



# AISSMS

COLLEGE OF ENGINEERING

ज्ञानम् सकलजनहिताय

(Accredited by NAAC with grade A+)



## SELF ASSESSMENT REPORT (SAR)

For Bachelor of Civil Engineering (Tier II)



National Board of Accreditation

New Delhi



Department of Civil Engineering

AISSMS College of Engineering Pune - 411001



## DEPARTMENT OF CIVIL ENGINEERING

### Part A

#### Institutional Information



## 1. Name and Address of the Institution

ALL INDIA SHRI SHIVAJI MEMORIAL SOCIETY S COLLEGE OF ENGG KENNEDY ROAD  
NEAR R.T.O.PUNE, KENNEDY ROAD, PUNE-411001

## 2. Name and Address of Affiliating University

UNIVERSITY OF PUNE GANESHKHIND ROAD PUNE-411007

## 3. Year of establishment of the Institution:

1992

## 4. Type of the Institution:

<input type="checkbox"/> University	<input type="checkbox"/> Autonomous
<input type="checkbox"/> Deemed University	<input checked="" type="checkbox"/> Affiliated
<input type="checkbox"/> Government Aided	

## 5. Ownership Status

<input type="checkbox"/> Central Government	<input checked="" type="checkbox"/> Trust
<input type="checkbox"/> State Government	<input type="checkbox"/> Society
<input type="checkbox"/> Government Aided	<input type="checkbox"/> Section 25 Company
<input type="checkbox"/> Self financing	<input type="checkbox"/> Any Other (Please Specify)

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

Name of Institutions	Year of Establishment	Programs of Study	Location
All India Shri Shivaji Memorial Society's Institute of Information Technology, Pune – 1	1999	Engineering and Technology : (Under Graduate Courses) 1) Computer Engineering, 2) Electrical Engineering, 3) Instrumentation Engineering, 4) Electronics and Telecommunication Engineering, 5) Information Technology, 6) Artificial Intelligence and Data Science (Post Graduate Courses) 1) Electronics and Telecommunication Engineering (VLSI & Embedded Systems), 2) Electrical Engineering (Power Electronics and Drives)	Kennedy Road, Pune - 1
All India Shri Shivaji Memorial Society's College of Polytechnic, Pune – 1	1994	Diploma Courses: 1) Civil Engineering, 2) Computer Engineering, 3) Electronics and Telecommunication Engineering, 4) Information Technology, 5) Instrumentation Engineering, 6) Mechanical Engineering, 7) Automobile Engineering	Kennedy Road, Pune - 1
All India Shri Shivaji	1996	B Pharm and M Pharm	Kennedy Road,



Memorial Society's College of Pharmacy, Pune – 1			Pune - 1
All India Shri Shivaji Memorial Society's Institute of Management, Pune – 1	2002	MBA	Kennedy Road, Pune - 1
All India Shri Shivaji Memorial Society's College of Hotel Management & Catering Technology, Pune – 5	1997	CHMCT Course : BHMCT, B Sc HS	55-56, Shivajinagar, Pune – 411 005
All India Shri Shivaji Memorial Society's Private Industrial Training Institute, Pune – 02	1991	ITI Courses : Welder ( Gas & Electric ), Mechanic Diesel, Fitter, Turner, Machinist, Machinist ( Grinder ), Mechanic (Refrigeration and Air-Conditioner), Electrician, Mechanic (Motor Vehicle), Electronic Mechanic, Painter ( General ), Tool and Die Maker (Press, Tool, Jig and Fixture )	t – Daund, Urulikanchan, Dist – Pune – 412 202
All India Shri Shivaji Memorial Society's SSPM Day School & Junior College, Pune – 5	1972	School & Jr College : Std. 5th to 10th (School), Std. 11th to 12th (College – Science & Commerce)	55-56, Shivajinagar, Pune – 411 005
All India Shri Shivaji Memorial Society's Shri Shivaji Preparatory Military School, Pune – 5	1932	School & Jr College : Std. 1st to 10th (School) & 11th to 12th (College – Science & Commerce)	55-56, Shivajinagar, Pune – 411 005





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

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
Civil Engineering	PG	2011	2011	18	No	18	Eligible but not applied	--	--	No	2
Chemical Engineering	UG	1996	1996	40	Yes	60	Granted provisional accreditation for twoyears for the period(specify period)	2013	2015	No	4
ME - Chemical Engineering	PG	2011	2011	18	No	18	Eligible but not applied	--	--	0	2
Computer Engineering	UG	1998	1998	40	Yes	120	Granted provisional accreditation for twoyears for the period(specify period)	2013	2015	0	4
ME - Computer Engineering (ArtificialIntelligence and Data Science)	PG	2013	2013	18	No	18	Not eligible for accreditation	--	--	0	2
Electrical Engineering	UG	1992	1992	60	No	60	Not accredited (specify visit dates, year)	18/01/2013	20/01/2013	0	4
ME - Electrical Engineering (PowerElectronics & Drives)	PG	2011	2011	18	No	18	Eligible but not applied	--	--	0	2
Electronics and Telecommunication Engineering	UG	1992	1992	60	No	60	Not accredited (specify visit dates, year)	18/01/2013	20/01/2013	0	4
ME - Electronics &	PG	2009	2009	18	No	18	Not eligible for	--	--	0	2



Telecommunication Engineering (IOT and Sensor Systems)							accreditation				
Mechanical Engineering	UG	1992	1992	60	Yes	120	Granted provisional accreditation for twoyears for the period(specify period)	2013	2015	0	4
ME - Mechanical Engineering (Design)	PG	2013	2013	18	No	18	Eligible but not applied	--	--	0	2
Mechanical Engineering (Sandwich)	UG	1994	1994	30	Yes	60	Granted provisional accreditation for twoyears for the period(specify period)	2013	2015	0	4
Production Engineering (Sandwich)	UG	1994	1994	30	Yes	60	Granted provisional accreditation for twoyears for the period(specify period)	2013	2015	0	4
ME - Mechanical Engineering (Automotive Engineering)	PG	2009	2009	18	No	18	Eligible but not applied	--	--	No	2
Robotics and Automation	UG	2022	2022	30	No	30	Not eligible for accreditation	--	--	No	4



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

S No	Level	Discipline	Program
1	Under Graduate	Engineering & Technology	Civil Engg.
2	Under Graduate	Engineering & Technology	Computer Engg.
3	Under Graduate	Engineering & Technology	Electrical Engg.
4	Under Graduate	Engineering & Technology	Mechanical Engg.
5	Under Graduate	Engineering & Technology	Chemical Engg.

## 9. Total number of employees in the institution

### A. Regular\* Employees (Faculty and Staff)

Items	2021-22		2020-21		2019-20	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	85	86	90	90	89	93
Faculty in Engineering (Female)	64	64	55	57	60	60
Faculty in Maths, Science & Humanities (Male)	9	10	7	7	8	9
Faculty in Maths, Science & Humanities (FeMale)	4	5	7	7	7	7
Non-teaching staff (Male)	105	105	105	107	107	109
Non-teaching staff (FeMale)	9	10	8	10	9	9

### B. Contractual\* Employees (Faculty and Staff)

Items	2021-22		2020-21		2019-20	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	4	4	0	0	1	1
Faculty in Engineering (Female)	1	1	2	2	3	3
Faculty in Maths, Science & Humanities (Male)	0	0	0	0	0	0
Faculty in Maths, Science & Humanities (FeMale)	0	0	0	0	0	0
Non-teaching staff (Male)	0	0	0	0	0	0
Non-teaching staff (FeMale)	0	0	0	0	0	0

## 10. Total number of Engineering Students

Engineering and Technology- UG	<input checked="" type="checkbox"/> Shift1	<input type="checkbox"/> Shift2
Engineering and Technology- PG	<input checked="" type="checkbox"/> Shift1	<input type="checkbox"/> Shift2
Engineering and Technology- Polytechnic	<input type="checkbox"/> Shift1	<input type="checkbox"/> Shift2
MBA	<input type="checkbox"/> Shift1	<input type="checkbox"/> Shift2
MCA	<input type="checkbox"/> Shift1	<input type="checkbox"/> Shift2



### Engineering and Technology- UG Shift-1

Items	2021-22	2020-21	2019-20
Total no. of Boys	2312	2342	2075
Total no. of Girls	718	770	740
<b>Total</b>	<b>3030</b>	<b>3112</b>	<b>2815</b>

### Engineering and Technology- PG Shift-1

Items	2021-22	2020-21	2019-20
Total no. of Boys	45	50	48
Total no. of Girls	28	27	21
<b>Total</b>	<b>73</b>	<b>77</b>	<b>69</b>

## 11. Vision of the Institution

Service to Society through quality education

## 12. Mission of the Institution

- 1) Generation of national wealth through education and research.
- 2) Imparting quality technical education at the cost affordable to all strata of the Society.
- 3) Enhancing the quality of life through sustainable development.
- 4) Carrying out high quality intellectual work.
- 5) Achieving the distinction of highest preferred Engineering College in the eyes of the stake holders.

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

Head of the Institution	
Name	Dr Dattatraya Shankar Bormane
Designation	Principal
Mobile No.	9850282286
Email ID	principal@aissmscoe.com

### NBA Coordinator, If Designated

Name	Dr Mangesh Ravindra Phate
Designation	Professor in Mechanical Engineering
Mobile No.	7058816968
Email ID	mrphate@aissmscoe.com



## DEPARTMENT OF CIVIL ENGINEERING

### CRITERION I

#### Vision, Mission and Program Educational Objectives



CRITERION I	Vision, Mission and Program Educational Objectives	60
1.1	State the Vision and Mission of the Department and Institute	05

### **Vision of Institute:**

**Service to society through quality education**

### **Mission of Institute:**

- Generation of national wealth through education and research
- Imparting quality technical education at the cost affordable to all strata of the society
- Enhancing the quality of life through sustainable development
- Carrying out high quality intellectual work
- Achieving the distinction of the highest preferred engineering college in the eyes of stake holders

### **Vision of Department:**

Nurture the talent in civil engineers to work as global leaders for the development of society.

### **Mission of the Department:**

- Provide quality education to develop competent civil engineers.
- Create awareness among students for sustainable development.
- Cultivate the leadership qualities for becoming successful entrepreneurs.



## Consistency of the Vision and Mission statements of department with that of Institute

The Vision and Mission statements of the Institute are set with broad scope. The Vision and Mission of the Department form a part of it. The Vision statement of Department perfectly aligns and becomes inevitable part of the Vision of the Institute. The Mission of the Department streamlines with broad scope of the Mission of the Institute and blends itself to form a part of it very consistently.

Following explanation will provide you valuable information how Vision and Mission of Department are amalgamated with Vision and Mission of the Institute. The Department Vision and Mission thoroughly blend with that of the Institute.

Considering today's era, it is the responsibility of our institute to generate technically sound engineers with social awareness. An engineer must be technically sound, a good communicator and a sensible human being. Engineers must be industry ready. Production Engineering is a specialized branch of Mechanical Engineering which deals with Engineering Materials, Machining Science, Welding, Forming, Casting, CAD/CAM/CIM, Tool Design, Process Engineering & Tooling, Mechatronic, Operations Research, Economics, Finance, Accounting, Costing, Entrepreneurship Development & Modern practices like TQM, BPR, Concurrent Engineering, Lean Manufacturing, JIT, TPM, SCM, etc. This is a unique branch of engineering in which a balanced approach is given towards basic branch of Mechanical Engineering and Management Science. Candidates having creative, innovative mind, sound technical knowledge, analytical skills, & processing excellent leadership qualities will probably find Production engineering as a challenging & lucrative career. The Production Engineers are employed by Manufacturing, Automobile, Management Consultancies, Finance & Investment Consultancies, Construction, Refining, Service industries etc. The unique feature of this branch is students undergo Industrial training in fifth and eighth semester of curriculum.

The course leading to a Bachelor's degree in Production Engineering (Sandwich) was started in the year 1994. The Department will ensure that the contemporary curriculum will be continuously empowering our graduates to be globally competent. Comprehensive efforts are being made to ensure that the students learn best industrial practices to develop a flair for solving real world problems.





**Table B.1.1: Department Vision and Mission statements consistency with that of the Institute**

Institute		Department
Vision Statement		
Service to <b>Society</b> through <b>Quality Education</b>		Nurture the talent in <b>civil engineers</b> to work as <b>global leaders</b> for the <b>development of society</b> .
Mission Statement		
•	Generation of <b>national wealth</b> through <b>education and research</b> .	Provide quality education to <b>develop competent civil engineers</b> .
•	Imparting <b>quality technical education</b> at the <b>cost affordable</b> to all strata of Society.	
•	Enhancing the quality of life through <b>Sustainable development</b> .	Create awareness among students for <b>sustainable development</b> .
•	Carrying out <b>high quality intellectual</b> work.	Cultivate the leadership qualities for becoming <b>successful entrepreneurs</b> .
•	<b>Achieving the distinction</b> of the highest preferred engineering college in the eyes of stake holders	



1.2

State the Program Educational Objectives (PEOs)

05

**The Program Educational Objectives (PEO) are as follows:**

- To produce civil engineering's who will be fully aware of the impact of their work on society, both nationally and globally.
- To achieve a high level of technical expertise to succeed in civil engineering practice and research.
- To develop civil engineers who acquire professionalism, leadership and commitment to professional development through lifelong learning.

**Justification/motive of the PEO Statements**

The knowledge of contemporary science, engineering related subjects and domain skills imparted in the programme will enable our graduates to be successful in their professional career.

Promotion of higher education, research and development and other innovative efforts in related subjects will broaden their horizon to enable them to lead in their area of specialization.

The education will enable graduates to pursue career in industry or higher education by improving technical, professional and communication skills.



1.3

Indicate where the Vision, Mission and PEOs are published and disseminated among stakeholders

10

**Published & Disseminated** - The process which ensures awareness among internal and external stakeholders (**Students, Faculty, Industry, Research Organizations, Parents, Alumni, Foundation Members, Advisory Committee, Community**) with effective process implementation. The publication medium and dissemination method of Vision, Mission, PEO statements among the internal and external stakeholders was done as per the explained Figures ( B.1.3 a - n ) and Tables (B.1.3 a-b).

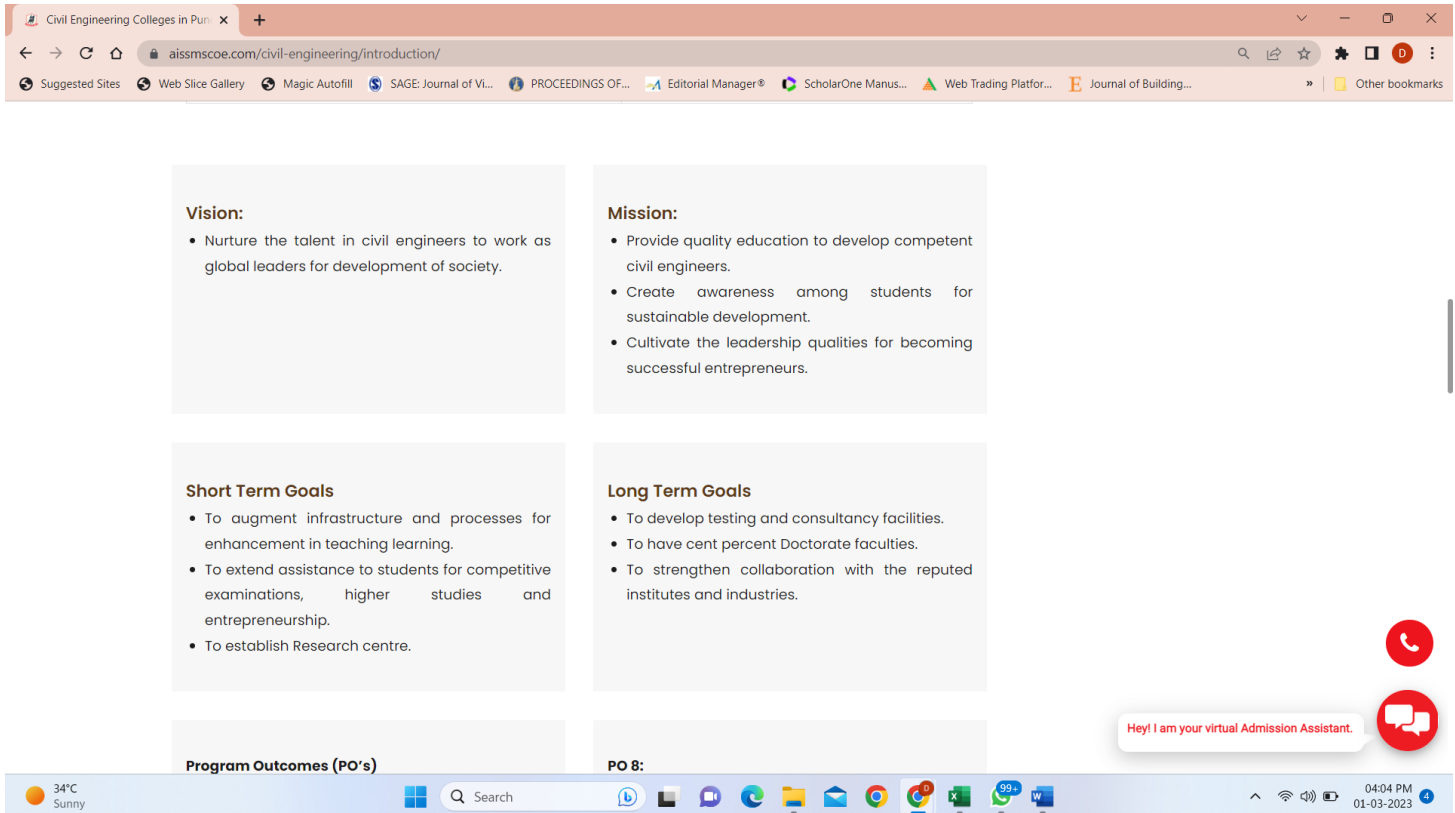
**The Vision, Mission and PEOs are published in:**

**Table B.1.3a: Publication Medium**

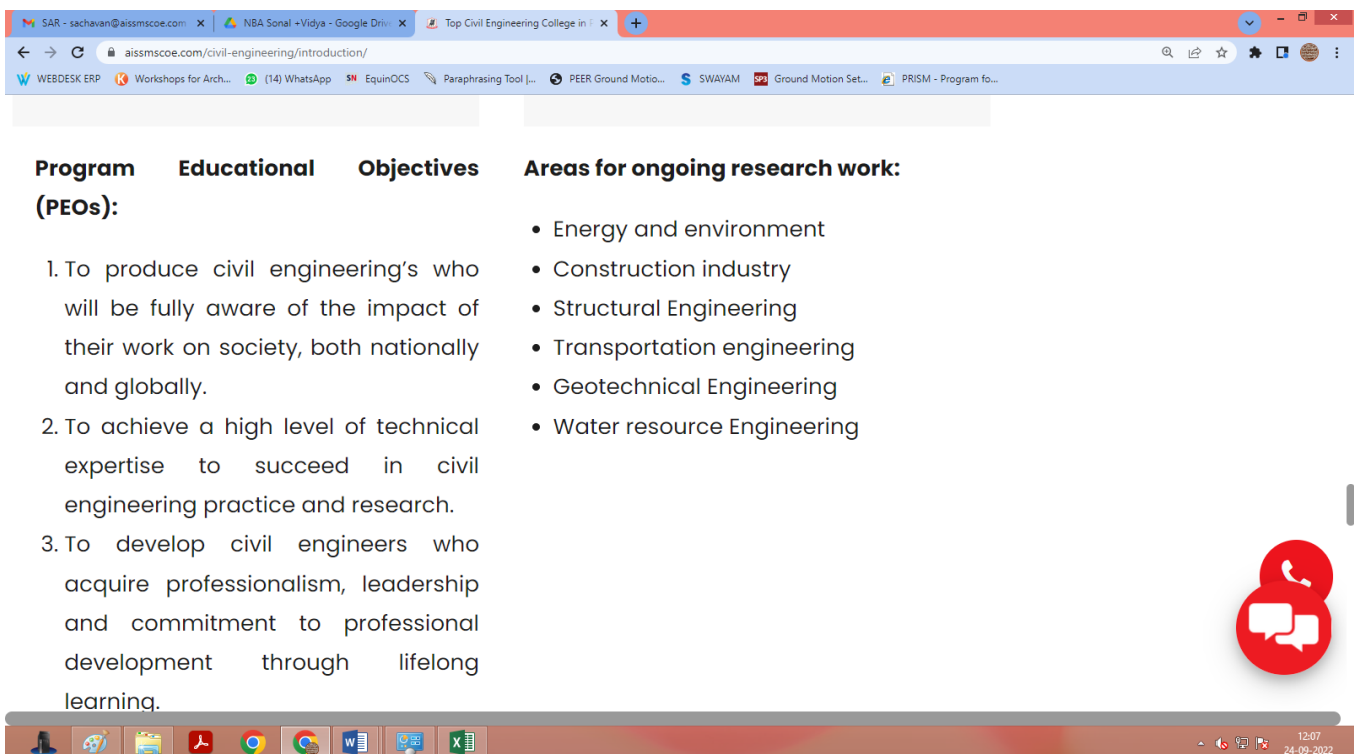
	Sr No	Medium of Publishing	Stake holders	
			Internal	External
Vision Mission PEOs	1	Departmental page on the Institute website: <a href="https://aiissmscoe.com/civil-engineering/introduction/">https://aiissmscoe.com/civil-engineering/introduction/</a>	Yes	Yes
	2	Academic Calendar of Department	Yes	Yes
	3	Students Journal	Yes	Yes
	4	Faculty Course files	Yes	Yes
	6	Departmental news letter	Yes	Yes
	7	Annual Magazine	Yes	Yes
	8	Departmental Library	Yes	Yes
	9	HOD Office	Yes	Yes
	10	Departmental notice boards	Yes	Yes
	11	Laboratory Manuals	Yes	Yes
	12	Faculty / Students' presentations	Yes	Yes
	13	Departmental Corridors	Yes	Yes
	14	Departmental Seminar Hall	Yes	Yes

**Table B.1.3b: Dissemination Method**

	Sr No	Method of Dissemination	Stake holders	
			Internal	External
Vision Mission PEOs	1	Brochure Flyers of program	Yes	Yes
	2	Invitation and cards	Yes	Yes
	3	Conferences organized	Yes	Yes
	4	College program	Yes	Yes
	5	Parent Teacher Meetings	Yes	Yes
	6	Placement drives	Yes	Yes
	7	Alumni Meetings	Yes	Yes
	8	Chapter activities	Yes	Yes
	10	Industry visits by faculty members	Yes	Yes
	11	E mail correspondence	Yes	Yes



**Fig. B.1.3a: Department Vision Mission Statements on the Institute website**



**Fig. B.1.3b: Department PEO Statements on the Institute website**



The screenshot shows a web browser window with the URL [aissmscoe.com/civil-engineering/introduction/](http://aissmscoe.com/civil-engineering/introduction/). The page title is "Top Civil Engineering College in". The main content area is titled "Program Specific Outcomes (PSO's)" and lists three outcomes:

- PSO1:** Exhibit technical knowledge in planning, analysis, design and management for infrastructural development.
- PSO2:** Apply the innovative technologies to address Civil Engineering problems of the society.
- PSO3:** Enhance professional abilities to meet industrial need.

