalanandanatha Mahaswamiji	President, Sri Adichunchanagiri Shikshana Trust ®	Chairman
2	Sri Sri Mangalanatha Swamiji	Sri Adichunchanagiri Shikshana Trust ®, Chickaballapura Shakha Mutt	Secretary
3	Dr. K P Srinivas Murthy	Doctor	Member
4	Sri Anil G V	Industrialist	Member
5	Sri K Govindraj	MLC	Member
6	Sri P R Srinivas	Industrialist	Government Nominee
7	Dr. B S Dhaliwal	Professor	University Nominee
8	Sri. R. Manjunatha	Director of Technical Education	Government Nominee
9	Dr. R. Sakthivel	Regional Officer and Assistant Director, South Western Regional Office	AICTE Nominee
10	Prof. P K MahaPathra	Professor	AICTE Nominee
11	Dr. G T Raju	Principal	Member Secretary

The Governing Council meets regularly twice in a year. All the activities of the Institute, the performance of students, academic matters, research progress and strategic plans for the overall development will be presented by the Principal / Member Secretary. All the matters will be reviewed and suitable suggestions for improvement will be sought from the Honourable members of the Governing Council. Minutes of the Governing Council meeting will be circulated to all the members after taking approval from Chairman of Governing Council. The Governing Council meeting details are presented in the Table B.10.1.2b. A sample of minutes of meeting is shown in figure 10.1

Table B.10.1.2b: Governing Council meeting held during Previous Years

Sl. No.	Year	Number of Meeting	Date of Meeting
1	2020	2	25/06/2020
			06/01/2020
2	2019	2	08/09/2019
			26/05/2019
3	2018	3	04/12/2018
			10/08/2018
			07/05/2018

**Figure 10.1 A snap shot showing contents of Minutes of Meeting held in the year 2018****The Administrative setup:**

The Institute believes in a transparent and decentralized work culture. The employees are empowered to initiate development actions for the improvement of quality education. The Organization structure is as shown in Figure 10.2

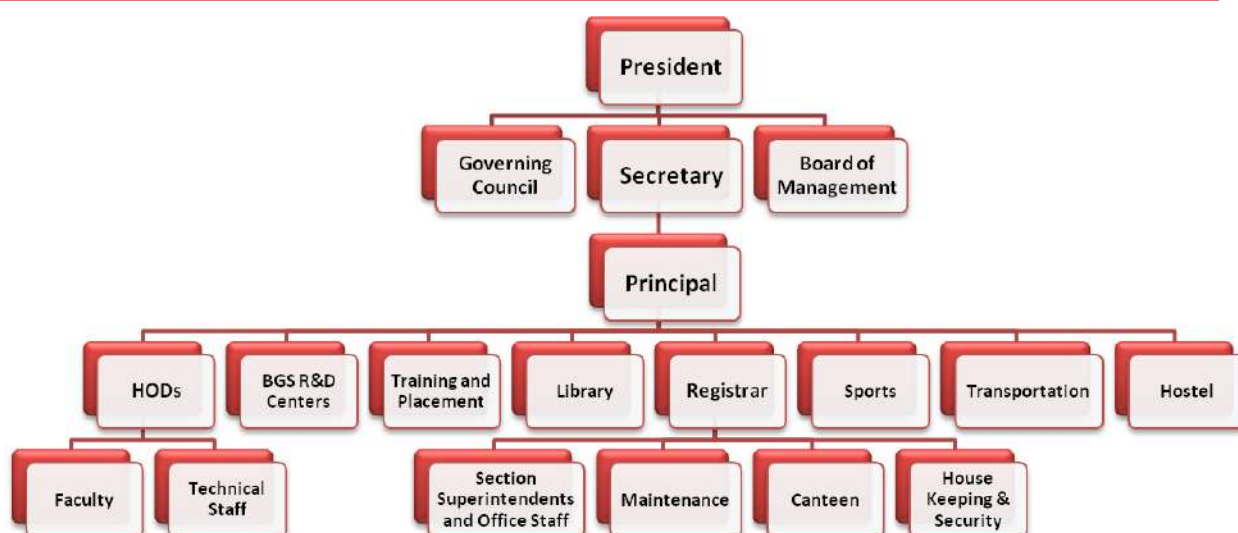


Fig.10.2 Organization Structure of the Institute

The above organization structure indicates the major portfolios and their reporting structure. However, the Institute has identified other key responsible areas and has been assigned to different faculty members. This is the core teams which lead the processes at the Institution Level. The functions and responsibilities of various positions are defined and presented in the following Table B.10.1.2c.

Table B.10.1.2c Functions of various bodies and positions

POSITION	FUNCTIONS
Governing Council	• Frame directive principles and policies. • Amend and approve policies from time to time. • Approve Budgets.
Principal	• Head of the Institution. • Academic and administrative management of the institution. • Policy planning and providing academic and administrative leadership. • Monitoring and Evaluation of academic and research activities. • Promotion of industry-institution interaction. • Providing Consultancy services. • Participation in policy planning at the regional/National level for development of technical education. • Allocation of budget and budget monitoring. • Managing the Quality Management System of the Institution. • Teaching. • Student and stakeholders' satisfaction. • Monitoring the Implementation of ISO 9001-2015 systems and standards across the organization.