Below the PSOs, the text "Program Educational Objectives (PEOs):" is partially visible. A red speech bubble icon is located on the right side of the page. The browser's taskbar at the bottom shows various application icons and the system clock indicating 12:12 on 24-09-2022.

**Fig. B.1.3c: Department PSO Statements on the Institute website**



8

**Vision**

Nurture the talent in civil engineers to work as global leaders for the development of society.

**Mission**

- Provide quality education to develop competent civil engineers
- Create awareness among students for sustainable development
- Cultivate the leadership qualities for becoming successful entrepreneurs

**Program Educational Objectives (PEOs):**

- To produce civil engineering's who will be fully aware of the impact of their work on society, both nationally and globally.
- To achieve a high level of technical expertise to succeed in civil engineering practice and research.
- To develop civil engineers who acquire professionalism, leadership and commitment to professional development through lifelong learning.

**Program Specific Outcomes (PSO's)****Graduates will able to:**

- PSO1: Exhibit technical knowledge in planning, analysis, design and management for infrastructural development.
- PSO2: Apply the innovative technologies to address Civil Engineering problems of the society.
- PSO3: Enhance professional abilities to meet industrial need.

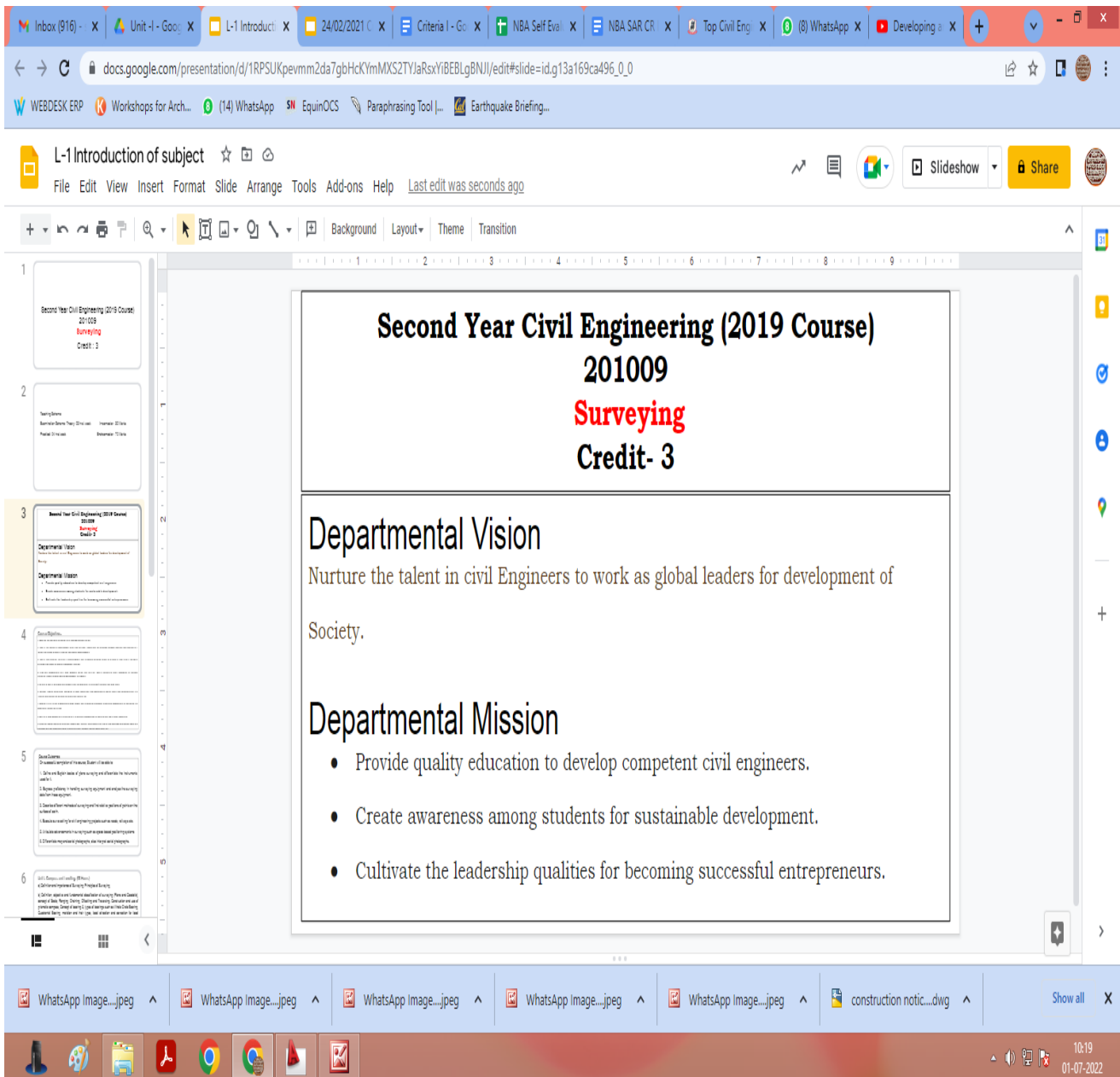
**Long Term Goals**

- To develop testing and consultancy facilities.
- To have cent percent Doctorate faculties.
- To strengthen collaboration with the reputed institutes and industries.

**Short Term Goals**

- To augment infrastructure and processes for enhancement in teaching learning.
- To extend assistance to students for competitive examinations, higher studies and entrepreneurship.
- To establish Research centre.

Fig. B.1.3d: Department newsletter



**Fig. B.1.3e: Dissemination of Vision and Mission on Faculty Presentation**



## ***Department of Civil Engineering***

### **Introduction**

As the students are now geared to explore the vast ocean that invariably allures them and have gamut of Rainbows to be colored, we too as the department also have certain specific Vision & Missions to be accomplished in the precincts of the department

### **Vision**

Nurture the talent in civil engineers to work as global leaders for the development of society.

### **Mission**

- Provide quality education to develop competent civil engineers
- Create awareness among students for sustainable development
- Cultivate the leadership qualities for becoming successful entrepreneurs

### **Short Term Department Goals:**

- To augment infrastructure and processes for improved teaching learning
- To create awareness amongst students for competitive examinations and higher studies
- To establish Research centre

### **Long Term Departmental Goal:**

1. To develop testing facilities & Consultancy
2. To encourage faculties to pursue
3. Doctorate and Post-Doctorate
4. To establish collaboration with the reputed
5. Institutes and industries

### **Program Educational Objectives (PEOs):**

1. To produce civil engineering's who will be fully aware of the impact of their work on society, both nationally and globally.
2. To achieve a high level of technical expertise to succeed in civil engineering practice and research.
3. To develop civil engineers who acquire professionalism, leadership and commitment to professional development through lifelong learning.

**Fig. B.1.3f: Department PEO statements on Departmental Magazine**

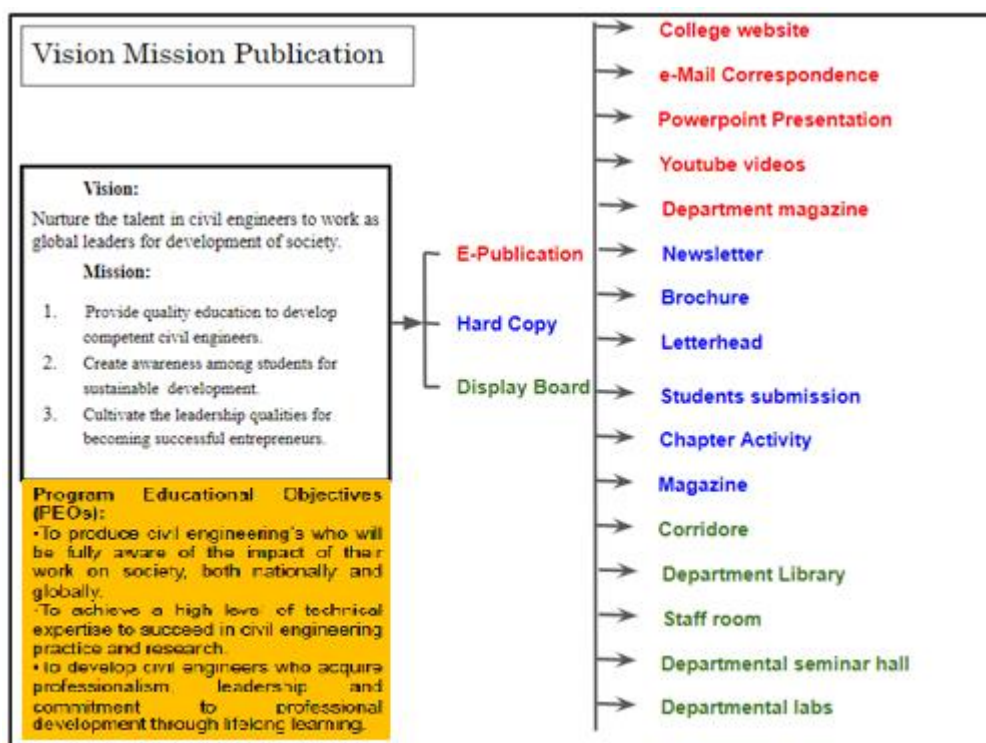


**These statements are disseminated to all the stakeholders of the programs through (Fig. B.1.3 h – l):**

- HOD address to First Year (FE) Students and their Parents in Induction Program
- Regular meetings with the Students by HOD, GFM & Mentors
- Workshops, Conferences and Training Programs
- Parents, Alumni and Industry Meets.
- Employers through electronic media/meetings.
- Students are asked to write Vision, Mission & PEO's statements in the practical journals.

**List of stakeholders of the program:**

1. **Internal Stakeholders** includes Students and Parents (**Fig. B.1.3g**).
  - a) Department conducts an entry Level Induction Program and explains about our departmental Vision, Mission and PEOs.
  - b) Department conducts parent meetings in addition discuss Vision and Mission and PEOs.
  - c) Department has published Vision and Mission statements on notice boards, course files, journals, lab manuals, laboratories, department office passages to make them aware about the importance of our Vision, Missions and PEOs.
2. **External stakeholders** include Subject Experts from the field, Industry persons, Alumni (**Fig. B.1.3g** ).
  - a) Vision, Mission and PEOs disseminated through invitation letters, thanks giving letters and feedback forms.
  - b) Through Workshops, Conferences, seminar brochures and flyers Vision, Missions and PEOs are disseminated.
  - c) Correspondence Letters through email, letterhead of our department are helping us to make our stakeholders aware for the Vision, Missions and PEOs.



**Fig. B.1.3g: Dissemination methods of Vision Mission PEO among stakeholders**






**AISSMS**  
COLLEGE OF ENGINEERING  
ज्ञानम् सफलताय  
Accredited by NAAC with "A+" Grade



**Institution of Engineers, India**  
in association with  
**AISSMS COLLEGE OF ENGINEERING, PUNE**  
Cordially invites all for

**GUEST LECTURE under IEI Student Chapter**

**SEPTEMBER 22, 2022 | 3:00 PM**

**Solar Energy and Sustainable Goals**

**Speaker**



**RAJENDRAKUMAR V. SARAF**  
Managing Director,  
Viraj Envirosing India Pvt. Ltd. Pune

**Department Vision:-**

- Nurture the talent in civil engineers to work as global leaders for development of society

**Department Mission:-**

- Provide quality education to develop competent civil engineers
- Create Awareness among students for sustainable development
- Cultivate the leadership qualities for becoming successful entrepreneurs

**PEOs of Department**

- 1.To produce civil engineering's who will be fully aware of the impact of their work on society, both nationally and globally.
- 2.To achieve a high level of technical expertise to succeed in civil engineering practice and research.
- 3.To develop civil engineers who acquire professionalism, leadership and commitment to professional development through lifelong learning.

**The Event Venue:**  
**SEMINAR HALL, Civil Department**

**Regards**

**M.S. CHIWANDE**  
Faculty Co-ordinator  
IEI Student Chapter  
AISSMS COE

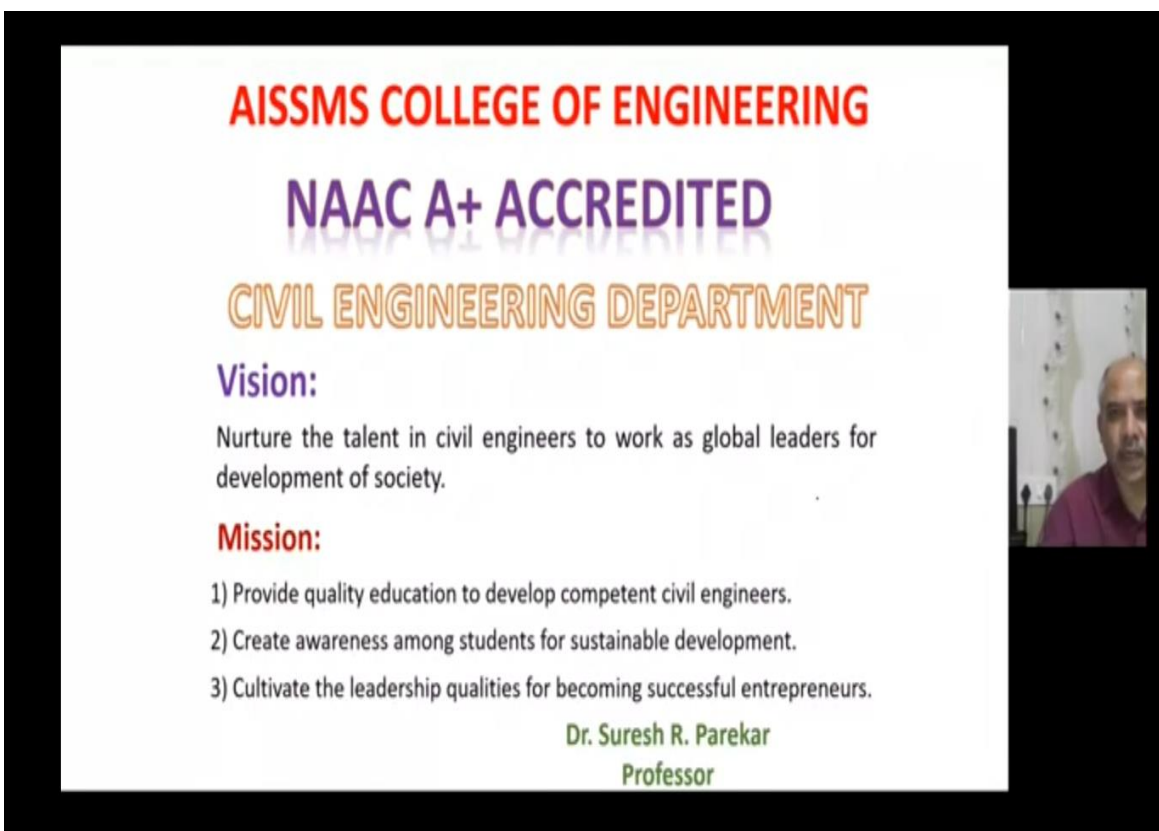
**DR. M. V. WAGHARE**  
Event Co-ordinator  
Civil Engineering Department  
AISSMS COE

**DR. S.R.PAREKAR**  
Student chapter Head  
Civil Engineering Department  
AISSMS COE

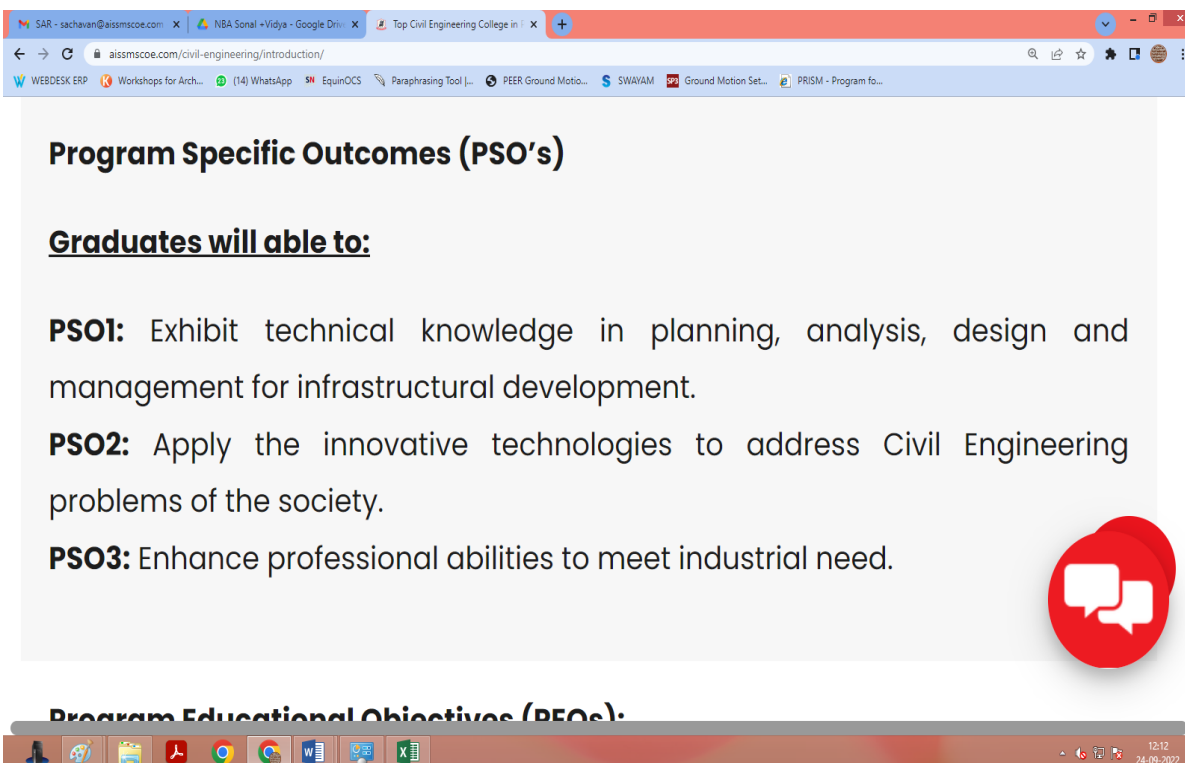
**DR. P.B.NAGARE**  
Head, Civil Engineering Department  
AISSMS COE

**DR. D. S. BORMANE**  
Principal  
AISSMS COE

**Fig. B.1.3h: Department Chapter activity Flyer**



**Fig. B.1.3i: Vision Missions on Faculty You - Tube Video -**  
<https://youtu.be/LCJDkDsjoNo>



**Fig. B.1.3j: Departmental PSO Statement on the Institute website**





8

**Vision**

Nurture the talent in civil engineers to work as global leaders for the development of society.

**Mission**

- Provide quality education to develop competent civil engineers
- Create awareness among students for sustainable development
- Cultivate the leadership qualities for becoming successful entrepreneurs

**Program Educational Objectives (PEOs):**

- To produce civil engineering's who will be fully aware of the impact of their work on society, both nationally and globally.
- To achieve a high level of technical expertise to succeed in civil engineering practice and research.
- To develop civil engineers who acquire professionalism, leadership and commitment to professional development through lifelong learning.

**Program Specific Outcomes (PSO's)****Graduates will able to:**

- PSO1: Exhibit technical knowledge in planning, analysis, design and management for infrastructural development.
- PSO2: Apply the innovative technologies to address Civil Engineering problems of the society.
- PSO3: Enhance professional abilities to meet industrial need.

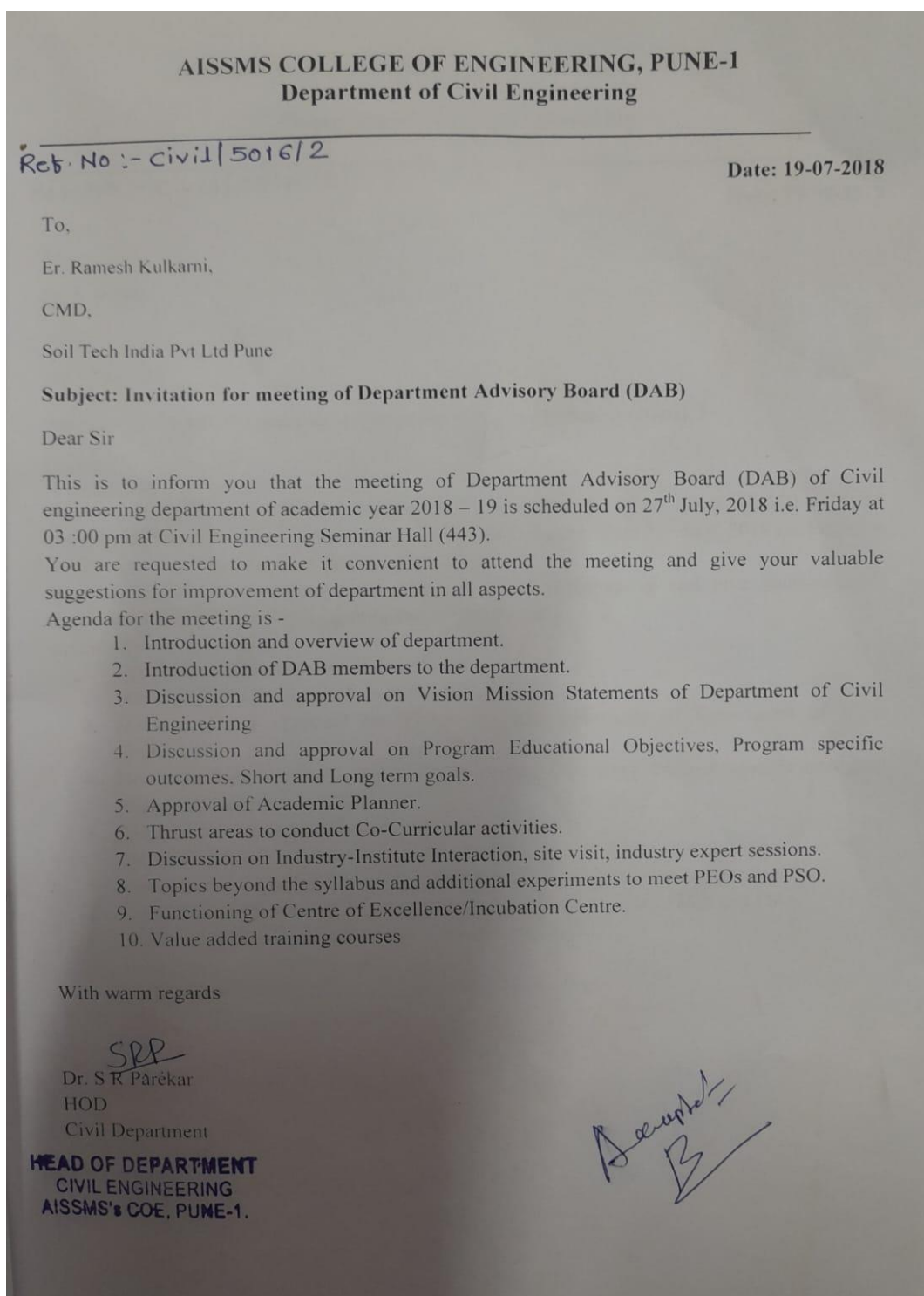
**Long Term Goals**

- To develop testing and consultancy facilities.
- To have cent percent Doctorate faculties.
- To strengthen collaboration with the reputed institutes and industries.

**Short Term Goals**

- To augment infrastructure and processes for enhancement in teaching learning.
- To extend assistance to students for competitive examinations, higher studies and entrepreneurship.
- To establish Research centre.

**Fig. B.1.3k: Vision, Mission and PEO's statement on Department newsletter**



**Fig. B.1.3m: DAB committee meeting invitation**





## DEPARTMENT OF CIVIL ENGINEERING

Academic Year 2018 – 19

### Department Advisory Board

Date: 19/07/2018

#### Notice

This is to inform you that the meeting of Department Advisory Board (DAB) of Civil engineering department of academic year 2018 – 19 is scheduled on 27<sup>th</sup> July, 2018 i.e. Friday at 03 :00 pm at Civil Engineering Seminar Hall (440).

Hence all DAB members are requested to make it convenient to attend the meeting and give your valuable suggestions for improvement of department in all aspects.

Agenda for the meeting is -

#### Agenda

1. Introduction and overview of department.
2. Introduction of DAB members to the department.
3. Discussion and approval on Vision Mission Statements of Department of Civil Engineering
4. Discussion and approval on Program Educational Objectives, Program specific outcomes, Short and Long term goals.
5. Approval of Academic Planner.
6. Thrust areas to conduct Co-Curricular activities.
7. Discussion on Industry-Institute Interaction, site visit, industry expert sessions.
8. Topics beyond the syllabus and additional experiments to meet PEOs and PSO.
9. Functioning of Centre of Excellence/Incubation Centre.
10. Value added training courses.

**Agenda**

1. Introduction and overview of department.
2. Introduction of DAB members to the department.
3. Discussion and approval on Vision Mission Statements of Department of Civil Engineering
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8. Topics beyond the syllabus and additional experiments to meet PEOs and PSO.
9. Functioning of Centre of Excellence/Incubation Centre.
10. Value added training courses

**Minutes of meeting**

- Welcoming of all DAB members was done by the department.
- Head of department presented departmental activities for the current academic year and review of last academic year was discussed.
- Committee critically reviewed vision mission statement, the formation process and after brainstorming committee approved the vision-mission statements of the department.
- The committee also directed regarding on various means on fulfilment of vision through mission statements.
- The committee discussed and approved the Program Educational Objectives, Program specific outcomes, short and long term goals of the department, also suggested faculty to give publicity with display of this with website, notice boards, display board to reach among all stakeholders.
- The committee reviewed and discussed different possible activities with topics beyond syllabus for achieving PSO and PO attainments.
- Internship Coordinator presented last year's internship and placement data of students and action to be taken to improve the number of students for internship and placement and requested to all DAB members for guidance in this matter.
- Mr. Ramesh Kulkarni suggested improvement of industry institute interaction through MOUs with different industries to increase the practical knowledge.
- Academic Co-ordinator presented academic planner for the current A.Y. and requirement of specific activities as per the gap identified for Cos and PSOs mapping.
- Discussion by the faculties and DAB members on University circulars regarding regular academic and circular regarding change in academics' policies due to pandemics are required in the department.

**Fig. B.1.3n: DAB meeting on Vision and mission finalization**

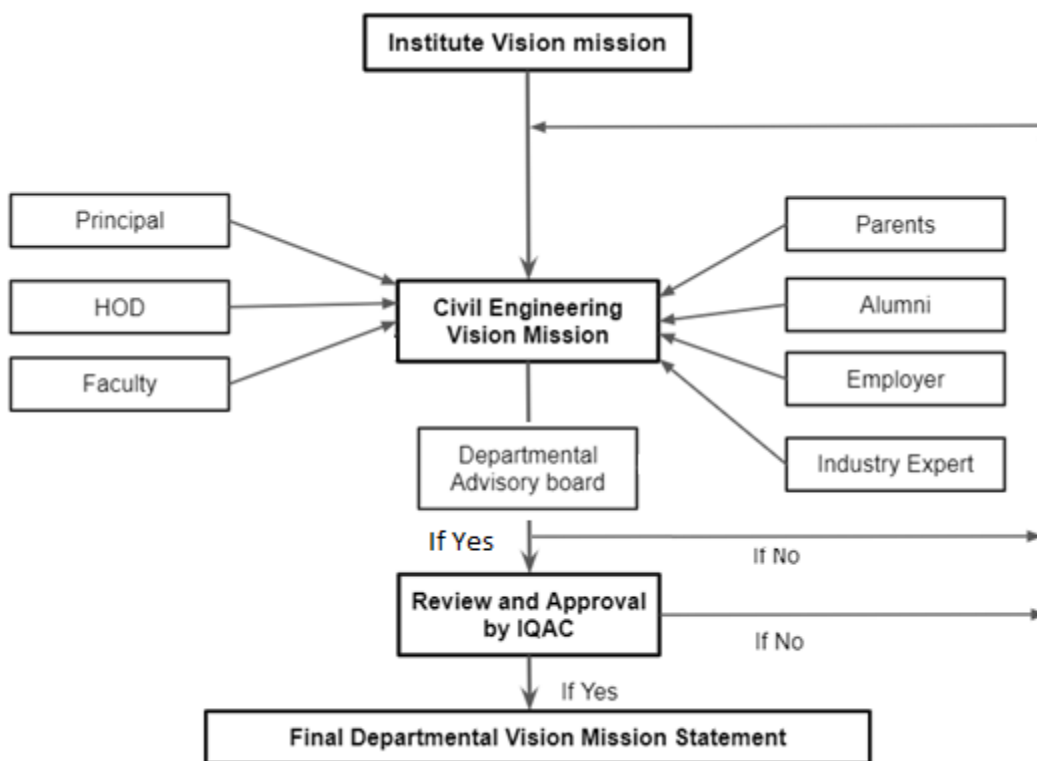
1.4

State the process for defining the Vision and Mission of the Department, and PEOs of the program

25

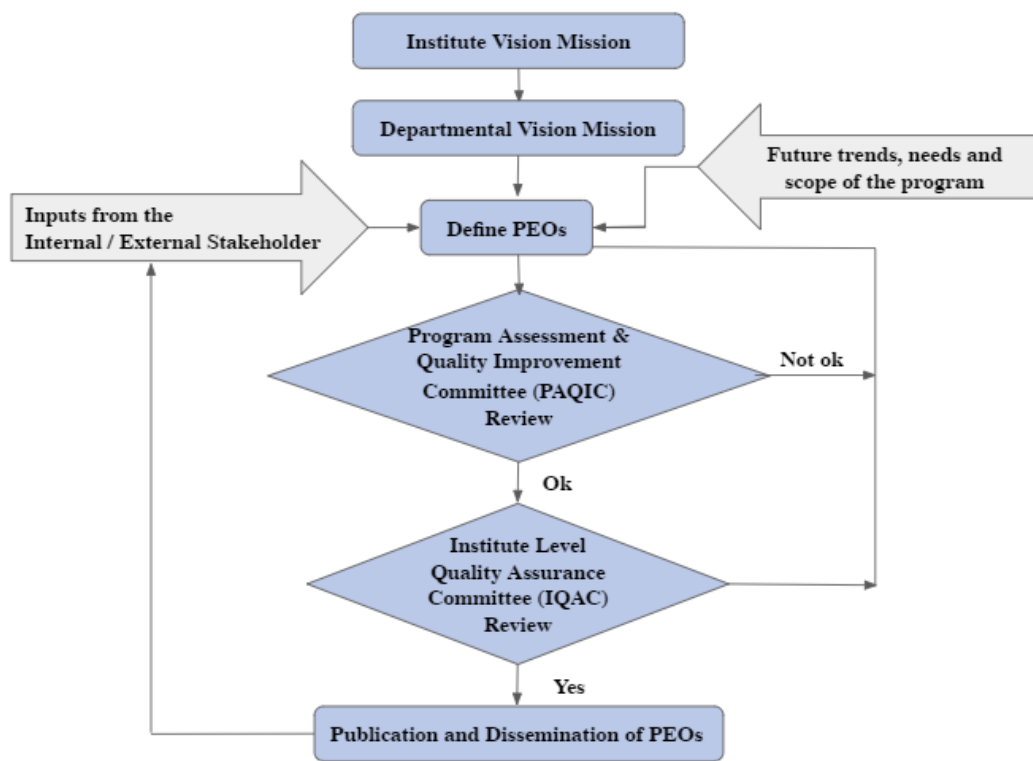
**Process for framing Vision and Mission of the Department**

In synchronization with Institute Vision and Mission statements, the Department Vision and Mission statements were formulated in brainstorming sessions, department level meetings. Department Vision Mission statements were formulated by stakeholders: faculty, Industry Experts, Distinguished Alumni, Parents etc. A continuous discussion among stakeholders and Internal Quality Assurance Cell (IQAC) was incorporated with suggestions and reformulated statements. Final Vision Mission statements were checked and approved by the IQAC committee of the Institution as shown in Fig B.1.4a.

**Fig B.1.4a: Flowchart of framing Department Vision and Mission statements.**

**Process for Framing Program Educational Objectives (PEOs) of the Department::**

The Program Educational Objectives (PEOs) are the broad statements of the objectives, for which the program is to be run. The PEOs of the program are defined by consideration of current developments as well as societal needs. These objectives are established to help, in fulfilling the Missions of the Department, and to the students graduating from the program to lead a fruitful and meaningful life in the society by being useful in its progressive development. The objectives are in consonance, to the extent possible, with the current scenario in the field of engineering and with the needs of the relevant Industry. The industry needs are gauged through the feedback received during the interaction with industry persons and even in the Centre for Information Training and Placement (CITP) when companies come for campus placements. Moreover, the Alumni who are with the Industry or to Institutes of high reputation are able to reflect whether the objectives are adequate. The inputs received from various sources are taken in to the consideration during the brain storming sessions in the Program Assessment and Quality Improvement Committee meeting (PAQIC) and then the final PEO are finalized, published and disseminated as shown in Fig B.1.4(b - g).

**Steps followed while establishing/revising Program Educational Objectives (PEOs):****Fig B.1.4b: Flowchart of framing Departmental Program Educational Objectives (PEOs)**



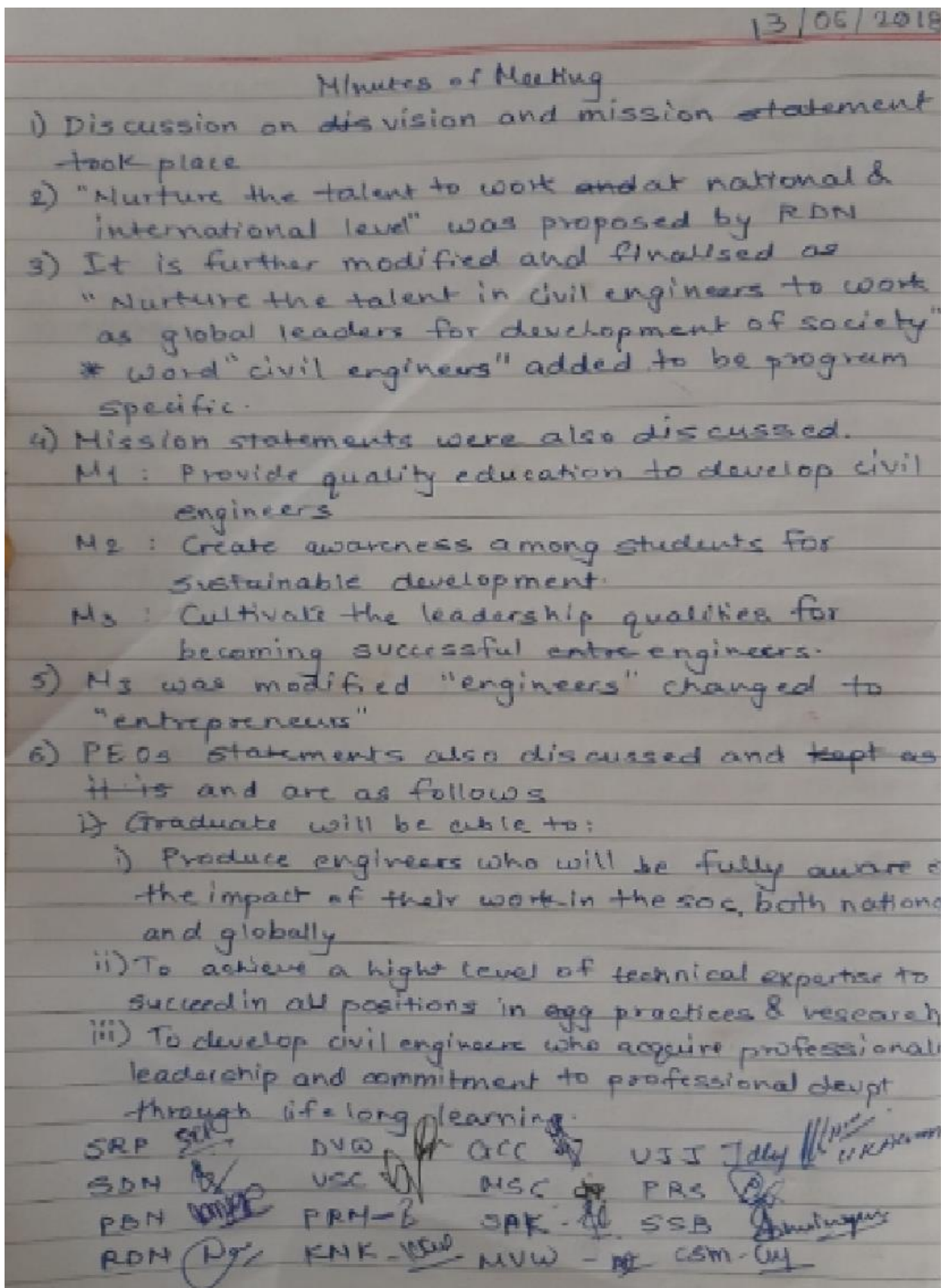



Fig B.1.4c: Vision mission and PEO framing Statement






# AISSMS

## COLLEGE OF ENGINEERING

ज्ञानम् सकलजनहिताय  
Accredited by NAAC with "A+" Grade

### Department of Civil Engineering



Date: 18/07/2018  
Reference No: Civil/ 5012a

Submitted,

**Subject:** Approval of Departmental Vision Mission and PEO statement.

Please find the Vision, Mission and PEO statement of the Department, finalized in the departmental meeting.

**Department Vision:**  
Nurture the talent in Civil Engineers to work as global leaders for the development of society.

**Department Mission:**  
M1: Provide quality education to develop competent Civil Engineers.  
M2: Create awareness among students for sustainable development.  
M3: Cultivate the leadership qualities for becoming successful entrepreneurs.