	Approval of Master timetable, Quality Manual and Quality System Procedures and changes to the same, Calendar of Events, Institution related documents.
Director [Research and Incubation Centre for Entrepreneurship]	- Create Awareness about Entrepreneurship and Intellectual Property Rights - Initiate new ideas to solve local problems through IDEATHON & HECKATHON process and convert ideas into proof of concept. Establish collaboration with government and non-government funding agencies to enhance research, innovation and entrepreneurial related activities. - Guide & motivate the students to become entrepreneurs. - Research & Development, Publications and Funding
Registrar	- Preparing regular financial and administrative reports. - Administration of Institution databases. - Managing office supplies stock and placing orders. - Prepare reports and presentations with statistical data, as assigned. - Organize a filing system for important and confidential Institute documents.
Registrar	- Office Administration. - Administration of the Institution as per the directions of Management and Principal. - Co-Ordinate with the MR in the Institution related matters. - Manages the financial matters of the college. - Budget monitoring. - Liaisoning administrative activities with Management, University, Central and State Government and Bodies, Local administration and Authorities, Principal, Staff, Students and Parents. - Managing and Monitoring the Purchase and Stock Verification activities. - Co-Ordination with the Supporting Sections Staff in organizing Extra/Co-Curricular activities. - Monitoring the Admission, Examination, Establishment and Recruitment Activities of the Institution. - Monitoring the Security activities & General Amenities across the Institution. - Monitoring the Implementation of ISO 9001-2015 Systems & Standards in the Office and its related area. - Approval of Office related work instruction. - Housekeeping.
Head of	Head of Department/Teaching/Research/Training.

Department	• Academic and administrative management of the department. • Teaching and research activities. • Implementation of ISO 9001 -2015 Systems & Standards Review of Lesson Planning, Review of Test Question papers. • Providing leadership in both post-graduate and undergraduate courses in relevant field of specialization. • Consultancy services. • Policy planning, Monitoring and Evaluation and Promotional activities both at departmental and institutional level. • Curriculum development and developing resource materials. • Design and development of new programmes. • Continuing education activities. • Interaction with industry and society. • Students counselling and interaction. • Administration both at Departmental and institutional levels. • Student and stakeholders' satisfaction. • Housekeeping.
Librarian	• Library Head. • General administration of library. • Budgeting, Planning and developing the library. • Books, periodicals, videotapes selection, acquisition & Storage. • Supervising of cataloguing and indexing. Automation aspects. • Maintenance of library books, periodicals, videotapes, catalogues etc. • E learning resources. • Student satisfaction. • Implementation of ISO 9001 -2015 systems and standards. • Approval of Library work instruction. • Housekeeping, Development of Digital Library.
Placement Officer	• Industry Interaction. • Organizing the Campus Recruitment. • Interaction with Industries and arrange Industrial visits, Technical Seminars. • Organizing Career Guidance and Personality Development Programs. • Organizing General Aptitude Tests. • Assisting the academic departments to get projects. • Organizing for Training as per academic department's requirements. • Implementation of ISO 9001-2015 systems and standards. • Approval of Placement work instruction and Letters.
Warden	• Hostel Activities. • Overall Monitoring of Hostel Activities. • Implementation of ISO 9001-2015 systems and standards. • Approval Routine Hostel Documents.

	• Maintenance of Discipline in the Hostel, Housekeeping.
Professors/ Associate/ Assistant Professors	• Teaching /Laboratory Maintenance. • Conduction of theory and practical classes. • Planning laboratory work & Maintenance of Laboratories. • Support HOD/Professor in Lab / Workshop Maintenance. • Preparation of lesson planning and test question papers. • Student Counselling and Interaction by the Proctors. • Support department in organizing curricular and extracurricular activities. • Implementation of ISO 9001-2015 systems and standards. • Awarding Internal Assessment Marks. • Housekeeping.
Foreman, Lab instructors, System programmers	• Laboratory Maintenance. • General Maintenance of Laboratory and equipment. • Maintenance of Computer Hardware & Software in the lab. • Maintenance of Problem and Maintenance Registers. • Updating of Stock Registers. • Supervising the activities of supporting lab Staff. • Assisting in the conduction of the Laboratory classes. • Student satisfaction. • Implementation of ISO 9001 -2015systems and standards. • Updating Stock Registers and Maintenance Registers. • Housekeeping.

Service Rules:

Service rules are constituted by Sri Adichunchanagiri Shikshana Trust and are documented in Sri Adichunchanagiri Shikshana Trust manual. The Service rules are made available for all the employees of the organization. The Services rules are under the guidelines of AICTE, affiliating University and Government of Karnataka. The establishment section maintains Service Book for every staff member. The Institution has Standard Operating Process is defined for all the activities of the Institution. The Recruitment procedure for the appointment of teaching faculty is presented below.

- Staff requirement details will be collected from the HODs through prescribed format during the academic year and will be placed before the Management for approval to advertise in the newspapers.
- Advertisement will be given in different newspapers by mentioning Qualifications, Experience, Pay Scales, etc.
- After receiving the applications / resumes, it will be scrutinized and shortlisted.

- Shortlisted candidates will be called for interview on the prescribed date.
- The Selection Committee meeting will be called on the prescribed date and the representative from VTU, AICTE, Governing Council Members with respective HOD and Subject Expert will be invited for the Interview.
- The Committee prepares the Merit List (Selection List).
- A letter signed by Principal shall be issued to the selected candidate (In the case of delay in obtaining signature of the President). The President of the Trust shall issue Appointment Order. The candidate will meet the Principal and report to duty within the specified joining date as mentioned in the letter signed by the Principal/President and submit all his / her original documents to the Office. In case, the candidate requests for an extension of joining period, the same shall be examined by the Principal and suitable decision will be conveyed to the candidate. In case, the chosen candidate does not report within the prescribed time, his / her appointment stands cancelled and a fresh Appointment Order is issued to the waitlisted candidate.
- The HOD will be informed about the reporting of duty.
- Name of the staff who has joined will be informed to the Library, Transportation section and hostels.

Promotional Policies:

Policies regarding promotion are as per AICTE norms. Additional increments are given to the faculty who excel in academics and research.

10.1.3. Decentralization in working and grievance redressal mechanism (10)

The Institution has identified various committees and is empowered to take appropriate decisions to ensure over all functioning of the institution are smooth. The committee in general consists of faculty members, key Officers from the Government of Karnataka, Industry Representatives, Alumni's and Student Representatives. The various committees, team members and its responsibilities are presented in the following Table B.10.1.3.

Table B.10.1.3: Committees, members and its responsibilities

Sl. No.	Name of the Committee	Members	Roles and Responsibilities
1.	Discipline Committee	1. Dr. Srinivas Reddy Perla, HOD, Maths 2. College level committee member 3. Department level committee member	• To oversee and monitor the overall discipline of students in the college, and review it periodically. • To take decisions and actions related to indiscipline activities of the students in the college as and when required
2.	Anti-Ragging Committee	1. Dr. G Narayan, CED, Chairman 2. Dr.M.N.Manjunath, , Chemistry 3. Dr.Nataraj S N, MED 4. Circle Inspector, Chikkaballapur 5. Sub Inspector, Rural Police Station 6. Mr. Chethan, Student Representative 7. Mr. Manoj Kumar, Student Representative	• Anti-Ragging Committee will be the Supervisory and Advisory Committee in preserving a Culture of Ragging Free Environment in the college Campus. • The Anti-Ragging Squad-office bearers will work under the Supervision of Anti Ragging Committee and to engage in the works of checking places like Hostels, Buses, Canteens, Classrooms and other places of student congregation. • Anti-Ragging Committee will be involved in designing strategies and action plan for curbing the Menace of Ragging in the college by adopting array of activities.

3.	Anti-Ragging Flying Squad	1. Prof.Ravindra, CED, Chairman 2. Prof.Kalaiah J B, ECE 3. Prof. Srinivas Murthy, CSE 4. Prof.Yogaraj, ISE 5. Prof. Harish S, MED 6. Prof.Rohith L G, AE 7. Prof. Mahesh, Maths	• Anti-Ragging Squad will be working under the Monitoring of Anti Ragging Committee and will seek advice from the Anti-Ragging Committee. • The functions of Anti-Ragging Squad will be to keep a vigil and stop the incidences of Ragging, if any, happening / reported in the places of Student aggregation including, Classrooms, Canteens, Buses, Grounds, Hostels etc. • The Squad will also educate the students at large by adopting various means about the menace of Ragging and related Punishments there to. • A gamut of positive reinforcement activities are adopted by Anti-Ragging Squad for orienting students and molding their personality for a better cause. They shall work in Consonance and Guidance of Anti Ragging Committee.
4.	Internal Quality Assurance Cell (IQAC)	1. Dr.B.N Shobha, ECE, Chairman 2. Management Representatives 3. Dr T Munikenche Gowda, BGS R&D 4. All HODs	• Development of quality benchmarks/parameters for various academic and administrative activities of the institution and carry out the gap analysis for SJCIT • Facilitating the creation of a learner-centric environment conducive to quality education and faculty maturation to adopt the required knowledge and technology for participatory teaching and learning process carrying out periodic check of course outcome attainment and action taken from each faculty and its mapping on to POs, PEOs.

			• Monitor the action taken by departments on feedback response from students, parents and other stakeholders on quality-related institutional processes; • Dissemination of information on various quality parameters of higher education; • Organization of inter and intra institutional workshops, seminars on quality related themes and promotion of quality circles; • Documentation of the various programmes / activities leading to quality improvement; • Acting as a nodal agency of the Institution for coordinating quality-related activities, including adoption and dissemination of best practices; • Development and maintenance of institutional database through MIS for the purpose of maintaining /enhancing the institutional quality; • Development of Quality Culture in the institution; • Preparation of the Annual Quality Assurance Report (AQAR) and submit to NAAC.
5.	Students Grievance Redressal Cell:	1. Dr.Nagendra Kumar N, ECE, Chairman 2. Dr.Manjunath Kumar H B, HOD, CSE 3. Prof.Deepa M S, HOD, AE 4. Dr.Bharathi M, CSE 5. Prof.Sharada S A,CED	• To develop an organizational framework to resolve Grievances of Students. • To provide the Students access to immediate, hassle free recourse to have their Grievances redressed. • To enlighten the Students on their duties and responsibilities. • To establish structured interactions with Students to elicit information, academic and

			administrative process on their expectations. To institute a monitoring mechanism to oversee the functioning of the Grievance Redressal Policy.
6.	Anti- Sexual Harassment Committee	1. Dr.Manjunath Kumar H B, CSE, Chairman 2. Dr. Suma, MBA 3. Prof.Deepa M S, AE 4. All HODs	- To provide conciliation to settle the matter between her and the respondent. - Conduct inquiry within the time frame (90 days) as prescribed in the Act. - Prepare inquiry and settlement reports & submit the same to the Director. - Ensure confidentiality in conciliation proceedings and conducting inquiry as well as in keeping records. - Easy accessibility.
7.	Alumni Association Committee	1. Prof.Satheesh Chandra Reddy, ISE, Chairman 2. Mr.Sunil Kumar 3. Ms.GeethaVivekanand 4. Mr.VenkateshKempa Reddy 5. Mr.Shaik Mahammad Raffi 6. Mr.Ravi Chandra 7. Mr Naveen 8. Mr.Pramodh Gowda 9. Mr.Anilkumar .P.V. 10. Mr.Venkatesh .Kolaram	To maintain alumni data base, ensure alumni meetings, establish alumni interaction, to promote alumni awareness engagement and commitment to the Institute, support a strong relationship between the alumni association and current students.
8.	Committee of Wardens	1. Dr Vija G R, ISE, Warden 2. Sri J Suresha, Registrar 3. Prof.Chethan H V, ISE 4. Prof.Susheelamma, ISE	- To plan and monitor the maintenance of all the infrastructure facilities concerned with the Hostel - To supervise all facilities/amenities and their up keep, receive complaints from students, redress of grievances etc. - To control, counsel the behavior of students in the hostel, monitor study schedules and patterns, etc.