**Department PEO ( Program Educational Objectives):**

- To produce civil engineering's who will be fully aware of the impact of their work on society, both nationally and globally.
- To achieve a high level of technical expertise to succeed in civil engineering practice and research.
- To develop civil engineers who acquire professionalism, leadership and commitment to professional development through lifelong learning

Through,

Dr. S. R. Parekar

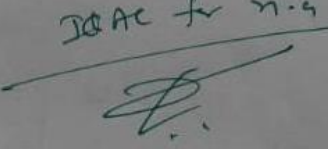

**HEAD OF DEPARTMENT**  
**CIVIL ENGINEERING**  
**AISSMS's COE, PUNE-1.**

To,

The Principal,  
AISSMSCOE, Pune

CC: IQAC college Coordinator

IQAC for 17-18

**Fig B.1.4d: Vision mission and PEO framing Statement**





**AISSMS**  
COLLEGE OF ENGINEERING  
ज्ञानम् सफलजनहिताय  
Approved by AICTE, New Delhi, Recognized by Govt. of Maharashtra,  
Affiliated to Savitribai Phule Pune University and recognized 2(f) and  
12(B) by UGC (Id.No. PU/PN/Engg./093 (1992))  
Accredited by NAAC with A+ Grade

**ISTE Approved**  
**CETL's One Week FDP on**  
**Vision-Mission-Goals-PEO-PSO-PO-CO: Framing,**  
**Mapping, Assessment and Attainment**

**Exercise Booklet**

**Name of Participant:** Prakash Baburao Nangare

**Designation:** Assistant Professor

**Name of Department:** Civil Engineering

**Mail ID:** pbnangare@aiissmcoe.com

**Contact:** 9423031807

**Courses Taught/Planned:**

**Year 2018-19-Term I:** Fluid Mechanics II

**Year 2018-19-Term II:** Dams and Hydraulic Structures

**Year 2019-20 Term I:** Fluid Mechanics II

**AISSMS**  
COLLEGE OF ENGINEERING  
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**ISTE Approved**  
**CETL's One Week FDP on**  
**Vision-Mission-Goals-PEO-PSO-PO-CO: Framing,**  
**Mapping, Assessment and Attainment**

**FDP Exercise Booklet**

**Convener**

Dr. D. S. Bormane  
Principal, AISSMS COE, Pune

**Coordinator**

Dr. Mrs. Mangal Dhend, CETL & Academic Coordinator

**Organizing Committee**

- Dr. P. N. Dange, Institute's FDP Coordinator
- Prof. M. L. Chaturvedi (Member)
- Prof. V. S. Ponkshe (Member)
- Prof. R. D. Nairwade (Member)
- Prof. S. P. Bhosale (Member)
- Prof. N. P. Mawale (Member)
- Prof. M. P. Bawkar (Member)
- Prof. P. S. Tadkar (Member)

**Resource Persons**

- Dr. S. R. Gangje, Professor, Walchand COE, Solapur
- Dr. M. S. Dehpande, Professor, Department of Chemical Engineering
- Dr. D. G. Bhaleke, Professor, Department of Electronics and Telecommunications Engineering
- Dr. D. P. Gaikwad, Associate Professor, Department of Computer Engineering
- Dr. Mrs. M. H. Dhend, Assistant Professor, Department of Electrical Engineering

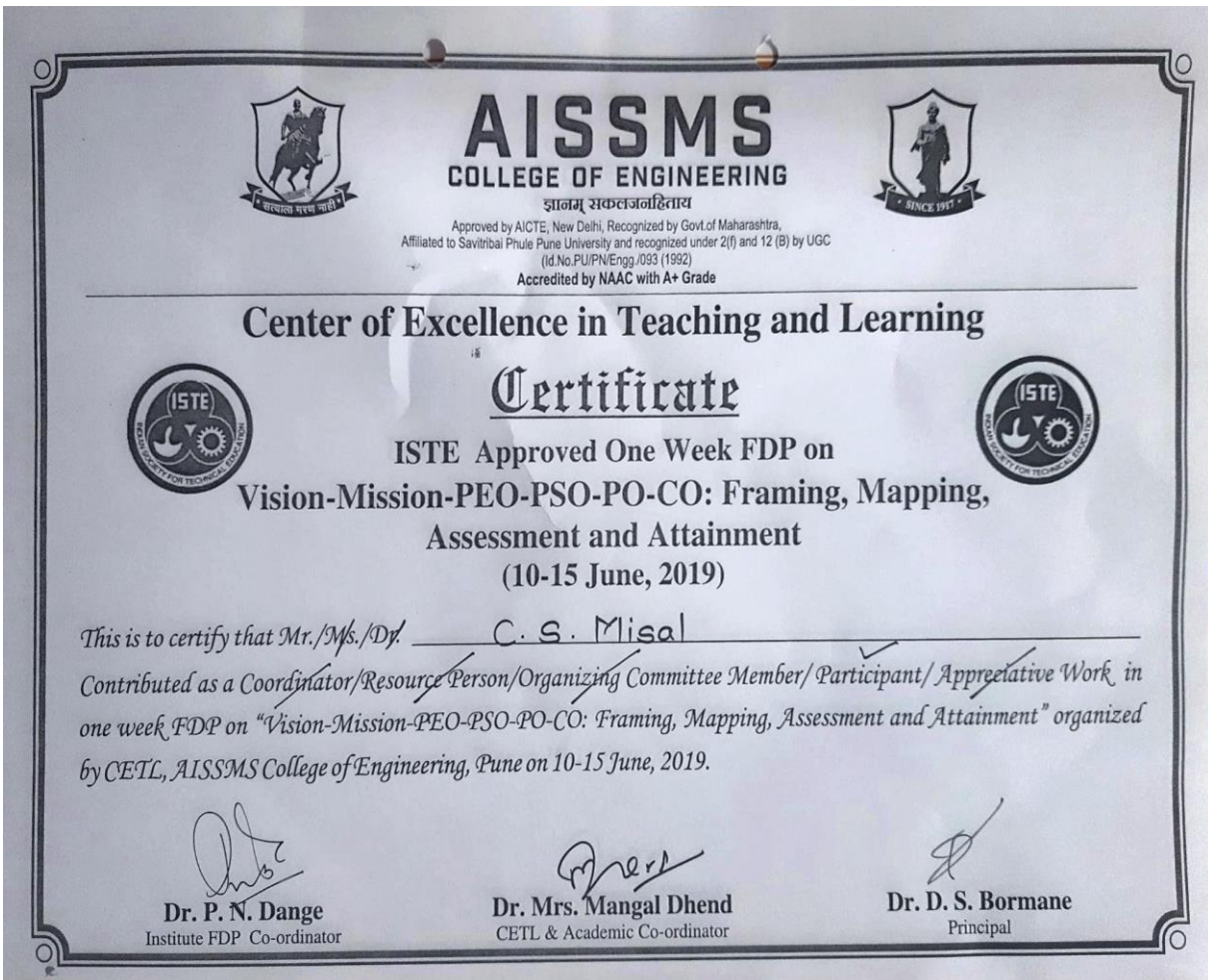


Fig B.1.4e: Vision mission and PEO FDP



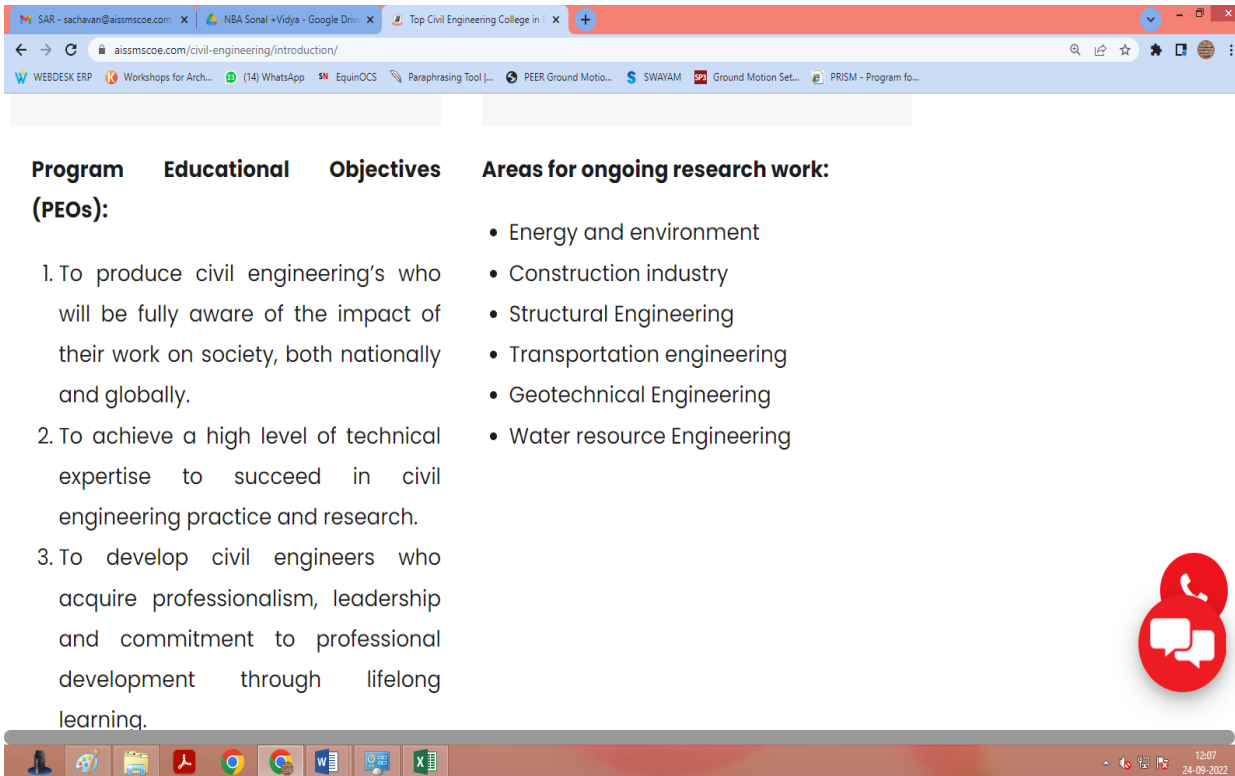


Fig B.1.4f: Department PEO Statements on the Institute website



Fig B.1.4g: Vision , Mission and PEO statements on faculty Mail correspondence



1.5

**Establish consistency of PEOs with Mission of the Department**

15

**In order to bring our dream Mission into reality:**

The Department is dedicated to produce Civil Engineers with basic knowledge in mathematics, science and engineering, to develop problem solving skills necessary for the career advancements in allied disciplines, and to implement these abilities into real practice.

The Department is dedicated to produce Civil Engineers with basic knowledge in mathematics, science and engineering, to develop problem solving skills necessary for the career advancements in allied disciplines, and to implement these abilities into real practice.

**The Program Educational Objectives are as follows. (PEO)**

1. To produce competent civil engineers who will be fully aware of the impact of their work in society, both nationally and globally.
2. To achieve a high level of technical expertise to succeed in civil engineering practice and research.
3. To develop civil engineers who acquire professionalism, entrepreneurship, leadership and commitment to technological development through lifelong learning.

Mission of the Department: (M1 ... M3)

M1: Provide quality education to develop competent civil engineers.

M2: Create awareness among students for sustainable development.

M3: Cultivate the leadership qualities for becoming successful entrepreneurs.

Program Educational Objectives (PEOs)	Mission of the Department		
	M1	M2	M3
To produce competent civil engineers who will be fully aware of the impact of their work in society, both nationally and globally.	3	2	2
To achieve a high level of technical expertise to succeed in civil engineering practice and research.	2	3	2
To develop civil engineers who acquire professionalism, entrepreneurship, leadership and commitment to technological development through lifelong learning.	2	2	3

Correlation levels are - 1: Slightly 2: Moderately 3: Substantially



## Justification of the PEO and Mission Statement Matrix

### PEO 1 Substantially Consistent with M1 and Moderately with M2, M3.

- Quality education develop competent civil engineers to work beyond the limits in societal service, research work at different positions nationally and globally.
- Students are groomed to think, analyze & find environmental, social and economically feasible solutions for variety of problems in society.
- Variety of courses are held so as to make students well aware of various career paths available after graduation.

### PEO 2 Substantially consistent with M2 and Moderately with M1, M3.

- With input of fundamentals, students are able to understand and analyze problems, to reach feasible solutions in real life situations. The curriculum gives an opportunity to students to work with sustainable developments in planning, designing and execution work.
- Quality education providing beyond course graduation capacities like higher education, research developments and societal service.
- Developments in professionalism, leadership and commitment to technological development through lifelong learnings.

### PEO 3 Substantially consistent with M3 and Moderately with M1, M2.

- Students are able to cope up with requirements in sustainable development along with leadership skill for becoming successful entrepreneurs.
- Quality education providing beyond course graduation capacities like higher education, research developments, societal services etc.
- Successful technical expertise in following sustainable engineering practices.



PEO Statements	M1: Provide quality education to develop competent civil engineers.	M2: Create awareness among students for sustainable development.	M3: Cultivate the leadership qualities for becoming successful entrepreneurs.
PEO1: To produce competent civil engineers who will be fully aware of the impact of their work in society, both nationally and globally.	3 - Quality education develop competent civil engineers to work beyond the limits in societal service, research work at different positions nationally and globally.	2 - Students are groomed to think, analyze & find environmental, Social and economic feasible solutions for variety of problems in society.	2 - Variety of courses is held so as to make students well aware of various career paths available after graduation.
PEO2: Civil engineers shall achieve a high level of technical expertise to succeed in all positions in sustainable engineering practice and research.	2- Quality education providing beyond course graduation capacities like higher education, research developments, societal services.	3 -With input of fundamentals, students are able to understand and analyze problems, to reach feasible solutions in real life situations. The curriculum gives an opportunity to students to work with sustainable developments in planning, designing and execution work.	2 - Developments in professionalism, leadership and commitment to technological development through lifelong learning.
PEO3: To develop civil engineers who acquire professionalism, entrepreneurship, leadership and commitment to technological development through lifelong learning.	2 -Quality education providing beyond course graduation capacities like higher education, research developments, societal services.	2 -Successful technical expertise in following sustainable engineering practices.	3 - Students are able to cope up with requirements in sustainable development along with leadership skills for becoming successful entrepreneurs.



Sr.	Date/Time	Alumni Name/ Batch	Designation	Topic	Mode	Participants	Mobile
1	01-5-2020 11 am- 12 noon	Mr. Vikram Dhoot Batch- 2000	Director Dhoot Industries, Pune	Interaction & Job opportunities in Construction Industry	Online ZOOM	35	9822448709
2	27-5-2020 9 am- 10.30 am	Mr. Shivam Padtare Batch- 2008	Project Control Manager Socal Gas company, Los Angeles, USA	Interaction & Job opportunities in USA	Online ZOOM	396	9955425614
3	2-6-2020 9 am- 10.30 am	Mr. Vivek Kate Batch- 2018	Management Member Kate Associate, Baramati	Interaction & Higher education NICMAR	Online ZOOM	201	8237663004
4	9-6-2020 11 am- 12.30 pm	Mr. Jitendra Pethkar Batch- 1998	Managing Director Pethkar Projects, Pune	Interaction & Job opportunities in Builder line	Online ZOOM	245	9764995514
5	1-8-2020 10 am- 11.15 am	Mr. Padmanabh Damale (MS) Batch- 2004 padmanabhdamale@gmail.com	Interior designer/visual concept / Art director Pune	Interaction & Job opportunities in Interior designing	Online ZOOM	150	9075090432 / 9822190432
6	11-8-2020 4.30pm- 5.30pm	Mr. Naynash Ldkat Batch- 2017	Technical Director, Optev Consultant & Civil Contractor	Introduction of Microsoft project & Primavera EPPM P6 software	Online ZOOM & youtube	145	7875122216
7	15-8-2020 10.30am- 12noon	Mr. Girish Narang Batch- 2015	Structural Design Engineer, TPF Engineering Pvt. Ltd, Pune	Interaction & Bridge designing	Online ZOOM & youtube	101	7620064146
8	29-8-2020 10 to 11.30 am	Mr. Dheeraj Deshmukh Batch- 2015	PhD Research scholar NIT Silchar	Interaction & Pavement designing	Online ZOOM & youtube	60	9420861949
9	24-10- 2020 10 to 11.30 am	Ms. Rutuja Dhage Batch- 2019	Water conservation Officer Government of Maharashtra	Interaction & Preparation for competitive exam	Online ZOOM & youtube	70	7972964219
10	6-11-2020 3 to 4 pm	Mr. Kiran Ghorpade Batch- 2012	Assistant Professor Trinity academy of Engg. Pune Civil Engineer & Contractor	Interaction & Civil contractor as an avenue for Entrepreneurship	Online ZOOM & youtube	70	9822456114 9028765121

**Fig B.1.5a: Alumni Meets**





**Date: 08-04-2022**

**To**

**Ruchi Andhare  
Bangalore**

**Sub :- Letter of Employment**

**Dear Ruchi Andhare,**

We are pleased to appoint you the role of “MIS Analyst” under Band E2 with Shadowfax Technologies Pvt. Ltd. with effect from 11th April 2022.

You will be subject to the detailed terms and conditions that are mentioned in this letter of employment. You will also be governed by the policies, rules and regulations of the Company, as may be amended and modified from time to time.

**Remuneration:**

Your Fixed Compensation, as mutually agreed in our discussion, will be **Rs.5,00,000/- ( Five Lakhs Only) Per Annum**.

The company may make changes to the component of your CTC at any time in its sole discretion or in accordance with any changes made to the relevant income tax regulations. Any changes in your CTC will be notified to you in writing.

**Acceptance of employment and Governing Law and Jurisdiction**

Accordingly, please sign and return a copy of this letter of appointment together with the attached Annexure “A” which is the assignment of Trademarks and IPRs to the Company, declare your interests in Annexure “B” and sign off the non-disclosure undertaking which is enclosed as Annexure “C”. Please initial each page of this letter.

We thank you in advance for your attention and cooperation in completing and returning these documents, within three days of receiving this letter, otherwise this letter of appointment will be revoked. Upon your signature and return to us, this letter of employment will be treated as an employment agreement between you and us, and the terms and conditions of this letter of employment shall govern your employment with us.

Your continued employment with the company is subject to successfully submitting all valid documents listed in Annexure E within three days of joining. The company also reserves the right to conduct reference checks on candidates. In case you fail to submit any documents mentioned as part of the offer letter successfully, or if there is a discrepancy in the documents submitted, the company reserves the right to terminate your employment with immediate effect.

It is a pleasure to welcome you as a member of our company. We are confident that your employment with us will prove mutually beneficial and rewarding, and we look forward to having you join us.

The following terms will govern your employment agreement with us:

1

**Shadowfax Technologies Private Limited**

Regd Address : House No-6A, Block NP, Pitampura, New Delhi -110 03  
Corp Office : 93/A, Appik Building, 1<sup>st</sup> Floor, 4<sup>th</sup> B Cross, 5<sup>th</sup> Block Koramangala, Bangalore - 560095  
Contact No. : 080-67500100; Email: [support@shadowfax.in](mailto:support@shadowfax.in); [www.shadowfax.in](http://www.shadowfax.in)  
CIN-U72900DL2013PTC279542

**Fig B.1.5b: Employment letter**



13 November 2019

Abhishek Badhe  
Flat 8  
56 Loughborough Rd  
West Bridgford  
Nottingham NG2 7JJ

Via e-mail to:  
badheabhishek@gmail.com

Dear Abhishek,

**Offer of Employment**

We are pleased to offer you the position of Graduate Engineer (generic job description enclosed) based in our Oxford office and confirm the following:

1. This offer is conditional upon receipt of references satisfactory to us.
2. You will be subject to a three-month probationary period in which time you are expected to suitably establish yourself in post. This probationary period may be extended at management's discretion, but shall not normally in any case exceed six months. During this period, the notice period set out below will apply.
3. The position is full time, based on a five-day working week of 37.5 hours. Your hours of work will be 08.30 to 17.00 with one hour taken for lunch between 12.00 and 14.00.
4. Your salary will be £26,000 per annum, payable in 12 equal monthly installments paid in arrears. The payment will be paid directly into your bank, such that it is in your account by the last day of each month.
5. The holiday year runs from 1<sup>st</sup> January to 31<sup>st</sup> December. You will be entitled to 33 days holiday per annum, which includes 8 bank/public holidays. We close our offices between the Christmas and New Year's statutory holidays and you will be expected to take three days of your holiday at this time and should ensure you retain enough days of your entitlement to cover the bank/public holidays.
6. After completion of the probationary period you will be entitled to various benefits whilst in our employment. Currently these are:
  - a) Pension: You will be automatically enrolled into a personal pension scheme which complies with current legislation. All newly enrolled employees will be required to contribute at least 4% of their gross salary into the pension scheme.  
  
You may also elect to contribute more. You have the right to opt out of this scheme if you wish. Full details of the AKSWard group Personal pension Plan will be provided when you commence work with us.



Registered in England No. 01433208  
Registered Office: Seacourt Tower West Way Oxford OX2 0JL

Seacourt Tower West Way Oxford OX2 0JL  
Tel: 01865 240 091  
oxford@aksward.com  
www.aksward.com

LONDON • BIRMINGHAM • HITCHIN • OXFORD • SOUTHAMPTON



- b) Private Health Care: You will join on a 'Moratorium' basis. This means that any medical

in the UK.

Consequently, on your first day will you please bring the original of a passport which shows that you are a British citizen or have a right of abode in the United Kingdom or a passport or national identity card showing that you are a national of a European Economic Area country or Switzerland.

If you are not able to produce either of the above, please contact us in order that we may discuss with you other documents that you may have that will confirm your eligibility to work in the UK.



Upon commencement you will be provided with health and safety training and access to a copy of our Conditions of Employment Handbook which, along with this letter, will form your employment contract with us.

Please confirm your acceptance of this offer by signing and returning the duplicate copy of this letter by the 21<sup>st</sup> of November 2019.