			- To plan for all the infrastructure facilities required as per - Responsible for proper maintenance of the lodging and boarding facilities of the hostel and for smooth running of the hostel - Responsible for the receipts and the payments of the hostel.
9.	Library Committee	1.Dr.Nataraj S N, Chairman 2.Mr. Lohith, Librarian 3.All HODs	- The Library Committee provides a forum for discussion of matters relating to the Library and its services. - To decide and adopt policies to govern the management and programme of the library. - To prepare the annual budget, rules and regulations of the library. - The committee also looks into students complains, if any. - The Library Committee is a standing committee of the Academic Council.
10.	Canteen Committee	1. Dr. G. Narayana, CED, Chairman 2. Prof. Kiran K M, CED 3. Prof.Vathsala M N, CED 4. Student representative from every dept.	- To supervise, take steps for the maintenance of canteen facilities with hygiene - To maintain and control the quality of food supplied in the canteen - To modernize the canteen equipment and cooking procedures - To control and make suggestions to the canteen management - To plan for all the infrastructure facilities required as per norms
11.	Career Guidance Cell	1. Mr. Sunil Kumar Nayak B, TPO, Chairman 2. Dr. Ravi Kumar T R, MED 3. Prof. Narendra Babu, CSE 4. Prof.AravindaThejas Chandra, ISE 5. Prof.Ravindra, CED	- Collects and maintains the students database for the purpose of HR activities - Does the training need analysis for all third year students. Based on the same, plans for imparting the necessary skills

		6. Dr.Sudhir P, ECE 7. Prof.Deepa M S, AE	such as soft skills, hard skills and technical skills. • Responsible for identifying placement opportunities across reputed organizations. • Arrange for interaction with industry and bridge the gap between Institute and industry. • Arranges for better conduct of industry – specific Training programmes • Assists companies in the recruitment process by conducting interviews, group discussions, written tests etc. in the Campus. • Arranges the special sessions for providing the contemporary trends and development in the technologies and tools to the students • The Training and placement Cell conducts lectures on personality development communication skills and conduct mock sessions for improving presentation skills. • Plan, designs, and imparts Soft skills to the students. • Plan, designs and imparts personality development to the students. • Plan, designs and implements finishing schools to the students. • Coordinates with Training Officer for identifying the training requirements related to Soft and communication skills
12.	Student Welfare Committee	1. Prof.Satheesh Chandra Reddy, ISE, Chairman 2. Dr.Manjunath Kumar H B, CSE 3. Prof. Ravi Kiran, CED 4. Mr. Shivaram,	• Coordinating problems in the distributions of BC, MBC, SC/ST scholarship to the deserving candidates. Monitoring students facilities, organizing financial support to

		Administrative Office	deserving students.
13.	Transportation Committee	1. Dr. P. Rukmangadha, MED, Chairman 2. Sri. J. Suresha, Registrar 3. Mr. Byrappa, Transport section	• To organize route schedule, to monitor maintenance of vehicles, liaison with Government, to address issues related to man power
14.	College Internal Complaints Committee (CICC)	1. Dr.B.N Shobha, ECE, Chairman 2. Dr.Manjunath Kumar H B, CSE 3. Dr. Suma S, MBA 4. Smt. Geethadevi K.L, CED 5. Ms. Hamsa, Student, CSE 6. Ms. Spoorthi, Student,MED 7. Ms. L Harshith, Student,AED 8. Smt. LeelaSriramaiah, NGO Member	• Creates awareness about the internal complaint committee among the Institute academic and administrative units. • Promotes effective communication and collaboration among those responsible for complaints • Ensures that the complainant and witnesses are not victimized or discriminated because of their complaint. • Encourages an open-dialogue with the complainant from the committee members. • Monitors emerging complaint trends and circulate the information as needed. • Serves as a resource in developing or improving complaint related processes. • Works with the University Policy Review Committee to ensure proper reporting of the complaints and their follow-up procedures. • Makes recommendations to senior management as to any resources or actions required for Institute compliance.
15.	Central Mentoring-Cum-Counselling Committee at College/Depar	1. Dr.Ranganath R, MED, Chairman 2. Dr. B. N Shobha, ECE, 3. Prof.Satheesh Chandra Reddy, ISE 4. Prof.Deepa M S, AED 5. Mr. Chandan T, PED 6. Mr. Lohith G.N, Librarian 7. Prof.Sridha J, MED	• To support the students in molding their character with self-confidence. • To de-stress the students by listening their problems and suggest solutions. • To conduct periodical meetings to address issues related to student academics.

	tments under VTU		- To counsel and mentor the specific case of students for academic improvement, career advancement and overall development. - To review the counseling process conducted by faculty.
16.	Internal Committee for the Students with disabilities in Universities/College	- Dr. Ravi Kumar M, ASE, Chairman - Dr. Manjunathkumar H B, CSE - Dr. S. Bhargavi - Sri. Venkatesh A, Parent - Sri. Nataraj. S, Parent - Ms. Spoorthi, 3rd year student, MED - Mr. Sudeep, 4th year student, ECE	To take care of day to day needs of differently able persons as well as for implementation of the schemes existing and to be devised in future.
17.	Accreditation (NBA/NAAC) Committee	- Dr. Ranganath R, MED, College level NBA Coordinator - Dr. Ravi Kumar M, ASE, College level NAAC Coordinator - Department level NBA Coordinators - Department level NAAC Coordinators	- To apply for NAAC/NBA certification. - To conduct periodical review meetings to monitor the progress of NAAC/NBA certification work. - To attend the seminars/conferences related to NAAC/NBA certification. - To organize training programmes for staff members by external resource persons to create awareness about NAAC/NBA certification. - Periodically reviewing the updation of NBA/NAAC related activities in the college.
18.	College Website and Internet Maintenance Committee	- Prof. Aravinda Thejas Chandra, ISE Chairman - Prof. Nagesh R, ISE, Coordinator - Mr. Somashekar, System administrator - Mr. Syed Imdad, System administrator	- To maintain and update the contents in the college website periodically. - To promote news, events related to college in the website regularly.