Yours sincerely

  
Gary Allen  
Managing Director  
AKSWard Ltd

cc: Helena Harji – AKSWard, London  
Paul Morgan – AKSWard, Oxford

I hereby accept the above offer of employment \_\_\_\_\_

My Start date will be: 16<sup>th</sup> December

**Fig B.1.5c: Student Appointment letter**



## DEPARTMENT OF CIVIL ENGINEERING

### CRITERION II

#### Program Curriculum and Teaching – Learning Processes



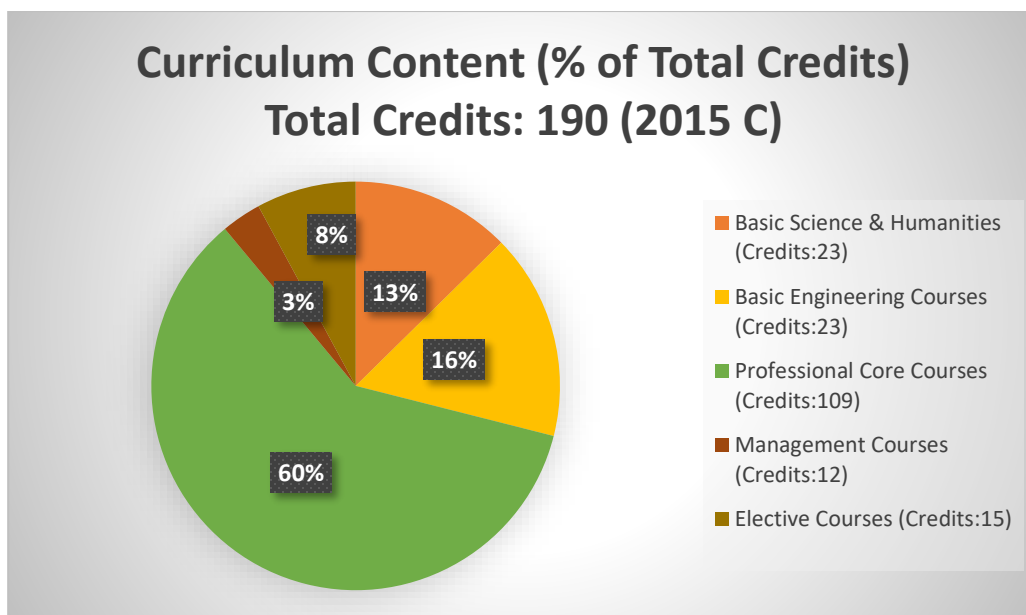


<b>CRITERION II</b>	<b>Program Curriculum and Teaching – Learning Processes</b>	<b>120</b>
<b>2.1</b>	<b>Program Curriculum</b>	<b>20</b>
<b>2.1.1</b>	<b>2.1.1 State the process used to identify extent of compliance of the University curriculum for attaining the Program Outcomes and Program Specific Outcomes as mentioned in Annexure I. Also mention the identified curricular gaps, if any (10)</b>  <i>(State the process details; also mention identified curricular gaps)</i>	<b>10</b>

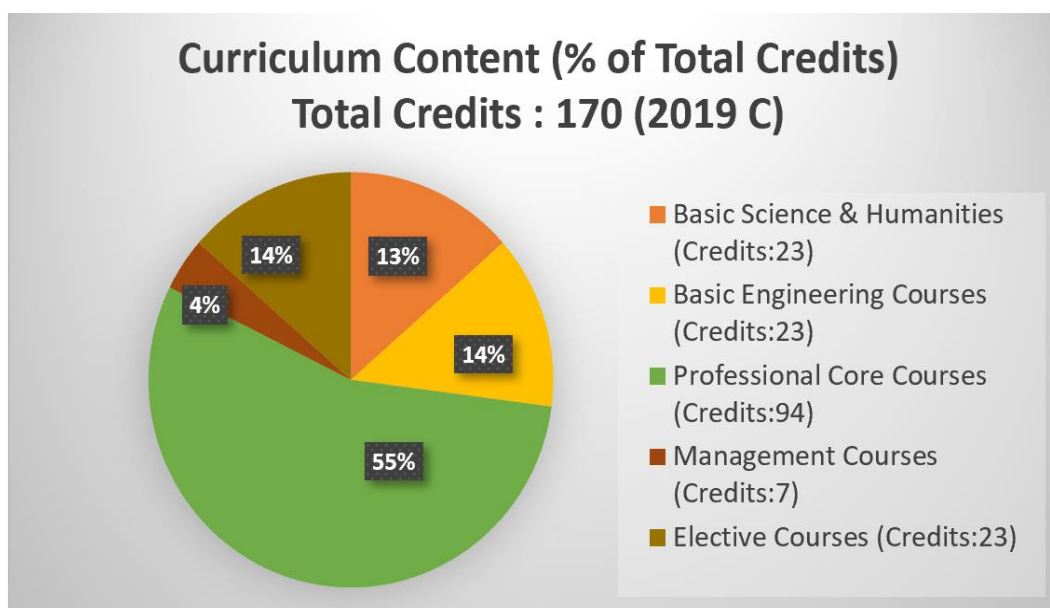
**AISSMS COLLEGE OF ENGINEERING**, Pune is affiliated to Savitribai Phule Pune University (SPPU). Hence, Program Curriculum is as per the pattern and syllabus framed by the university. The program curriculum is categorized into various streams like Basic sciences, Basic engineering courses, Professional core courses, Management & humanities and Elective courses. The distribution of curriculum into various streams for First year (FE) 2019 C, Second year (SE) 2019 C, Third year (TE) 2019 C, Fourth year (BE) 2019 C is presented in Table No. B2.1.1 (a). Fig.B 2.1.1 (a) and Fig.B 2.1.1 (b) presents the curriculum for 2015 C and 2019 C respectively.

**Table No. B2.1.1 (a) Various streams of program curriculum**

<b>Sr. No.</b>	<b>Streams</b>	<b>Contribution of Curriculum content (%)</b>	<b>Total Credits</b>
1	Basic Sciences & Humanities	13.53	23
2	Basic Engineering Courses	13.53	23
3	Professional Core Courses	53.53	91
4	Management Courses	5.88	10
5	Elective Courses	13.53	23



(a)



(b)

**Fig.B2.1.1 Percentage coverage of various streams of program curriculum for (a) 2015 C and (b) 2019 C**

SPPU syllabus structures for First year (2019 C), Second year (2019 C), Third year (2019 C) and Final year (2019 C) are given here; PO and PSO mapping of courses of Bachelor of Civil Engineering Program are tabulated in **Table No. B2.1.1 (b)**.



**TABLE -1 First Engineering \_Structure for Semester-I**

Course Code	Course Name	Teaching Scheme (Hours/Week)			Examination Scheme and Marks						Credits			
		Theory	Practical	Tutorial	ISE	ESE	TW	PR	OR	Total	TH	PR	TUT	Total
107001	Engineering Mathematics-I	03	--	01	30	70	25	--	--	125	03	--	01	04
107002/107009	Engineering Physics / Engineering Chemistry	04	02	--	30	70	--	25	--	125	04	01	--	05
102003	Systems in Mechanical Engineering	03	02	--	30	70	--	25	--	125	03	01	--	04
103004 / 104010	Basic Electrical Engineering / Basic Electronics Engineering	03	02	--	30	70	--	25	--	125	03	01	--	04
110005/101011	Programming and Problem Solving / Engineering Mechanics	03	02	--	30	70	--	25	--	125	03	01	--	04
111006	Workshop <sup>@</sup>	--	02	--	--	--	--	25	--	25	--	01	--	01
Total		16	10	01	150	350	25	125	--	650	16	05	01	22
101007	Audit Course 1 <sup>&amp;</sup>	02	Environmental Studies-I											
Induction Program : 2 weeks at the beginning of semester-I and 1 week at the beginning of semester-II														

**TABLE -2 First Engineering \_Structure for Semester-II**

Course Code	Course Name	Teaching Scheme (Hours/Week)			Examination Scheme and Marks						Credits			
		Theory	Practical	Tutorial	ISE	ESE	TW	PR	OR	Total	TH	PR	TUT	Total
107008	Engineering Mathematics-II	04	--	01	30	70	25	--	--	125	04	--	01	05
107002/ 107009	Engineering Physics/ Engineering Chemistry	04	02	--	30	70	--	25	--	125	04	01	--	05
103004 / 104010	Basic Electrical Engineering / Basic Electronics Engineering	03	02	--	30	70	--	25	--	125	03	01	--	04
110005/ 101011	Programming and Problem Solving / Engineering Mechanics	03	02	--	30	70	--	25	--	125	03	01	--	04
102012	Engineering Graphics <sup>Ω</sup>	01	02	01	--	50	25		--	75	01	01		02
110013	Project Based Learning <sup>§</sup>	--	04	--	--	--	25	50	--	75	--	02	--	02
Total		15	12	02	120	330	75	125	--	650	15	05	02	22
101014	Audit Course 2 <sup>&amp;</sup>	02	Environmental Studies-II											
107015		--	Physical Education-Exercise and Field Activities											



Savitribai Phule Pune University, Pune SE (Civil Engineering) 2019 Course (With effect from Academic Year 2020-21)														
Semester-III														
Course Code	Course Name	Teaching Scheme (Hours/Week)			Examination Scheme and Marks						Credit			
		Theory	Practical	Tutorial	IN-Sem	End-Sem	TW	PR	OR	Total	TH	PR	TUT	Total
201001	Building Technology and Architectural Planning	03	-	-	30	70	--	-	-	100	03	-	-	03
201002	Mechanics of structure	03	-	-	30	70	-	-	-	100	03	-	-	03
201003	Fluid Mechanics	03	-	-	30	70	-	-	-	100	03	-	-	03
207001	Engineering Mathematics III	03	-	01	30	70	25	-	-	125	03	-	01	04
207009	Engineering Geology	03	-	-	30	70	-	-	-	100	03	-	-	03
201004	Building Technology and Architectural Planning Lab	-	04	-	-	-	50	-	-	50	-	02	-	02
201005	Mechanics of structure Lab	-	04	-	-	-	-	-	50	50	-	02	-	02
201006	Fluid Mechanics Lab	-	02	-	-	-	-	-	50	50	-	01	-	01
207010	Engineering Geology Lab	-	02	-	-	-	25	-	-	25	-	01	-	01
201007	Audit Course 1 Awareness to civil Engineering Practices / Road Safety Management / Foreign Language	-	01	-	-	Grade	-	-	-	Grade	-	-	-	-
Total		15	13	01	150	350	100	-	100	700	15	06	01	22
Abbreviations: TH: Theory      TW: Term Work      PR : Practical      OR: Oral      TUT : Tutorial Note: Interested students of S.E. (Civil) can opt any one of the audit courses from the list of audit courses prescribed by BoS (Civil Engineering) Note for all the courses: The Underlined portion of the syllabus will be covered by video lectures/ on-line lectures/ flip classroom, self-study, NPTEL course lecture and/or using relevant ICT techniques														

Semester-IV														
Course Code	Course Name	Teaching Scheme (Hours/Week)			Examination Scheme and Marks						Credit			
		Theory	Practical	Tutorial	IN-Sem	End-Sem	TW	PR	OR	Total	TH	PR	TUT	Total
201008	Geotechnical Engineering	03	-	-	30	70	-	-	-	100	03	-	-	03
201009	Survey	03	-	-	30	70	-	-	-	100	03	-	-	03
201010	Concrete Technology	03	-	-	30	70	-	-	-	100	03	-	-	03
201011	Structural Analysis	03	-	01	30	70	25	-	-	125	03	-	01	04
201012	Project management	03	-	-	30	70	-	-	-	100	03	-	-	03
201013	Geotechnical Engineering <b>Lab</b>	-	02	-	-	-	-	-	50	50	-	01	-	01
201014	Survey <b>Lab</b>	-	04	-	-	-	-	50	-	50	-	02	-	02
201015	Concrete Technology <b>Lab</b>	-	02	-	-	-	25	-	-	25	-	01	-	01
201017	Project Based Learning	-	04	-	-	-	50	-	-	50	-	02	-	02
201018	Audit Course II: Disaster Management	-	01	-	-	Grade	-	-	-	Grade	-	-	-	-
Total		15	13	01	150	350	100	50	50	700	15	06	01	22
<b>Abbreviations:</b> TH: Theory    TW: Term Work    PR : Practical    OR: Oral    TUT : Tutorial <b><u>Note for all the courses: The Underlined portion of the syllabus will be covered by video lectures/ on-line lectures/ flip classroom, self-study, NPTEL course lectures and/or using relevant ICT technique</u></b>														



Savitribai Phule Pune University, Pune TE (Civil Engineering) 2019 Pattern (With effect from Academic Year 2021-22)																
SEMESTER: V																
Course Code	Course Name	Teaching Scheme (Hours/Week)			Examination Scheme and Marks						Credit					
		Theory	Practical	Tutorial	IN-Sem	End-Sem	TW	PR	OR	Total	TH	TW	PR	OR	TUT	Total
301001	Hydrology and Water Resources Engineering	03	--	--	30	70	--	--	--	100	03	--	--	--	--	03
301002	Water Supply Engineering	03	--	--	30	70	--	--	--	100	03	--	--	--	--	03
301003	Design of Steel Structures	03	--	--	30	70	--	--	--	100	03	--	--	--	--	03
301004	Engineering Economics and Financial Management	03	--	--	30	70	--	--	--	100	03	--	--	--	--	03
301005	Elective I	03	--	--	30	70	--	--	--	100	03	--	--	--	--	03
301006	Seminar	--	--	01	--	--	50	--	--	50	--	--	--	--	01	01
301007	Hydrology and Water Resources Engineering <b>Lab</b>	--	02	--	--	--	25	--	--	25	--	01	--	--	--	01
301008	Water Supply Engineering <b>Lab</b>	--	02	--	--	--	--	50	--	50	--	--	01	--	--	01
301009	Design of Steel Structures <b>Lab</b>	--	04	--	--	--	--	--	50	50	--	--	--	02	--	02
301010	Elective I <b>Lab</b>	--	02	--	--	--	25	--	--	25	--	01	--	--	--	01
301011	Audit Course I: Professional Ethics and Etiquettes/ Sustainable Energy Systems	--	--	01	--	GR	--	--	--	GR	--	--	--	--	--	--
<b>Total</b>		<b>15</b>	<b>10</b>	<b>02</b>	<b>150</b>	<b>350</b>	<b>100</b>	<b>50</b>	<b>50</b>	<b>700</b>	<b>15</b>	<b>02</b>	<b>01</b>	<b>02</b>	<b>01</b>	<b>21</b>
<b>Abbreviations: TH : Theory, TW: Term Work, PR : Practical, OR: Oral, TUT : Tutorial, GR: Grade</b>																

SEMESTER-VI																
Course Code	Course Name	Teaching Scheme (Hours/Week)			Examination Scheme and Marks						Credit					
		Theory	Practical	Tutorial	IN-Sem	End-Sem	TW	PR	OR	Total	TH	TW	PR	OR	TUT	Total
301012	Waste Water Engineering	03	--	--	30	70	--	--	--	100	03	--	--	--	--	03
301013	Design of RC Structures	03	--	--	30	70	--	--	--	100	03	--	--	--	--	03
301014	Remote Sensing and GIS	03	--	--	30	70	--	--	--	100	03	--	--	--	--	03
301015	Elective II	03	--	--	30	70	--	--	--	100	03	--	--	--	--	03
301016	Internship	--	--	--	--	--	100	--	--	100	--	04	--	--	--	04
301017	Waste Water Engineering <b>Lab</b>	--	02	--	--	--	--	--	50	50	--	--	--	01	--	01
301018	Design of RC Structures <b>Lab</b>	--	04	--	--	--	--	--	50	50	--	--	--	02	--	02
301019	Remote Sensing and GIS <b>Lab</b>	--	02	--	--	--	50	--	--	50	--	01	--	--	--	01
301020	Elective II <b>Lab</b>	--	02	--	--	--	50	--	--	50	--	01	--	--	--	01
301021	Audit Course II: Leadership and Personality Development/ Industrial Safety	--	--	01	--	GR	--	--	--	GR	--	--	--	--	--	--
<b>Total</b>		<b>12</b>	<b>10</b>	<b>01</b>	<b>120</b>	<b>280</b>	<b>200</b>	<b>--</b>	<b>100</b>	<b>700</b>	<b>12</b>	<b>06</b>	<b>--</b>	<b>03</b>	<b>--</b>	<b>21</b>
<b>Abbreviations: TH : Theory, TW: Term Work, PR : Practical, OR: Oral and TUT : Tutorial, GR: Grade</b>																



Savitribai Phule Pune University, Pune BE (Civil Engineering) 2019 Pattern (With effect from Academic Year 2022-23)																
SEMESTER: VII																
Course Code	Course Name	Teaching Scheme (Hours/Week)			Examination Scheme and Marks						Credit					
		Theory	Practical	Tutorial	IN-Sem	End-Sem	TW	PR	OR	Total	TH	TW	PR	OR	TUT	Total
401001	Foundation Engineering	03	--	--	30	70	--	--	--	100	03	--	--	--	--	03
401002	Transportation Engineering	03	--	--	30	70	--	--	--	100	03	--	--	--	--	03
401003	Elective III	03	--	--	30	70	--	--	--	100	03	--	--	--	--	03
401004	Elective IV	03	--	--	30	70	--	--	--	100	03	--	--	--	--	03
401005	Project Stage I	--	04	--	--	--	50	--	50	100	--	01	--	02	--	03
401006	Transportation Engineering Lab	--	02	--	--	--	--	--	50	50	--	--	--	01	--	01
401007	Elective III Lab	--	02	--	--	--	--	--	50	50	--	--	--	01	--	01
401008	Elective IV Lab	--	02	--	--	--	50	--	--	50	--	01	--	--	--	01
401009	Computer Programming in Civil Engineering	01	02	--	--	--	50	--	--	50	--	02	--	--	--	02
401010	Audit Course I Stress Management by Yoga / Communication Etiquette in Workplaces	--	--	01	--	GR	--	--	--	GR	--	--	--	--	--	--
Total		13	12	01	120	280	150	--	150	700	12	04	--	04	--	20
Abbreviations: TH : Theory, TW: Term Work, PR : Practical, OR: Oral, TUT : Tutorial, GR: Grade																

### Elective III and IV

S N	Course Code	Elective III: Course Name	Course Code	Elective IV: Course Name
01	401003 a	Coastal Engineering	401004 a	Air Pollution and Control
02	401003 b	Advanced Design of Concrete Structures	401004 b	Advanced Design of Steel Structures
03	401003 c	Integrated Water Resources Planning & Management	401004 c	Statistical Analysis and Computational Method
04	401003 d	Finite Element Method	401004 d	Airport and Bridge Engineering
05	401003 e	Data Analytics	401004 e	Design of Prestressed Concrete Structures
06	401003 f	Operation Research	401004 f	Formwork and Plumbing Engineering





SEMESTER-VIII																
Course Code	Course Name	Teaching Scheme (Hours/Week)			Examination Scheme and Marks						Credit					
		Theory	Practical	Tutorial	IN-Sem	End-Sem	TW	PR	OR	Total	TH	TW	PR	OR	TUT	Total
401011	Dams and Hydraulics Structures	03	--	--	30	70	--	--	--	100	03	--	--	--	--	03
401012	Quantity Surveying, Contracts and Tenders	03	--	--	30	70	--	--	--	100	03	--	--	--	--	03
401013	Elective V	03	--	--	30	70	--	--	--	100	03	--	--	--	--	03
401014	Elective VI	03	--	--	30	70	--	--	--	100	03	--	--	--	--	03
401015	Project Stage II	--	10	--	--	--	100	--	50	150	--	03	--	02	--	05
401016	Dams and Hydraulics Structures <b>Lab</b>	--	02	--	--	--	--	--	50	50	--	--	--	01	--	01
401017	Quantity Surveying, Contracts and Tenders <b>Lab</b>	--	02	--	--	--	--	--	50	50	--	--	--	01	--	01
401018	Elective V <b>Lab</b>	--	02	--	--	--	50	--	--	50	--	01	--	--	--	01
401019	Audit Course II <b>Social Responsibility / Human Rights</b>	--	--	01	--	GR	--	--	--	GR	--	--	--	--	--	--
Total		12	16	01	120	280	150	--	150	700	12	04	--	04	--	20
Abbreviations: TH : Theory, TW: Term Work, PR : Practical, OR: Oral and TUT : Tutorial, GR: Grade																

### Elective V and VI

S N	Course Code	Elective V: Course Name	Course Code	Elective VI: Course Name
01	401013 a	Earthquake Engineering	401014 a	TQM and MIS
02	401013 b	Structural Design of Bridges	401014 b	Advanced Transportation Engineering
03	401013 c	Irrigation and Drainage	401014 c	Geo Synthetic Engineering
04	401013 d	Design of Precast and Composite Structures	401014 d	Structural Design of Foundations
05	401013 e	Hydropower Engineering	401014 e	Green Structures and Smart Cities
06	401013 f	Structural Audit and Retrofitting of Structures	401014 f	Rural Water Supply and Sanitation