19.	Central Computing Facility And Computer Maintenance Committee	1. Prof. Abdul Khadar, ISE, Coordinator 2. Mr. Somashekar, System administrator 3. Mr. Syed Imdad, System administrator	• To provide central computing facility for the first year students • To maintain all the computers, LCD projectors, printers in the college
20.	University Examination Committee	1. Dr.Suresha Gowda M V, ASE, Chairman 2. Mr. Krishnappa, Exam Section 3. Chief Time-table Coordinator (CTTC)	• To conduct and monitor the University Examinations as per the time table systematically with proper arrangements
21.	Internal Examination Committee	1. All the Head of Departments 2. All Departments Test Coordinator	• To conduct and monitor the three periodical tests as per the schedule systematically with proper arrangements
22.	Signboard In charge/ Maintenance Committee	1. Dr. G Narayan, Chairman 2. Prof.Manjunath K A, CED 3. Mr. Somashekar, System administrator 4. Mr. Syed Imdad, System administrator	• To install signboards in the college as and when required • To monitor and maintain the Power supply, Generators, UPSs, A/Cs available in the college and hostels
23.	Publicity and College News Promotion Committee	1. Prof. Narendra Babu C, CSE 2. Dr. K M Rajashekar , Physics 3. Dr. Suma S, MBA	• To send advertisements, news items to the newspaper about the college or events organized in the college. • To bring press reporters to the college functions through invitations or by phone. • To make promotional activities about the college in the newspaper and website.
24.	Purchase Committee	1. Secretary, Sri Adichunchanagiri Shakha Math, Chickballapur branch 2. Dr. N Shivarama Reddy, CAO 3. Dr. G T Raju, Principal 4. Sri. J Suresha, Registrar 5. All the Head of Departments	• To make arrangements for purchase of the equipments/items/devices required by any department in the college as per the guidelines. • After receiving the item /device/equipment in good quality, make arrangements for payment. • To make arrangements for servicing/repairing of faulty

			items/devices/equipments.
25.	Central Time Table Committee	1. Dr.Bharathi M, CSE, Chairman 2. Department level Time Table coordinators	• To coordinate the time table preparation for first year classes at college level in consultation with HODs in every semester. • To prepare master time table of the college during every semester
26.	Estate Maintenance Committee	1. Dr. G Narayan, CED 2. Mr. Rakesh M R, CED 3. Mr. Srinivas, CED	• To do works related to campus cleaning, gardening and do the maintenance work (including carpentry and plumbing works) of all buildings in the college and hostel premises.
27.	Security Committee	1. Sri J Suresha, Registrar 2. Chief Warden 3. Residential Warden 4. Supervisors	• To maintain duty chart of securities in the Academic Blocks, Boys Hostel, Girls Hostel and in College Main Gate
28.	Professional Societies Activities: ISTE,CSI,IEEE/IETE Committee	1. Dr.Manjunath Kumar B H, CSE, Chairman 2. Dr. Chandra Mohan H K, MED 3. Prof.Ravikiran, ECE	• To promote ISTE/CSI/IEEE/IETE memberships among students in the college. • To conduct mini project competition for all second/third year students during even semester in every year
29.	AICTE – Approval and VTU – Affiliation Process Committee	1. Prof. Nagaraj G, ISE, Chairman 2. Mr. Surendranatha Reddy B, CSE	• To do works related to AICTE Approval and VTU Affiliation process
30.	Research Council	1. Dr. T Munikenche Gowda T, Chairman 2. Dr.Nagendra Kumar, ECE 3. Dr. Vijay G R, ISE 4. Dr.Thyagaraj N R, MED 5. Dr. Murthy SVN, CSE 6. Dr.Bino Prince Raja D, AE 7. Prof. Shashi Kumar A, CED	• To review the Research and Development activities of the college each year and make suggestions for further improvements
31.	Academic Calendar	1. Dr.Ranganath R, MED, Chairman 2. All the Head of Departments	• To prepare and publish the academic calendar at the beginning of every semester.

	Committee		
32.	College Magazine Committee	1. Dr.B NShobha, ECE, Chairman 2. Department level Coordinators	• To prepare and publish College Annual Magazine at the end of every academic year.
33.	NSS/NCC Committee	1. Prof, Shashi Kumar N V, CED 2. Prof.Umesh A Chougala, MED 3. Department level Coordinators (NSS)	• To conduct NSS related activities in the college. • To conduct NCC related activities in the college.
34.	Institute Innovation Council, IPR and Entrepreneur Development Cell	1. Dr.S Bhaskar, ECE, Chairman 2. Dr.Bino Prince Raja, AE 3. Prof. Pradeep kumar, ECE 4. Prof. Narendra Babu C, CSE 5. Department level Coordinators	• To promote Innovation culture at Institute level • To assist in IPR related services • To promote and conduct EDC related activities in the college • To support and sustain Startups at Institute Level
35.	Cultural Activities Committee	1. Dr.Nagendra Kumar, ECE, Chairman 2. Department level Coordinators	• To conduct cultural activities in the college during College Day and during other events. • To accompany with students for cultural events to be organized in other colleges/Universities
36.	Sports Committee	1. Mr. Chandan T, PED 2. Department level Coordinators	• To promote and develop sports activities in the college among students and staff members. • To organize intra-college and inter-college sports events in the college. • To accompany with students for sports events to be organized in other colleges
37.	Planning Committee	1. Dr.Madhusudhana S V, ASE, Chairman 2. Prof. Nagaraj G, ISE 3. Prof. Y R Manjunath, ECE 4. Prof.Vikas Reddy S, CSE 5. Prof.Chandrakala, CED 6. Prof.Deepa M S, AE 7. Dr.Thyagaraj N R, MED	• To make a planning of academic/co-curricular/extra-curricular activities for the forthcoming semester/academic year. As well, to review the activities of the previous semester/year and make recommendations to the Principal/CAO/Management for further improvement.

			To overview the financial viability of the college in each financial year and based on the report of the auditor it will make suggestions/recommendations to the Principal/CAO/Management about further facilities/amenities/laboratories to be included in the forthcoming semester/year.
38.	Admission Committee	- Sri J Suresha, Registrar, Chairman - Prof. Narendra Babu C, CSE - Prof. Manjunath B C, Phy - All the Head of Departments	- To promote admission related activities throughout the year - Design, Plan and implement college Brand Building Activities - Present ideas, mechanisms, tools and techniques to improve admissions
39.	SEED	- Prof. Vikas Reddy S, CSE, Chairman - Dr. Madhusudhana S V, ASE - Prof. Rohit G, AED - Prof. Harish S, MED - Prof. Y R Manjunath, ECE - Prof. Ravindra M V, CED - Prof. Abdul Khadar A, ISE - Dr. Rajskhekar K M, Phy - Prof. S M Padmavathi, MBA	- To mentor students to accomplish their ambition of being results oriented. - To instill in students the discipline of systems thinking to facilitate into viewing problems holistically. - To educate students on the basics of life hacking on how to excel in social and personal life. - To promote to peer learning

10.1.4. Delegation of Financial Powers (10)

The Financial decisions for carrying out administrative, curricular, co-curricular, extracurricular and infrastructure development related activities are delegated at different levels. This is illustrated in the following table 10.1.4.1

Table 10.1.4.1: Delegation of Financial Power

Sl. No.	Designation	Financial Quantum Activities
1	President	Major allocation of funds for infrastructural development and any other activities which involves funds greater than 10 lakhs
2	Governing Council	Purchases of Laboratory equipment and general accessories required for Institutional activities
3	Principal	- Salary disbursement, VTU fees payment, Invoice settlement of recurring and non-recurring expenditures - Expenditures incurred for carrying out curricular, co-curricular and extracurricular activities in various departments - Maintenance and settlement of expenditures related to Professional societies - R&D and Incubation related expenditures

Delegation of financial power for day to day activities of the Institution.

Head of the departments have been empowered with financial powers up to the maximum of Rs.5000 at a time. They can draw advance to meet the department expenditure for any department related activities. They are free to draw this advance any number of times in a month. Any staff member can initiate departmental activities and seek financial assistance with the approval from Principal. The following table indicates the imprest amount that the members can have to meet contingency expenses.

SL.NO	DESIGNATION	IMPREST AMOUNT (IN RS.)
1	Principal	50,000/-
2	Head of Department	5,000/-
3	Librarian	5,000/-
4	Registrar	5,000/-
5	Hostel Wardens	10,000/-
6	Transportation In-charge	10,000/-
7	Placement & Training Officer	5,000/-

10.1.5. Transparency and availability of correct / unambiguous information in public domain (5)

All the information about the Institute, Infrastructure, Staff, equipment details, students and facilities are being put up on the website in “Mandatory disclosure”. The Program specific information is made available to all the aspirants through the website.

10.2. Budget Allocation, Utilization, and Public Accounting at Institute level (30)

S J C Institute of Technology is an Engineering Institution under the private unaided self-financing category. The revenue generation is through the fee received from the students.

The Budget proposal for the academic year is prepared by the individual departments as per the guidelines by Sri Adichunchanagiri Shikshana Trust and Principal office. The collective budget proposals are scrutinized by the budget committee at the college level and further taken to governing council for approval and sanction. Once it is sanctioned, the Principal and AO will issue the budget order. The budgetary details of the institution are presented in the following Tables B.10.2a to B.10.2e.

CFY-2020-2021

Table B.10.2a Details of Total income and Expenditure (In Rupees) for the year 2020-2021

Total Income				Actual Expenditure			Total Number of Students
Fee	Govt.	Grant	Other sources	Recurring Including Salaries	Non-Recurring	Special projects / Any other, specify	Expenditure per students (2775)
18,64,29,627	83,95,808	30,59,355	3,79,63,123	18,90,43,933	65,74,509	-	70493.13

CFY-2019-2020

Table B.10.2b: Details of Total income and Expenditure (In Rupees) for the year 2019-2020

Total Income				Actual Expenditure			Total Number of Students
Fee	Govt.	Grant	Other sources	Recurring Including Salaries	Non-Recurring	Special projects / Any other, specify	Expenditure per students 2694
24,54,89,243	74,45,157	39,89,845	5,62,84,704	25,29,91,658	1,75,57,428	1,96,59,246	107723.95

CFY-2018-2019**Table B.10.2c: Details of Total income and Expenditure (In Rupees) for the year 2018-2019**

Total Income				Actual Expenditure			Total Number of Students
Fee	Govt.	Grant	Other sources	Recurring Including Salaries	Non-Recurring	Special projects / Any other, specify	Expenditure per students 2681
22,45,45,886	72,45,755	32,26,289	4,75,70,844	28,85,34,757	1,93,16,684	1,96,59,246	110970.04

CFY-2017-2018**Table B.10. 2d: Details of Total income and Expenditure (In Rupees) for the year 2017-2018**

Total Income				Actual Expenditure			Total Number of Students
Fee	Govt.	Grant	Other sources	Recurring Including Salaries	Non-Recurring	Special projects / Any other, specify	Expenditure per students 2568
22,35,44,833	19,44,610	55,14,550	5,11,76,948	22,71,98,201	3,21,93,257	8,06,72,344	132423.60