**Table No. B2.1.1 (b) PO and PSO mapping of courses of Bachelor of Civil Engineering Program**

Sr No	Course Component	Code	Course	Semester	Credit	Mapping with PO	Mapping with PSO
<b>First year Engineering (2019 Course)</b>							
1	Basic Sciences and Humanities	107001	Engineering Mathematics-I	1	04	PO:1, 2, 3, 5	PSO:1
2	Basic Sciences and Humanities	107002/ 107009	Engineering Physics / Engineering Chemistry	1	05	PO:1, 2, 5, 7, 10	PSO:1, 2
3	Basic Engineering Courses	102003	Systems in Mechanical Engineering	1	04	PO:1, 2, 7, 10	PSO:1
4	Basic Engineering Courses	103004 / 104010	Basic Electrical Engineering / Basic Electronics Engineering	1	04	PO:1, 2, 3, 5	PSO:1, 3
5	Basic Engineering Courses	110005/ 101011	Programming and Problem Solving / Engineering Mechanics	1	04	PO:1, 2, 3, 5, 8, 9, 10, 12	PSO:1, 2, 3
6	Basic Engineering Courses	111006	Workshop	1	01	PO:1, 2, 3, 4, 6	PSO:1,2
7	Basic Sciences and Humanities	101007	Audit Course 1- Environmental Studies-I	1	--		
					<b>22</b>		
8	Basic Sciences and Humanities	107008	Engineering Mathematics II	2	05	PO:1, 2, 3, 5	PSO:1
9	Basic Sciences and Humanities	107002/ 107009	Engineering Physics/ Engineering Chemistry	2	05	PO:1, 2, 3, 7, 9, 10	PSO:1, 2, 3
10	Basic Engineering Courses	103004 / 104010	Basic Electrical Engineering / Basic Electronics Engineering	2	04	PO:1, 2, 3, 5	PSO:1
11	Basic Engineering	110005/ 101011	Programming and Problem Solving /	2	04	PO:1, 2, 5, 10, 12	PSO:1



	Courses		Engineering Mechanics				
12	Basic Engineering Courses	102012	Engineering Graphics	2	02	PO:1, 2, 3, 5, 10, 12	PSO:1, 3
13	Management Courses	110013	Project Based Learning	2	02	PO:1, 2, 3, 5, 6, 7, 9, 10, 11, 12	PSO:1, 2, 3
14	Basic Sciences and Humanities	101014/ 107015	Audit Course 2 Environmental Studies-II /Physical Education- Exercise and Field Activities	2	--		
					<b>22</b>		
<b>Second year Civil Engineering (2019 Course)</b>							
15	Professional Core Courses	201001	Building Technology and Architectural Planning (BTAP)	3	03	PO:1, 2, 3, 4, 6, 7, 8	PSO:1, 2, 3
16	Professional Core Courses	201002	Mechanics of Structure (MOS)	3	03	PO:1, 2, 3, 4, 12	PSO: 1, 3
17	Professional Core Courses	201003	Fluid Mechanics (FM)	3	03	PO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	PSO:1, 2, 3
18	Basic Sciences and Humanities	207001	Engineering Mathematics III (EM-III)	3	04	PO:1, 2, 3, 4,	PSO: NIL
19	Professional Core Courses	207009	Engineering Geology (EG)	3	03	PO:1, 2, 3, 6, 7, 9, 10, 12	PSO:1, 2, 3
20	Professional Core Courses	201004	Building Technology & Architectural Planning Lab (BTAP Lab)	3	02	PO:1, 2, 3, 4, 5, 7, 8, 9, 10	PSO:1, 2, 3



21	Professional Core Courses	201005	Mechanics of structure Lab (MOS Lab)	3	02	PO:1, 9, 10	PSO:1, 3
22	Professional Core Courses	201006	Fluid Mechanics Lab (FM Lab)	3	01	PO:1, 2, 4, 5, 6, 9, 10, 12	PSO:1, 2, 3
23	Professional Core Courses	207010	Engineering Geology Lab (EG Lab)	3	01	PO:1, 2, 4, 5, 9, 10	PSO:1
24	Basic Sciences and Humanities	201007	Audit Course 1 Awareness to civil Engineering Practices / Road Safety Management /Foreign Language	3	--		
					<b>22</b>		
25	Professional Core Courses	201008	Geotechnical Engineering (GTE)	4	03	PO:1, 2	PSO:1
26	Professional Core Courses	201009	Survey (SUR)	4	03	PO:1, 2	PSO:1
27	Professional Core Courses	201010	Concrete Technology (CT)	4	03	PO:1, 2, 3, 7, 12	PSO:1, 3
28	Professional Core Courses	201011	Structural Analysis (SA)	4	04	PO:1, 2, 4, 12	PSO:1, 3
29	Professional Core Courses	201012	Project management (PM)	4	03	PO:1, 2, 3, 4, 5, 6, 7, 8, 11, 12	PSO:1, 3
30	Professional Core Courses	201013	Geotechnical Engineering Lab (GTE Lab)	4	01	PO:1, 9, 10	PSO:1
31	Professional Core Courses	201014	Survey Lab (SUR Lab)	4	02	PO:1, 9, 10	PSO:1
32	Professional	201015	Concrete Technology	4	01	PO:1, 2,	PSO:1, 3



	Core Courses		Lab (CT lab)			3, 7, 9, 10	
33	Management Courses	201017	Project Based Learning (PBL)	4	02	PO:1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	PSO:1, 2, 3
34	Basic Sciences and Humanities	201018	Audit Course 2 Disaster Management	4	--		
					22		
<b>Third year Civil Engineering (2019 Course)</b>							
35	Professional Core Courses	301001	Hydrology and Water Resource Engineering (HWRE)	5	03	PO:1, 2, 3, 4, 6	PSO:1
36	Professional Core Courses	301002	Water Supply Engineering (WSE)	5	03	PO:1, 2, 3, 4, 6, 7	PSO:1, 3
37	Professional Core Courses	301003	Design of Steel Structures (DSS)	5	03	PO:1, 2, 3, 4, 6, 8	PSO:1, 3
38	Management Courses	301004	Engineering Economics and Financial Management (EEFM)	5	03	PO: 1, 5, 11	PSO: 1, 2, 3
39	Elective Courses	301005	Elective I	5	03	PO: 1, 5, 11 PO: 1, 2, 3, 5, 7	PSO: 1, 2, 3 PSO: 1, 2, 3
40	Professional Core Courses	301006	Seminar	5	01	PO:1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	PSO:1, 2, 3
41	Professional Core Courses	301007	Hydrology and Water Resource Engineering (HWRE) Lab	5	01	PO:1, 2, 3, 4, 6, 9, 10	PSO:1, 3
42	Professional Core	301008	Water Supply	5	01	PO:1, 2,	PSO:1, 3



	Courses		Engineering (WSE) Lab			3, 6, 7, 9, 10	
43	Professional Core Courses	301009	Design of Steel Structures (DSS) Lab	5	02	PO:1, 2, 3, 4, 6, 8, 9, 10	PSO:1, 3
44	Elective Courses	301010	Elective I Lab	5	01	PO:1,9, 10, 11 PO:1, 5, 8, 9, 10	PSO:1, 3 PSO:1, 2
43	Basic Sciences and Humanities	301011	Audit Course 1 Professional Ethics and Etiquettes/ Sustainable energy systems	5	--		
					<b>21</b>		
44	Professional Core Courses	301012	Waste Water Engineering (WWE)	6	03	PO:1, 2, 3, 4, 6, 7	PSO:1, 3
45	Management Courses	301013	Design of RC Structures (DRCS)	6	03	PO:1, 2, 3, 4, 6, 8	PSO:1, 3
46	Professional Core Courses	301014	Remote sensing and GIS (RSGIS)	6	03	PO:1, 2, 5, 6	PSO:1, 2 3
47	Elective Courses	301015	Elective-II	6	03	PO: 1, 2, 6, 7, 8	PSO:1,3
48	Professional Core Courses	301016	Internship	6	04	PO: 1, 3, 5, 6, 8, 9, 10, 12	PSO:1,2,3
49	Professional Core Courses	301017	Waste Water Engineering (WWE) Lab	6	01	PO:1, 2, 3, 4, 6, 7, 9,10	PSO:1, 3
50	Professional Core Courses	301018	Design of RC Structures (DRCS) Lab	6	02	PO:1, 2, 3, 4, 5, 8, 9, 10	PSO:1, 3
51	Professional	301019	Remote sensing and GIS	6	01	PO:1, 2,	PSO: 1, 2



	Core Courses		(RSGIS) Lab			5, 6, 9, 10	3
52	Elective Courses	301020	Elective-II lab	6	01	PO: 1, 2, 6, 7, 8, 9,10	PSO:1,3
53	Basic Sciences and Humanities	301021	Audit Course 2 Leadership and Personality Development/ Industrial Safety	6	--		
					<b>21</b>		
<b>Final year Civil Engineering (2019 Course)</b>							
54	Professional Core Courses	401001	Foundation Engineering (FE)	7	03	PO:1, 2, 3, 4, 6,	PSO:1, 3
55	Professional Core Courses	401002	Transportation Engineering (TRE)	7	03	PO:1, 2, 3, 4, 6, 8	PSO:1, 3
56	Elective Courses	401003	Elective III	7	03	PO: 1,4,7 PO: 1,2,3,4,1 1	PSO:1,3  PSO:1,3
57	Elective Courses	401004	Elective IV	7	03	PO: 1,6,7 PO: 2, 3, 4, 11	PSO:1, 3  PSO:1
58	Professional Core Courses	401005	Project (Phase-I)	7	03	PO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	PSO:1, 2, 3
59	Professional Core Courses	401006	Transportation Engineering (TRE) Lab	7	01	PO: 1, 2, 3, 4, 6, 8, 9, 10	PSO:1, 3
60	Elective Courses	401007	Elective III Lab	7	01	PO: 1, 4, 7, 9, 10 PO: 1, 2,	PSO:1, 3  PSO:1, 3



						3, 4, 9, 10, 11	
61	Elective Courses	401008	Elective IV Lab	7	01	PO: 1, 6, 7, 9, 10 PO: 2, 3, 4, 9, 10, 11	PSO:1, 3  PSO:1
62	Professional Core Courses	401009	Computer programming in Civil Engineering	7	02	PO:1, 2, 3, 5	PSO:1, 2, 3
63	Basic Sciences and Humanities	401010	Audit Course 1: Stress Management by Yoga/ Communication Etiquettes in workplaces	7	--		
					<b>20</b>		
64	Professional Core Courses	401011	Dams and Hydraulic Structures (DHS)	8	03	PO:1, 2, 3, 4, 5, 6, 7	PSO:1, 3
65	Professional Core Courses	401012	Quantity Surveying, Contracts and Tenders (QSCT)	8	03	PO:1, 2, 5, 6, 8, 11	PSO:1, 3
66	Elective Courses	401013	Elective V	8	03	PO: 1, 2, 4, 6, 7	PSO:1, 3
67	Elective Courses	401014	Elective VI	8	03	PO: 1, 5, 6, 7, 8, 11	PSO:1, 2, 3
68	Professional Core Courses	401015	Project Stage-II	8	05	PO:1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	PSO:1, 2, 3
69	Professional Core Courses	401016	Dams and Hydraulic Structures (DHS) Lab	8	01	PO:1, 2, 3, 4, 5, 6, 7, 9, 10	PSO:1, 3
70	Professional	401017	Quantity Surveying,	8	01	PO:1, 2,	PSO:1, 3





	Core Courses		Contracts and Tenders (QSCT) Lab			5, 6, 8, 9, 10, 11	
71	Elective Courses	401018	Elective V lab	8	01	PO: 1, 2, 4, 6, 7, 9, 10	PSO:1, 3
72	Basic Sciences and Humanities	401019	Audit Course 1: Social responsibility / Human Rights	8	--		
					<b>20</b>		
<b>Total Credits</b>					<b>170</b>		

### Program Outcomes (PO)

#### 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 teamwork** – 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.

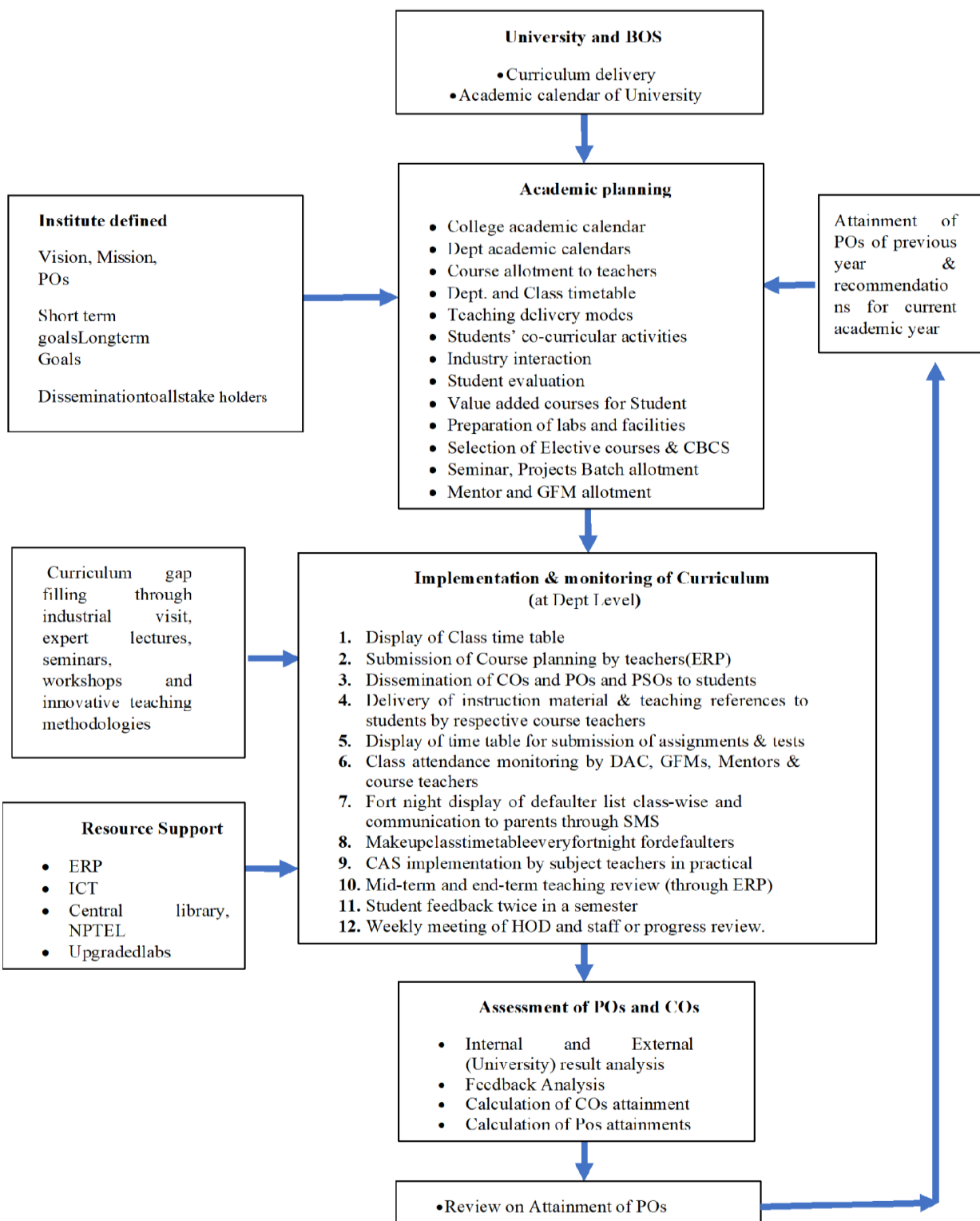
Program Specific Outcomes (PSO)	
<b>PSO1</b>	Exhibit technical knowledge in planning, analysis, design and management for infrastructural development.
<b>PSO2</b>	Apply the innovative technologies to address Civil Engineering problems of the society.
<b>PSO3</b>	Enhance professional abilities to meet industrial need.

Each course has defined COs that are mapped to the POs. The POs are achieved through a curriculum that offers a number of core courses as well as elective courses. A set of performance criteria is used to provide a quantitative measure of how well the COs are achieved. The mapping of COs with POs and PSOs of



the program are considered by the individual faculty. Outcome-based education (OBE) is education in which an importance is given on a clearly articulated plan of what students are expected to know and be able to do, that is, what skills and knowledge they need to have, when they leave the system. We have defined Course Outcomes (COs) for each course in the program. COs are the statements that help the learners to understand the reason for pursuing the course and help him to identify what he will be able to do at the end of the each course. Student surveys are useful tools which provide good understanding modification, planning or redesigning a course. Course End survey has been taken at the end of each course. Since we are following outcome based education system this survey helps us to understand how much we have attained the COs indirectly.

Feedbacks from stakeholders such as students, alumni, parents, employers, faculties on curriculum are taken. Input from stakeholders is communicated to the members of Board of Studies (BOS), SPPU. The BOS- Civil Engineering considers these inputs in framing / modifying the syllabus, through faculties by participating in various syllabus design and implementation work-shops. The suggestions given by individual faculty members are incorporated by BOS for curriculum enrichment.



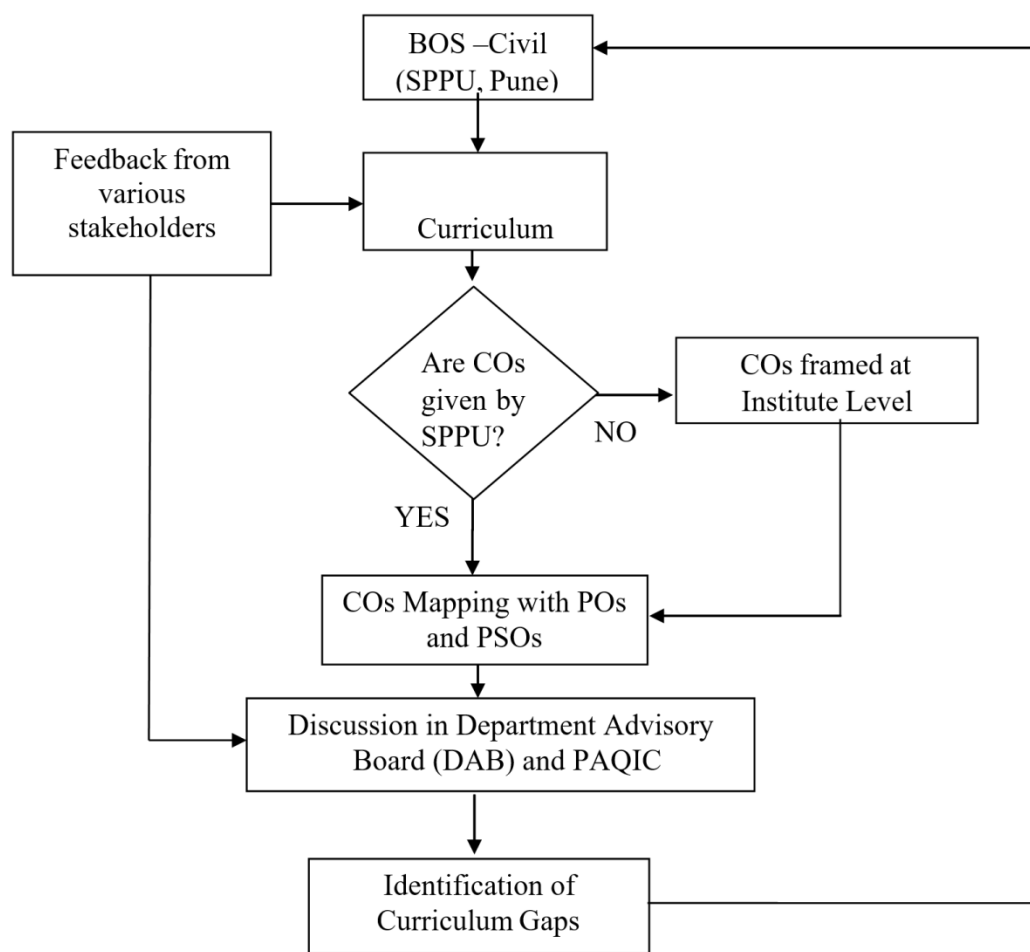
**Fig. B 2.1.1 (b) Process used to identify the extent of compliance of the University curriculum for attaining the Program Outcomes (POs) and Program Specific Outcomes (PSOs)**

Curriculum Gap refers to the content that is required to raise average mapping levels for specific Program Outcomes (POS) and Program Specific Outcomes (PSOs). This curriculum gap is filled by imparting appropriate additional knowledge through collaboration and the inclusion of content beyond the syllabus.

The process to identification of Gap is shown in **Fig. B 2.1.1 (c)**.

### Steps to find out curriculum gaps

- Study of SPPU syllabi of SE, TE, and BE for Civil Engineering program
- Study of GATE/GRE etc. competitive exam syllabus
- Study of recent advancements in Civil Engineering industry
- Recommendations from DAB, Industry Institute Interaction and Performance Assessment and Quality Improvement Committee (PAQIC).
- Brain storming in Department meetings
- As per suggestions by industry professionals, other faculty members and discussions in Industry Institute Interaction meet; concerned faculty members identifies the gaps
- After finding the gap for each course, the gap recovery strategy is decided by the course teacher
- To bridge the gap, different activities are carried out by course teacher
- A request letter is sent to the BOS chairman for modifications with the syllabus



**Fig. B 2.1.1 (c) Process used for identification of Gap**



## Evidences of DAB Meeting



**AISSMS**  
COLLEGE OF ENGINEERING  
ज्ञानम् सकलजनहिताय  
Accredited by NAAC with "A+" Grade



### Department of Civil Engineering

VISION:-Nurture the talent in Civil Engineers to work as global leaders for development of society.