Table B.10. 2e: Actual expenses (In Rupees) during 2017 - 2021

Items	Budgeted CFY (2020-2021)	Actual Expenses CFY (2020-2021)	Budgeted CFY m1 (2019-2020)	Actual Expenses m1 (2019-2020)	Budgeted CFY m2 (2018-2019)	Actual Expenses CFY m2 (2018-2019)	Budgeted CFY m3(2017- 2018)	Actual Expenses CFYm3 (2017-2018)
Infrastructure Built-Up	39,342,869	1,480,000	29,683,789	17,269,423	28,139,787	23,896,834	113,829,330	81,400,102
Library	709,250.00	816,713.00	1,685,000.00	1,183,296.00	2,235,000.00	1,708,633.00	1,680,000.00	1,577,061.00
Laboratory Equipment's	26,445,025	5,696,796	44,803,834	12,473,138	55,833,465	13,928,198	61,374,535	23,101,094
Laboratory Consumables	2,079,243.00	329,204.00	1,293,792.00	366,874.00	2,007,722.00	650,599.00	686,568.00	887,599.00
Teaching & Non- Teaching Staff Salary	179,626,389	119,360,733	176,774,795	152,357,687	162,724,820	146,636,876	157,481,767	133,443,733
Maintenance and spares	175,000.00	45,720.00	175,000.00	306,348.00	140,000.00	212,863.00	110,000.00	213,304.00
R&D	2,365,000.00	1,089,110.00	3,437,165.00	1,081,911.00	4,655,160.00	1,241,551.00	4,999,998.00	2,697,610.00
Training and Travel	5,750,000.00	4,969,582.00	9,557,000.00	8,772,745.00	9,400,000.00	8,128,059.00	10,750,000.00	11,051,928.00
Miscellaneous Expenses for academic activities	77,472,594.00	33,778,825.00	78,930,010.00	54,812,945.00	59,944,210.00	56,676,525.00	57,991,166.00	50,120,716.00
TOTAL	333,965,370	167,566,683	346,520,385	248,624,367	325,080,164	253,080,138	408,903,364	304,493,147

10.2.1. Adequacy of budget allocation

The budget allocation and actual expenditure details for the last four assessment years are presented in the following Table B.10.2.1.

Table B. 10. 2.1 Adequacy of budget allocation (In Rupees)

SL. NO.	ASSESSMENT YEAR	BUDGET ALLOCATION IN RS.	ACTUAL EXPENDITURE IN RS.	ADEQUATE / IN ADEQUATE
1	CFY(2020-21)	333,965,370	167,566,683	ADEQUATE
2	CFYm1(2019-20)	346,520,386	248,624,366	ADEQUATE
3	CFYm2(2018-19)	325,080,164	253,080,137	ADEQUATE
4	CFYm3(2017-18)	408,903,366	304,493,147	ADEQUATE

10.2.2. Utilization of allocated funds

The budget utilization details for the last four assessment years are presented in the following Table B.10.2.2.

Table B. 10.2.2 Allocated funds (In Rupees) during 2013- 2017

SL. NO.	ASSESSMENT YEAR	BUDGET ALLOCATION IN RS.	ACTUAL EXPENDITURE IN RS.	PERCENTAGE OF UTILIZATION
1	CFY(2020-21)	333,965,370	167,566,683	50.17
2	CFYm1(2019-20)	346,520,386	248,624,366	71.75
3	CFYm2(2018-19)	325,080,164	253,080,137	77.85
4	CFYm3(2017-18)	408,903,366	304,493,147	74.47

10.2.3. Availability of the audited statements on the institute's website

The audit statements of the academic years are available in the institute website:

www.sjcit.ac.in

10.3 Program Specific Budget Allocation, Utilization (30)**Civil Engineering****Budget allocation and utilization details of Civil Engineering Program**

The recurring and non-recurring budget details, expenditure per student specific to Civil engineering program are presented in the following Tables B.10.3a to 10.3e

CFY-2020-2021**Table B.10.3a: Total Budget allocation and utilization (In Rupees) 2020-2021**

Total Budget		Actual Expenditure		Total Number of Students:375
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per Student
28,00,635.00	2,06,82,541.00	1,47,177.00	1,41,03,113.00	38,000.00

CFYm1-2019-2020**Table B.10.3b: Total Budget allocation and utilization (In Rupees) 2019-2020**

Total Budget		Actual Expenditure		Total Number of Students: 408
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per Student
35,14,437.00	2,18,05,857.00	1,28,292.00	1,73,42,386.00	42,820.00

CFYm2-2018-2019**Table B.10.3c: Total budget allocation and utilization (In Rupees) 2018-2019**

Total Budget		Actual Expenditure		Total Number of Students:485
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per Student
64,15,560.00	2,18,66,319.00	2,13,833.00	1,81,14,045.00	37,789.00

CFYm3-2017-2018**Table B.10.3d: Total budget allocation and utilization (In Rupees) 2017-2018**

Total Budget		Actual Expenditure		Total Number of Students:457
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per Student
60,79,729.00	2,21,88,276.00	13,80,150.00	1,79,92,746.00	42,391.00

Table B.10.3e: Actual expenses during (In Rupees) 2017 – 2021

Items	Budgeted CFY (2020- 2021)	Actual Expenses CFY (2020- 2021)	Budgeted CFY m1 (2019- 2020)	Actual Expenses m1 (2019- 2020)	Budgeted CFY m2 (2018- 2019)	Actual Expenses CFY m2 (2018- 2019)	Budgeted CFY m3(2017- 2018)	Actual Expenses CFYm3 (2017- 2018)
Laboratory Equipments	2,400,500	-	3,067,700	-	3963800	-	3,768,300	642,964
Software	-	-	-	-	2,100,000	-	2,000,000	439,200
R & D	400135.00	147177.00	446737.00	128292.00	352760.00	213833.00	311429.00	297986.00
Laboratory Consumables	107000.00	71012.00	130000.00	23500.00	70000.00	139018.00	214600.00	25982.00
Maintenance & Spares	35000.00	18650.00	40000.00	22351.00	30000.00	59700.00	50000.00	47657.00
Training and Travel	540541.00	621713.00	1135857.00	1135047.00	1266319.00	1753839.00	1423676.00	1757619.00
Establishment Expenses	20,000,000	13,391,738	20,500,000	16,161,488	20,500,000	16,161,488	20,500,000	16,161,488
TOTAL	23483176.00	14250290.00	25320294.00	17470678.00	28281879.00	18327878.00	28268005.00	19372896.00

10.3.1. Adequacy of budget allocation (10)

The budget allocation and actual expenditure details for the last four assessment years are presented in the following Table B.10.3.1.

Table B 10.3.1: Adequacy of budget allocation (In Rupees)

SL.NO.	ASSESSMENT YEAR	BUDGET ALLOCATION IN RS.	ACTUAL EXPENDITURE IN RS.	ADEQUATE / INADEQUATE
1	CFY (2020-21)	2,34,83,176.00	1,42,50,290.00	ADEQUATE
2	CFYm1 (2019-20)	2,53,20,294.00	1,74,70,678.00	ADEQUATE
3	CFYm2 (2018-19)	2,82,81,879.00	1,83,27,878.00	ADEQUATE
4	CFYm3 (2017-18)	2,82,68,005.00	1,93,72,896.00	ADEQUATE

10.3.2. Utilization of allocated funds (20)

The budget utilization details for the last four assessment years are presented in the following Table B.10.3.2.

Table B.10.3.2: Budget utilization (In Rupees) 2017-2021

SL.NO.	ASSESSMENT YEAR	BUDGET ALLOCATION IN RS.	ACTUAL EXPENDITURE IN RS.	PERCENTAGE OF UTILIZATION
1	CFY (2016-17)	2,34,83,176.00	1,42,50,290.00	60.68
2	CFYm1 (2015-16)	2,53,20,294.00	1,74,70,678.00	69.00
3	CFYm2 (2014-15)	2,82,81,879.00	1,83,27,878.00	64.80
4	CFYm3 (2013-14)	2,82,68,005.00	1,93,72,896.00	68.53

10.4 Library and Internet (20)

The SJCIT Library is an important learning resource center with open access system encouraging the user to browse freely in the stock area. The library is housed in a spacious block. Presently library has 81440 volumes of books and periodicals/magazines. The library comprises of reference section, periodical section, stock area, digital library with internet facility. Library also has collection of newspapers, journals back volumes, competitive exam books, GATE question papers and University question papers and syllabus of all the

branches. The basic infrastructure, working duration, internet availability and membership details of central library is presented in the Table B.10.4

Table B.10.4: Details of Central Library facility

Number of Volumes	81440
Number of Titles	13599
Carpet Area of library (in m ²)	656 square meters
Reading Space (in m ²)	1884.40 square meters
Number of Seats in reading space	155 Seats
Number of Users (Issue Book) per day (2020-21)	246
Number of Users (Reading space) per day (2020-21)	76
Timings Working day	8.30 am to 8.30 pm
Timings: Weekend	8.30 am to 5.00 pm
Timings: Vacation	8.30 am to 5.00 pm
Number of Library Staff	10
Computerization for search, indexing, issue/return records	Available
Bar Coding Used	Yes
Library Services on Internet/Intranet	Yes
Availability over Internet/Intranet	Yes
Availability of exclusive space/room	Yes
Number of users per day.	140
INDEST/DELNET and other similar membership	DELNET VTU Consortium. Indian Institute of Science NDL CMTI

The college central library facility has obtained no deficiency report from the VTU Local Inquiry Committee (LIC) for all the assessment years. To enhance the efficiency of library operation, the centre is automated with **LIBSUIT** software to provide speed service to the library users.

10.4.1 Quality of learning resources (hard/soft) (10)

Relevance of availability learning resources including e-Resources

The Institution has taken up membership from Visvesvaraya Technological University consortium for enabling utilization of e-resources. The VTU Consortium acts as a single-window service for Technical Institutions with their diverse research and academic interests. These e-resources can be accessed through IP based in the campus through web addresses.

The various e-resources that can be accessed by the faculty and student members are presented in section 9.4 (Criteria 9).

Accessibility to students

Computers and internet facility is provided in central library where students can access different types of e-journals. There is open access for books. The students can access the e-books/e-journals through Wi-Fi facility at library centre. The learning resource facility is kept open for 12 hours a day for use and will be extended on requirement.

Support to students for self-learning activities

Digital Library: The Institution has set up Digital Library with 30 computers having adequate internet connectivity. The objective of this facility is to support self-learning activities. About 6000 online video lectures are made available in the digital library for assisting self-learning.

Apart from the availability of e- resources through VTU consortium, the college central library has established NPTEL local chapter. Mr. Harshavardhan D, Asst. Professor, Computer Science and Engineering department is the single point of contact to enable student registration to NPTEL online courses. The central library provides necessary information to the students for registering to these online courses. During the year 2020-21, 502 members (both Staff and Students) have registered for the NPTEL online courses.

10.4.2 Internet (10)

The Institution has enabled adequate internet facility to support the operations. The details of internet provider and the specifications are provided in the following Table B.10.4.2.

Table B.10.4.2: Details of Internet availability

1	Name of the Internet Provider	1.INFYNIX Data Services Private Limited 2.MICRONOVA & e-Infrastructure Private Ltd.
2	Availability of Bandwidth	500 Mbps [INFYNIX Data Services Pvt Ltd] 10 Mbps [MICRONOVA & e-Infrastructure Private Limited]
3	Wi-Fi availability	Yes
4	Internet access in Labs, Classrooms, Library and offices of all Departments	Yes
5	Security arrangements	Fire walls

PART-C

DECLARATION BY

THE INSTITUTION

Declaration

The head of the institution needs to make a declaration as per the format given -

- 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 institutes shall fully abide by them.
- It is submitted that information provided in this Self Assessment Report is factually correct.
- I understand and agree that an appropriate disciplinary action against the Institute will be initiated by the NBA. In case, any false statement/information is observed during pre-visit, visit, postvisit and subsequent to grant of accreditation.

Head of the Institute

Name : Dr. G T Raju

Designation : Principal

Signature :



Seal of The Institution :

Principal
H.J.C. Institute of Technology
Chickballapur-562101

Place : Chickballapur

Date : 13-12-2021 15:41:02



ANNEXURE

Annexure-I

(A) PROGRAMME OUTCOMES (POs)

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 modelling 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.

(B) PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: Apply civil engineering knowledge in analysis, design, laboratory investigations and construction aspects

PSO2: Solve problems in various fields of civil engineering with appropriate construction materials & technology