Ref. No.:- Civil/

Date : 12/10/2020

To,

Dr. C. Krishnaiah,  
Scientist -D/ Chief research officer,  
CWPRS, Pune

### Subject: Invitation for meeting of Department Advisory Board (DAB)

Dear Sir

This is to inform you that the meeting of Department Advisory Board (DAB) of Civil engineering department of academic year 2020 – 21 is scheduled on 9<sup>th</sup> November, 2020 i.e. Monday at 03:00 pm at Civil Engineering Seminar Hall (440).

You are requested to make it convenient to attend the meeting and give your valuable suggestions for improvement of department in all aspects.


Agenda for the meeting is -

1. Discussion and approval on Vision Mission Statements of Department of Civil Engineering
2. Program Educational Objectives, Program specific outcomes and Program Outcomes
3. Academic plans preparation by faculty members for their respective courses allotted by the Department
4. Approval of Academic Planner
5. Thrust areas to conduct Co-Curricular activities
6. Topics beyond the syllabus and additional experiments to meet PEOs and Pos
7. Functioning of Centre of Excellence/Incubation Centre

Value added training courses

With warm regards

  
Dr. U R Awari  
Head of Department  
Civil Department

Accepted  
  
15/10/2020

**Mission -** M1: Provide quality education to develop competent Civil Engineers.  
M2: Create awareness among students for sustainable development.  
M3: Cultivate the leadership qualities for becoming successful entrepreneurs.





## Communication to BOS

9/2/22, 3:01 PM

AISSMS College of Engineering Mail - Suggestion for 2019 course syllabus



Uttam Awari <urawari@aissmscoe.com>

### Suggestion for 2019 course syllabus

2 messages

**Uttam Awari** <urawari@aissmscoe.com>  
To: Shreenivas Londhe <shreenivas.londhe@viit.ac.in>

Sun, May 2, 2021 at 10:22 PM

Dear sir, please find attached herewith suggestion for drafting of T E Civil 2019 pattern syllabus.

--

**Regards**

**Dr. Uttam R Awari**

**Head of Department**

**Civil Engineering Department**

AISSMS College of Engineering, Pune - 01

Ph. 020-26057660/26058587 Ext. 1301

Email Id - [civil.hod@aissmscoe.com](mailto:civil.hod@aissmscoe.com)

Website - [www.aissmscoe.com](http://www.aissmscoe.com)

### Vision :

- Nurture the talent in Civil Engineers to work as global leaders for development of society

### Mission:

- Provide quality education to develop competent Civil Engineers
- Create awareness among students for sustainable development
- Cultivate the leadership qualities for becoming successful entrepreneurs



**Suggestion to chairman BOS.docx**  
98K

**Shreenivas Londhe** <shreenivas.londhe@viit.ac.in>  
To: Uttam Awari <urawari@aissmscoe.com>

Mon, May 3, 2021 at 9:12 AM

Thanks for the mail. We will certainly consider the suggestions while finalizing the draft  
Prof. Londhe

[Quoted text hidden]

--

Prof. Shreenivas Londhe Ph.D. P. D. F.  
Professor in Civil Engineering



**GAP Staements AY 2020-21:**

- i. Additional guidance in professional and soft skills
- ii. Need of expert knowledge in emerging technology and trends required for Industry
- iii. Industry Institute Interaction for insufficient field exposure
- iv. Awareness regarding intellectual propert rights and patents.

**GAP Staements AY 2019-20 :**

- i. Additional guidance in professional and soft skills
- ii. Need of expert knowledge in emerging technology and trends required for Industry
- iii. Industry Institute Interaction for insufficient field exposure
- iv. Awareness regarding intellectual propert rights and patents.

**GAP Staements for AY 2018-19:**

- i. Additional guidance in professional and soft skills
- ii. Need of expert knowledge in emerging technology and trends required for Industry
- iii. Industry Institute Interaction for insufficient field exposure
- iv. Awareness regarding intellectual propert rights and patents.

2.1.2	<p><b>State the delivery details of the content beyond the syllabus for the attainment of POs and PSOs</b></p> <p><i>(Provide details of the additional course/learning material/content/laboratory experiments/projects etc., arising from the gaps identified in 2.1.1 in a tabular form in the format given below)</i></p>	10
-------	---	----

**Following are the delivery details of the content beyond the syllabus for the attainment of POs and PSOs:**

- Soft skill training
- Industry visits
- Expert lectures
- Webinars

**Delivery details of the content beyond the syllabus**

**CAYm1AY 2020-2021**


**Table B2.1.2a**

S. No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	Gap-IV	Expert lecture on Intellectual property right	19/06/2021	Mr Vikas Asawat, Patent agent Delhi	80	PO: 11, PO: 12, PSO:2
2	GAP-II	Expert Lecture on “Career Opportunities after Engineering”	04/06/2021	Mr. Anand Kumar Assistant professor ACE Engineering Academy	50	PO:1, PO:12 PSO: 1,3
3	GAP-II	Webinar on “Building an innovation/product fit for innovation”	28/05/2021	Prof. Gururaj Dangare, Head department of MBA, Institute of Management, PIBM, Pune	65	PO: 6, PO: 12, PSO: 3
4	GAP-III	Virtual tour of India’s largest cement manufacturing plant for Civil Engineering students in association with Ultra Tech Cement Limited on	26/05/2021	Mr Ram Pant, Engineer, Ultratech Cement Ltd.	80	PO: 1, PO: 2, PO: 5, PO: 6, PO: 7, PO: 8, PSO: 2
5	GAP-II	One-week online STTP for on 2D and 3D modeling in STAAD Pro.	10/05/2021	Er R Udayshankar, Structural Consultant and Freelancer	90	PO: 1, PO: 2, PO: 3, PO: 5, PO: 6, PO: 8, PO: 10, PSO: 1, PSO: 3
6	GAP-I	Expert Lecture on “Soft Skills: A Must-Have Asset for Engineers”.	20/03/2021	Dr. Utpal K Ganatra, English Lecturer Government Polytechnic College, Dohod	67	PO:12, PSO: 3
7	GAP-I	One week Student development program on “GATE coaching Tips and Tricks”	25/01/2021	Dr S T Mali, Associate Professor, PCCOE, Pune	70	PO: 1, PO: 2, PO: 12, PSO:1, PSO: 2, PSO: 3
8	GAP-I	Interaction & Civil contractor as an avenue for Entrepreneurship	06/11/2020	Mr. Kiran Ghorpade Batch-2012 Assistant Professor Trinity academy of Engg. Pune Civil Engineer & Contractor	70	PO: 2, PO: 3, PO: 5, PO:12, PSO:3
9	GAP-I	Webinar Series on “Communication skills &	05/11/2020	Dr Pragya Bajpayi, Assistant Professor, NDA, Pune	75	PO: 10, PO: 12, PSO:3



		Presentation skills”under IE(I) students’ chapter				
10	GAP-I	Interaction & Preparation for competitive exam	24/10/2020	Ms. Rutuja Dhage Batch- 2019 Water conservation Officer Government of Maharashtra	70	PO: 8, PO: 12, PSO: 3
11	GAP-II	Webinar on “Innovative solutions on earth retention”	16/10/2020	Er Vikas Patil, Mnaging Director, Savi Infra Pvt Ltd	65	PO: 3, PO: 5, PO: 6, PSO:1
12	GAP-I	Webinar on “Guidance for competitive exams preparation”under IE(I) students’ chapter	21/08/2021	Mr Paresh Gugale, Director J2E Private Lt	45	PO: 12, PSO:3
13	GAP-I	Online lecture on Pavement Design	03/09/2020	Dr K B Tapase, Professor, KBPCOE, Satara	90	PO: 3, PO: 5, PO: 6, PO: 8, PSO: 1, PSO: 3
14	GAP-I	Interaction & Pavement designing	29/08/2020	Mr. Dheeraj Deshmukh Batch- 2015 PhD Researchscholar NIT Silchar	60	PO: 2, PO3, PO: 5, PO:12, PSO: 1, PSO: 3
15	GAP-I	Interaction & Bridge designing	15/08/2020	Mr. Girish Narang Batch- 2015 Structural DesignEngineer, TPF Engineering Pvt. Ltd, Pune	63	PO: 2, PO: 3, PO: 5, PO:12, PSO: 3
16	GAP-II	Introduction to Microsoft project & Primavera EPPM P6 software	11/08/2020	Mr. Naynish Ldkat Batch- 2017 Technical Director, Optev Consultant & Civil Contractor	90	PO: 5, PO: 11, PO: 12 PSO: 3
17	GAP-II	Expert talk on “Career opportunities for Civil Engineers afterCOVID - 19”	01/08/2020	Ms. Kiran Somvanshi Chief manager Economic Times Intelligence group	62	PO:1, PO: 12, PSO:1, PSO:3
18	GAP-II	Interaction & Job opportunities in Interior designing	01/08/2020	Mr. Padmanabh Damale Batch- 2004 Interiordesigner/visual concept / Art director Pune	90	PO: 9, PO: 11, PO: 12 PSO: 3
19	GAP-III	Organized Coffee & Conversation with Alumni, Season-2	29/05/2020	Er. KavishThakwani, Technical Director and CEO, Avishkar Realty and Er. Rohit Sharma, PMO Leader, Adearest LLC, Dubai	50	PO: 4, PO: 5, PSO: 3

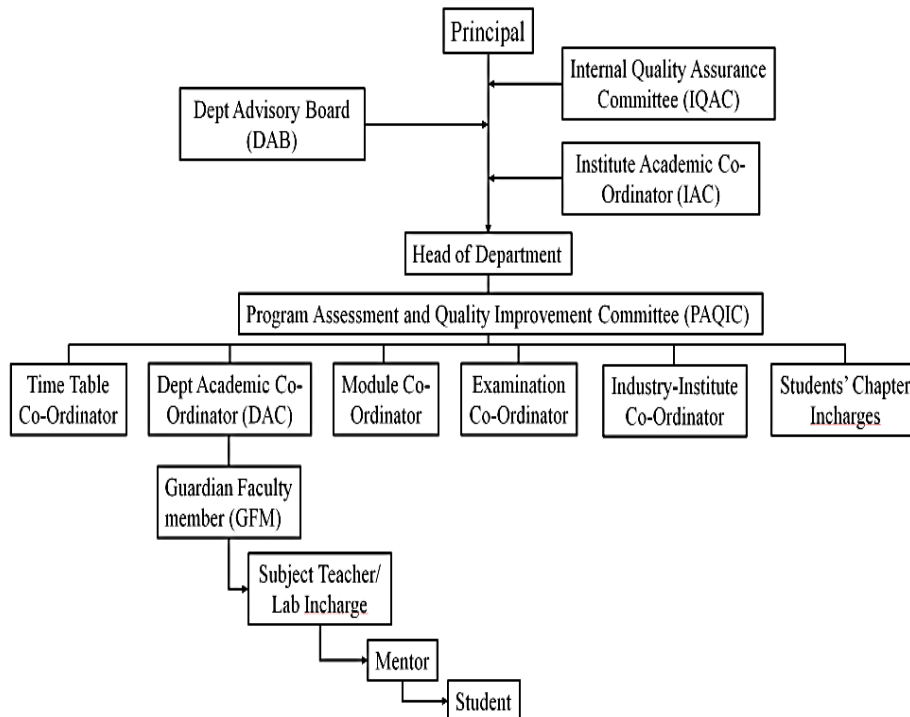
2.2	<b>Teaching-Learning Processes</b>	100
2.2.1	<b>Describe Processes followed to improve quality of Teaching &amp; Learning (25)</b>  <i>(Processes may include adherence to academic calendar and improving instruction methods using pedagogical initiatives such as real world examples, collaborative learning, quality of laboratory experience with regard to conducting experiments, recording observations, analysis of data etc. encouraging bright students, assisting weak students etc. The implementation details and impact analysis need to be documented)</i>	25

### 2.2.1 A. Adherence to academic calendar (3)

Our institute is affiliated with Savitribai Phule Pune University (SPPU). We are following the teaching-learning as per the university guideline. To strengthen our teaching-learning (TL) process, we believe that outcome-based education (OBE) is important to identify the strength and weaknesses and to decide the plan for continuous improvement. This process helps us to identify our strengths and weakness and attain proficiency in the teaching-learning process.

For assessment of our teaching-learning process, we use direct and indirect tools. The direct assessment of each outcome is through internal and external tools. Some indirect tools are also used for the assessment. The indirect tools provide valuable insights and feedback on students views of what they are learning.

Organization structure of academic monitoring committee is as shown in **Fig. B2.2.1 (a)**.



**Fig. B2.2.1 (a) Organization structure of academic monitoring committee**



SPPU prescribes the commencement, conclusion and examination dates in every semester. The Institute follows the academic calendar prescribed by the SPPU.

- ❖ Institute academic calendar is prepared by the academic committee at institute level, in concurrence with SPPU academic calendar.
- ❖ Academic calendar of the Institute includes schedule of curricular delivery assessment, technical events, class test, midterm submission, online & in-sem examination, list of holidays and extra curricular activities.

On the basis of institute level calendar departmental academic calendar is prepared which includes Institute level activities and department activities, such as site visit (Industry & construction sites), exhibitions, survey projects, guest lectures, internship programs and exhibitions related to Civil engineering. Department academic calendar follows Institute academic calendar.

**Following major activities are included in Department Academic Calendar:**

- Departmental Vision and Mission statement.
- Commencement and conclusion of UG and PG terms as per the Institute Calendar and university calendar.
- Insem examination, Oral and Endsem examination as per Institute calendar in alliance with the university schedule.
- Engineering Today Celebration plan.
- Innovation startup week planner on the occasion of Dr. A. P.J. Abdul Kalam's Birthday.
- Departmental UG Unit test schedule and Assessment and distribution of sheets.
- Schedule for Assignment & Distribution of Corrected Scripts.
- UG Level Time table and Roll call list display date.
- Mid term review of Academics
- Mid term and End term Feedback from the students.
- HOD meeting Schedule
- Mentor Meeting Schedule
- GFM meeting Schedule
- Students chapter Activities.
- Defaulter's List display schedule.
- Expert talks, Industrial Visits Schedule
- Technical Activities like Webinar, Workshop, Consultancy, STTP, FDP etc. schedules.

Sample academic calendars of Savitribai Phule Pune University (SPPU), Institute academic calendar and department academic calendar for academic year (AY) 2020-21 are presented in **Fig. B2.2.1 (b), Fig.**



B2.2.1 (c), and Fig. B2.2.1 (c), respectively.

**Savitribai Phule Pune University**  
(Formerly University of Pune)



**Circular No. 284 of 2020**

**Important Notification**

**Dates of Commencement and Conclusion of I<sup>st</sup> & II<sup>nd</sup> terms for the Academic Year 2020-2021  
For affiliated Colleges/recognised Institutes Only.**

It is hereby informed that, the dates of Commencement and conclusion of the I<sup>st</sup> and II<sup>nd</sup> term of for the Academic Year 2020-2021 University Courses, under various faculties shall be as under :

**Dates of Commencement and conclusion of First Year of academic session 2020-21 will be declared later.**

Sr. No.	Name of the Courses and Faculties	2020-2021			
		First Term		Second Term	
		Commencement	Conclusion	Commencement	Conclusion
1	<b>Science &amp; Technology</b>				
	Science	15/06/2020	05/12/2020	01/01/2021	15/05/2021
	Engineering : SE,TE,BE	15/06/2020	05/12/2020	01/01/2021	15/05/2021
	Engineering :ME - II Year. MCA- II & III Year	01/07/2020	24/12/2020	19/01/2021	31/05/2021
	B.Architecture II, III, IV & V Year.	15/06/2020	05/12/2020	01/01/2021	15/05/2021
	M. Architecture II Year.	01/07/2020	24/12/2020	19/01/2021	31/05/2021
	B. Pharmacy	15/06/2020	05/12/2020	01/01/2021	15/05/2021
	M. Pharmacy	01/07/2020	24/12/2020	19/01/2021	31/05/2021
2	<b>Commerce &amp; Management</b>				
	Commerce	15/06/2020	05/12/2020	01/01/2021	15/05/2021
	Management	01/07/2020	24/12/2020	19/01/2021	31/05/2021
3	<b>Humanities</b>				
	Arts & Fine Arts	15/06/2020	05/12/2020	01/01/2021	15/05/2021
	Mental Moral and Social Sciences				
	Law : UG & PG ( II/III/IV/V Year.)	01/07/2020	24/12/2020	19/01/2021	31/05/2021
4	<b>Inter-disciplinary Studies</b>				
	Education II Year. (B.Ed., M.Ed.)	01/07/2020	24/12/2020	19/01/2021	31/05/2021
	Physical Education II Year. (B.P.Ed., M.P.Ed.)	01/07/2020	24/12/2020	19/01/2021	31/05/2021



-- 2 --

NOTE

1. In view of prevailing COVID-19 situation in the Country, Colleges / Institutes shall required to follow the guidelines / instructions issued by the Government of Maharashtra time to time.
2. In case, the Principal of the affiliated Colleges require to give additional holiday in exceptional circumstances, he may do by the compensating the same by keeping the College working on Sunday.
3. The Term & holidays for the Post-Graduate courses conducted in the Colleges/Institutes will be as per the University Department.

*[Signature]* 16/10/2020  
Deputy Registrar  
(P.G.Admission)

Ganeshkhind, Pune-07  
Ref. No. PGS/ 1817  
Date: 15/10/2020

Copy to: for Information and necessary action

The Members of the Management Council.  
The Deans of Faculties.  
The Registrar, Savitribai Phule Pune University, Pune.  
The Director, Examinations & Evaluation, Savitribai Phule Pune University, Pune.  
The Heads of all University Departments.  
The Principals of all Affiliated Colleges.  
The Directors of all Recognized Institutes.  
The Heads of all the Administrative Sections of the University Office.  
Asstt. Registrar, office of the Hon. Vice-Chancellor, Savitribai Phule Pune University  
Asstt. Registrar, office of the Hon. Pro-Vice-Chancellor, Savitribai Phule Pune University

**Fig.B2.2.1 (b) Savitribai Phule Pune University Academic Calendar Academic Year-2020-21**





All India Shri Shivaji Memorial Society's College of Engineering Pune-01 ACADEMIC CALENDAR 2020-21 TERM I			
ACADEMIC ACTIVITIES			
SN	Activity	Year/Class	Dates
1	Notice	Time Table	08/06/2020
		Roll Call List	
		Elective Confirmation List	
		Seminar List	
		Project List	
2	Principal Address to Faculty Members	All Faculty Members	15/06/2020
3	Commencement of Teaching	SE, TE, BE	15/06/2020
		ME-II	01/07/2020
		FE	As per MHT Cell
4	Weekly Academic Report	FE, SE, TE, BE	After every 07 days (starting from commencement of teaching)
5	Mid term test/In-semester/Online/End term Test	SE TE and BE Mid Term exam	Each Faculty Member Conduct Class Test after Completion of Unit (Minimum 6 Class Test)
		FE, SE, TE, BE	As per the University Schedule
6	Assignment	FE SE, TE BE	Each Faculty Member Should provide Assignment after Completion of two Units (Minimum 3 Assignment)
7	BE and ME Project Evaluation	BE & ME Students	Department Should Conduct Minimum 3 Presentation during the term
8	Students Feedback	FE, SE, TE, BE	Department should conduct minimum 2 Feedback during the term
9	Completion of Term Work	SE, TE, BE	23/11/2020 to 27/11/2020
		ME II	07/12/2020 to 11/12/2020
		FE	First Week of April 2021
10	Conclusion of Term	SE, TE, BE	05/12/2020
		ME-II	24/12/2020
11	Oral/ Practical examination	SE, TE, BE	As per the University Schedule
		ME II	As per the University Schedule
12	Theory Exam	SE, TE, BE	As per the University Schedule
		ME II	As per the University Schedule
		FE	As per the University Schedule
13	Commencement of Second Term of Academic Year 2020-21	SE, TE, BE	01/01/2021
		FE, ME I, II	19/01/2021
Two Department Meetings with Principal will be conducted in the month of August and November			
HOD Meeting with Principal		Every Thursday	
NAAC/NBA Meeting		Every Tuesday	
ADC		First and Third Monday of Every Month	
CDC and GC		August, November, February and April/ May	
Purchase Meeting		Last Week of April	
Staff Selection Meeting		Last Week of May	
Principal Meeting with all Non Teaching Staff and Support		Once in Term	
Principal Meeting with CIP		Once in Term	
		  PRINCIPAL	

Fig.B2.2.1 (c) Institute Academic Calendar, Academic Year-2020-21





Department of Civil Engineering  
Department Academic Calendar

Academic Year-2020-21(Term II)

- 1 Commencement of Classes: SE,TE,BE - 01/1/2021  
ME I - 28/01/2020 & ME II - 15/01/2021  
3 SE Online: As per the university Schedule

2 In Sem: 1st week of march

4 Conclusion of Classes: SE, TE, BE - 15/05/2021  
ME I - 22/05/2020, ME II - 31/05/2021

- 5 University Examinations: Practical/ Oral : SE,TE,BE - as per university schedule  
ME I - as per university schedule & ME II - as per university schedule

6 Theory Exam: SE,TE,BE - As per the university Schedule  
ME I & ME II - As per the university Schedule

I) Internal Test through online mode Time Table:

UT-I	UT-II	UT-III	UT-IV	UT-V	UT-VI
18/01/21	8/02/21	22/02/21	15/03/21	05/04/21	03/05/21
19/01/21	9/02/21	23/02/21	16/03/21	06/04/21	04/05/21
20/01/21	10/02/21	24/02/21	17/03/21	07/04/21	05/05/21
21/01/21	11/02/21	25/02/21	18/03/21	08/04/21	06/05/21
22/01/21	12/02/21	26/02/21	19/03/21	09/04/21	07/05/21

II) Schedule for Answer Sheet Assessment & marks Distribution through if Corrected Scripts:

Name of Subjects								
SE	TE	BE	DOE	AAS	DAS	DOE	AAS	DAS
GT	Adv. Surveying	DHS	As per internal test time table	Within Three Days after the DOE	on 4 <sup>th</sup> day after the DOE	As per internal test time table	Within Three Days after the DOE	on 4 <sup>th</sup> day after the DOE
Survey	PMEE	QSCT						
CT	FE	EIEC-III						
SA	SD-II	ELEC-IV						
PM	EE-I	-						

III) Schedule for Assignment & Distribution of Corrected Scripts:

Name of Subjects			Assignment I			Assignment II			Assignment III			Principal's Meetings:
SE	TE	BE	DOA	DOS	DCS	DOA	DOS	DCS	DOA	DOS	DCS	--
GT	Adv. Surveying	DHS	18/01/21	25/01/21	01/02/21	22/03/21	30/03/21	05/04/21	03/05/21	10/05/21	15/05/21	--
Survey	PMEE	QSCT	19/01/21	26/01/21	02/02/21	23/03/21	30/03/21	06/04/21	04/05/21	11/05/21	16/05/21	
CT	FE	EIEC-III	20/01/21	27/01/21	03/02/21	24/03/21	31/03/21	07/04/21	05/05/21	12/05/21	17/05/21	
SA	SD-II	ELEC-IV	21/01/21	28/01/21	04/02/21	25/03/21	01/04/21	08/04/21	06/05/21	13/05/21	18/05/21	
PM	EE-I	-	22/01/21	29/01/21	05/02/21	26/03/21	02/04/21	09/04/21	07/05/21	14/05/21	19/05/21	

IV) Schedule for Departmental Activities :

S N	Description(Name of expert)	Date	Faculty name	Sub	Sign	SN	Subject	Date	Faculty name	Sub	Sign
<b>Guest Lectures through online mode</b>											
1	expert lecture Project Management by. B. T. Ade IUCEE students chapter	13/03/2021	PRM	-		3	Webinar on soft skill : A must have asset for engineers by Dr. Utpal Ganatra under IEI Student Chapter	20/3/2021	MSC		
2	Webinar on preparation for being industry ready by Mr. Ganesh Zhadag(assistant Manager) and Alumni Mr. Chetan Bhutada (Junior Engineer ) Kolte patil Developer	20/03/2021	VSC			4	Building an Innovation and Product feet for innovation by Gururaj Dangre	28/05/2021	PRM , VNP		
<b>Site Visits</b>											
1	Virtual tour to Asia's largest cement manufacturing plant Rajashree cement works - Malkhed,Gurberga a Site visit for CT	26/05/2021	CSM			2	Site visit Under ongoing activity in in percolation tank at Kalyan Village, taluka-Haveli, Dist -Pune	12/1/2021	PBN,VSC,R DN, PRM		
<b>Technical Activities ( Workshop/ Conference / STTP/FDP/ Students competition)</b>											
1	FDP on recent trends in concrete technology	9/01/2021	SRP, CSM			5	One day international FDP on Evaluation of construction Industry to address in infrastructure challenges by Tejas Borse	23/04/2021	SDN		
2	Organised one day Campus Drive of QH talhros Pvt. Ltd. Pune for mechanical And Production	13/1/2021	PBN			6	TE Civil Workshop on syllabus revision	3/05/21 to 5/05/21	PRM, URA		
3	One week student development program on "Get examination coaching with tips and tricks"	25/01/2021 to 31/01/2021	SRP, CSM , PRM			7	Ongoing Study and modification in percolation tank at Kalyan Village, taluka-Haveli, Dist -Pune	Ongoing	PBN,VSC,R DN		
4	One week student development program for SE Civil (Specially for direct second year)	1/02/2021 to 7/02/2021	SRP, CSM,SPK			8					

Abbreviations:

1. DOE - Date of Examination  
2. AAS- Assessment of Answer Sheets

3. DAS- Distribution of Answer Sheets  
4. DOA- Date of Assignment

5. DOS- Date of Submission  
6. DCS- Distribution of Corrected Scripts

*Chavan S-A*  
Academic Calendar I/C  
Chavan S-A

HOD Civil Engineering Dept.

W.E.F :- 01/01/2021

Fig.B2.2.1 (d) Department Academic CalendarAcademic Year-20-21(Term II)

## 2.2.1 B. Use of various instructional methods and pedagogical initiatives (3)

### Curriculum Delivery

The effective implementation of curriculum is ensured by supplementing classroom teaching with expert lectures, presentations/seminars, mini projects, in-house and industry supported projects, tutorials, group



assignments, case studies, industry visits, internships, hands-on- sessions, e-learning, NPTEL lectures, knowledge wall, technical quiz, assignments, internal-tests etc. Training needs of the faculty are identified by the head of the department. Faculty is encouraged to attend short term training programs (STTPs), faculty development programs (FDPs), Seminars, Workshops and Industry Trainings etc. to bridge the needs.

Following are some additional pedagogical initiatives taken by the department in addition to Chalk &Talk lectures, assignments, power point presentations, tutorials etc.;

- Interactive teaching in classroom
- Project based learning
- NPTEL videos
- Experiential learning
- ICT enabled teaching learning
- Student centric activities like quiz, group discussions, Google classroom
- Course end survey
- Internships
- Project Work
- Tutorials
- PPTs, e-content development
- Expert Lectures
- Industry Visits
- Value added courses
- Instructions from faculty

Lockdown due to COVID 19 has not stopped Teaching Learning process at the AISSMS College of Engineering, Pune. Systematic efforts have been put forth for initiating and implementing teaching with online mode. During initial part of the lockdown, ZOOM platform was used to conduct different webinars, FDP and different teaching learning activities. However, other options like Google classroom, whatsapp, telegram have also been used.

For academic year 2020-21, institute has used Microsoft Teams platform for online teaching. For effective implementation of teaching learning through MS teams

- i. Awareness sessions for the use of MS teams have been conducted at institute level by delegates from Microsoft and at department level by trainers identified by the departments.
- ii. Review through survey has been taken regarding availability of internet and other facilities with



students.

- iii. For individual faculty and students, MS team login credentials had been generated.
- iv. Individual faculty has created teams and channels for their assigned subjects (Both theory and practicals).
- v. Timetable prepared for conducting theory and practical has been prepared matching with curriculum requirement and scheduled on MS teams accordingly.
- vi. For every class, daily four theory classes of 60 minutes each and one practical (60 minutes each) and tutorials have been scheduled and conducted regularly.
- vii. Unit wise tests and assignments are also conducted through MS team platform. Assessment of tests and assignments also have been carried out through MS teams.
- viii. Study materials like subject notes, PPTs, e books, previous question papers have been shared by faculty on MS teams.
- ix. Recorded videos on MS teams are also shared with students to compensate the academic loss of students because of power failure and failure in net connectivity.
- x. Regarding conduction of practicals, faculty have been instructed to record the videos and share with students. Virtual Labs also have been identified for different domains and subjects.
- xi. Mentoring meetings have also been conducted by every faculty on MS teams, as per schedule decided by the department.
- xii. Training sessions on virtual labs, also have been conducted by institute for institute faculty and university faculty as well. In fact, that initiative was very well appreciated by university authorities and faculty from other institutes.
- xiii. For monitoring of conduction of academics, every week google form querrying all the details regarding conduction of classes is circulated to all faculty.
- xiv. At the same time, weekly HoD meetings with Principal, and department faculty with HoD are conducted, through online mode and offline also.

Overall, every effort had been put by institute for smooth conduction of academics during this lockdown period.

Due to COVID-19 pandemic, from AY 2019-20 (Semester-II) the institute has adopted online teaching-learning process. Teachers have conducted lectures online on ZOOM app, Google Meet, YouTube and Microsoft Teams. Teachers have developed e-content, youtube videos and posted it on Google classrooms and Microsoft teams. Practical of some subjects are conducted through virtual labs. MCQ based internal tests and INSEM examinations were conducted through google form. Virtual tours were conducted in place of actual site visits.





Online alumni meet, encouragement lectures, Online expert lectures, Student development programs and webinars were conducted. The details of the e- content developed by faculty members which are available online is given **Table No. B2.2.1 (a)**. For the full form of the courses refer to **Table No. B2.1.1 (b)**

**Table No. B2.2.1 (a).e- content developed by faculty members and available online**

Sr. No.	Course	Link
1	SD-I	<a href="https://classroom.google.com/c/MjQwMTEzMTg5NDk0?cjc=wwso2tu">https://classroom.google.com/c/MjQwMTEzMTg5NDk0?cjc=wwso2tu</a>
2	SD-I	<a href="https://classroom.google.com/c/MjQwMTEzMTg5NDcx?cjc=ykbt3y">https://classroom.google.com/c/MjQwMTEzMTg5NDcx?cjc=ykbt3y</a>
3	MOS, SA, SD1, SD2	<a href="https://youtube.com/channel/UC4BIGxRzcrVN0U8WXY-6o6A">https://youtube.com/channel/UC4BIGxRzcrVN0U8WXY-6o6A</a>
4	MOS	<a href="https://classroom.google.com/c/MzQzMjkxNDQyMzE0?cjc=efjozwz">https://classroom.google.com/c/MzQzMjkxNDQyMzE0?cjc=efjozwz</a>
5	SDD-III, HWRE, FE, PMEE	<a href="https://classroom.google.com/c/NzIwOTE1Mjk4MDZa?cjc=kvokq6r">https://classroom.google.com/c/NzIwOTE1Mjk4MDZa?cjc=kvokq6r</a>
6	HWRE and DHS	<a href="https://classroom.google.com/c/NTgxMjE3NTE4ODVa?cjc=5pdbhpd">https://classroom.google.com/c/NTgxMjE3NTE4ODVa?cjc=5pdbhpd</a>
7	FM , DHS, AS	<a href="https://youtube.com/channel/UCY8DnPNxrSVpmH5jTypBAAQ">https://youtube.com/channel/UCY8DnPNxrSVpmH5jTypBAAQ</a> ,
8	FM , DHS, AS	<a href="https://drive.google.com/drive/folders/1PbPrDP-hPacFZRcIj_GyNvZgkDoxctQ_?usp=sharing">https://drive.google.com/drive/folders/1PbPrDP-hPacFZRcIj_GyNvZgkDoxctQ_?usp=sharing</a>
9	TRE, ACT,FE	<a href="https://drive.google.com/file/d/1NwVYn5VP5Tzf5SjJusdz_zyK8i_UUO4f/view?usp=sharing">https://drive.google.com/file/d/1NwVYn5VP5Tzf5SjJusdz_zyK8i_UUO4f/view?usp=sharing</a> ,
10	TRE, ACT,FE	<a href="https://drive.google.com/file/d/1-VplGPcs8qzIT05yU6BbJTkrb_oeisN/view?usp=sharing">https://drive.google.com/file/d/1-VplGPcs8qzIT05yU6BbJTkrb_oeisN/view?usp=sharing</a> , <a href="https://drive.google.com/file/d/1KoMh4yMRIqB5gKIP_1U-gBg4_inSWfJT/view?usp=sharing">https://drive.google.com/file/d/1KoMh4yMRIqB5gKIP_1U-gBg4_inSWfJT/view?usp=sharing</a>
11	IECT,PMEE, TQM and MIS	<a href="https://classroom.google.com">https://classroom.google.com</a>
12	EEL, EEII, BTM, BTAP	<a href="https://drive.google.com/drive/folders/1Tbs2TRtFWyiyaMiH91TbOJaiU5PT3qIZ">https://drive.google.com/drive/folders/1Tbs2TRtFWyiyaMiH91TbOJaiU5PT3qIZ</a>
13	EEL, EEII, BTM, BTAP	<a href="https://www.youtube.com/channel/UCjT_Qj5V9_dSLWeNCwXytqw">https://www.youtube.com/channel/UCjT_Qj5V9_dSLWeNCwXytqw</a>
14	Advance Surveying, EE-I	<a href="https://youtu.be/8acEg8doM7c">https://youtu.be/8acEg8doM7c</a>
15	Advance Surveying,	<a href="https://classroom.google.com/u/2/c/MjU2MjIxMzYzMzk1">https://classroom.google.com/u/2/c/MjU2MjIxMzYzMzk1</a>



16	EE-I	<a href="https://youtu.be/kW_9AFGr6pw">https://youtu.be/kW_9AFGr6pw</a>
17	PMEE	<a href="https://classroom.google.com/c/NjYwODQ4MzQ0NTFa?cjc=xyx2uzr">https://classroom.google.com/c/NjYwODQ4MzQ0NTFa?cjc=xyx2uzr</a> <a href="https://youtu.be/4VwBk7EWKjA">https://youtu.be/4VwBk7EWKjA</a>
18	SACE	<a href="https://classroom.google.com/c/MzA2OTQyOTU0MjA1?cjc=fu5lm52">https://classroom.google.com/c/MzA2OTQyOTU0MjA1?cjc=fu5lm52</a> <a href="https://youtu.be/i8BiU1VSeEs">https://youtu.be/i8BiU1VSeEs</a> <a href="https://youtu.be/yQ7VLw5yhYo">https://youtu.be/yQ7VLw5yhYo</a>
19	CM	<a href="https://classroom.google.com/c/MzEyNDk0MjE5MDIy?cjc=k4onel6">https://classroom.google.com/c/MzEyNDk0MjE5MDIy?cjc=k4onel6</a>
20	PM	<a href="https://classroom.google.com/c/Mjk4NzgZnJU1MjE2?cjc=xvmmcoc">https://classroom.google.com/c/Mjk4NzgZnJU1MjE2?cjc=xvmmcoc</a>
21	ES SS	<a href="https://youtu.be/BoDjY6UBCEU">https://youtu.be/BoDjY6UBCEU</a>
22	GT	<a href="https://classroom.google.com/w/MzQwNzA0MTYwMzE0/t/all">https://classroom.google.com/w/MzQwNzA0MTYwMzE0/t/all</a>
23	SDD-III	<a href="https://classroom.google.com/u/1/c/MTE2MjU5MTY0OTAx">https://classroom.google.com/u/1/c/MTE2MjU5MTY0OTAx</a>
24	SDD-III Practical	<a href="https://classroom.google.com/u/0/c/MTgyMjA3MDc1OTkw">https://classroom.google.com/u/0/c/MTgyMjA3MDc1OTkw</a>
25	SD-II	<a href="https://classroom.google.com/u/0/c/MjcxMzYyNTkwMTU5">https://classroom.google.com/u/0/c/MjcxMzYyNTkwMTU5</a>
26	Surveying, SD-II Practicals	<a href="https://www.youtube.com/channel/UC_ZAGtS7cln_FLf_5kx6e-g">https://www.youtube.com/channel/UC_ZAGtS7cln_FLf_5kx6e-g</a>
27	IECT	<a href="https://classroom.google.com/c/MTQzMjY4OTE2MzIw?cjc=hx66thg">https://classroom.google.com/c/MTQzMjY4OTE2MzIw?cjc=hx66thg</a>
28	BTAP	<a href="https://youtu.be/7CHphTguO0c">https://youtu.be/7CHphTguO0c</a> <a href="https://youtu.be/ilC5sFd2Z1k">https://youtu.be/ilC5sFd2Z1k</a> <a href="https://drive.google.com/drive/u/0/folders/18NYiHb4cn6xIUuEiboTZrtXEBhP7Dqjh">https://drive.google.com/drive/u/0/folders/18NYiHb4cn6xIUuEiboTZrtXEBhP7Dqjh</a>
29	BTAP	<a href="https://classroom.google.com/c/MTE3MzYxNDZAzOTUw?cjc=rpeanvz">https://classroom.google.com/c/MTE3MzYxNDZAzOTUw?cjc=rpeanvz</a>
30	BTAP	<a href="https://youtu.be/0vNLdOZIY0A">https://youtu.be/0vNLdOZIY0A</a>
31	BTAP	<a href="https://youtu.be/6XNzunl_XcU">https://youtu.be/6XNzunl_XcU</a>
32	BTAP	<a href="https://youtu.be/EnuLwDSwEQ4">https://youtu.be/EnuLwDSwEQ4</a>
33	BTAP	<a href="https://www.youtube.com/watch?v=xK0hgmQGios&amp;t=269s">https://www.youtube.com/watch?v=xK0hgmQGios&amp;t=269s</a>
34	SACE	<a href="https://drive.google.com/drive/folders/0BzJRSnMLt32tfnpSZXNPMG1yZWRjbnVBRzlnNDNRmRWZ1MX1TNUpIYzRfVHk2c2l6blE3Ymc?usp=sharing">https://drive.google.com/drive/folders/0BzJRSnMLt32tfnpSZXNPMG1yZWRjbnVBRzlnNDNRmRWZ1MX1TNUpIYzRfVHk2c2l6blE3Ymc?usp=sharing</a>
35	PM	<a href="https://classroom.google.com/c/MjU1MDc3NjUwOTQ1?cjc=qjzyoew">https://classroom.google.com/c/MjU1MDc3NjUwOTQ1?cjc=qjzyoew</a>
36	APC	<a href="https://classroom.google.com/c/MzQzNTI4Njg3ODgy?cjc=zlnq4kl">https://classroom.google.com/c/MzQzNTI4Njg3ODgy?cjc=zlnq4kl</a>
37	APC (BE A)	<a href="https://classroom.google.com/u/0/c/Mjg1ODg0Nzc1NzY1">https://classroom.google.com/u/0/c/Mjg1ODg0Nzc1NzY1</a>
38	TE (A &B)	<a href="https://classroom.google.com/u/0/c/MzE2Nzc1MTUyODMw">https://classroom.google.com/u/0/c/MzE2Nzc1MTUyODMw</a>
39	TE (A &B)	<a href="https://classroom.google.com/u/0/c/MzE3MTMxNzYzNDA1">https://classroom.google.com/u/0/c/MzE3MTMxNzYzNDA1</a>



40	CT	<a href="https://classroom.google.com/c/MjY5ODk2ODY3MzI5?cjc=bgvaats">https://classroom.google.com/c/MjY5ODk2ODY3MzI5?cjc=bgvaats</a>
41	SDD-III Practical	<a href="https://classroom.google.com/c/MTMwMjU1MDg2MDQ0?cjc=744xoxy">https://classroom.google.com/c/MTMwMjU1MDg2MDQ0?cjc=744xoxy</a>
42	MOS	<a href="https://classroom.google.com/c/MTM3NzgwODMyMTUy?cjc=iaf6kxb">https://classroom.google.com/c/MTM3NzgwODMyMTUy?cjc=iaf6kxb</a>

### Expert Lectures-Pedagogical Initiatives

**Table No. B2.2.1 (b)Expert Lectures-Pedagogical InitiativesAY- 2020-21**

Sr. No.	Class	Name of Expert	Designation	Topic	Date
1	SE, TE, BE	Gururaj Dangre	Sr Engineer	Building an Innovation and Product feet for innovation	28/05/2021
2	SE, TE, BE	B. T. Ade Under IUCEE students chapter	Sr Engineer	Project Management	13/03/2021
3	SE, TE, BE	Mr. Chetan Bhutada Mr. Ganesh Zhadage	Junior Engineer Assistant Manager Kolve Developer	Webinar on preparation for being industry ready	20/03/2021
4	SE, TE, BE	Dr. Utpal Ganatra under IEI Student Chapter	Sr Engineer	Webinar on soft skill : A must have asset for engineers	20/3/2021
5	SE, TE, BE	Dr. Pragya Bajpai	Assistant Professor, National Defense Academy Pune	Communication skills	05/11/2020
6	SE, TE, BE	Dr. Pragya Bajpai	Assistant Professor, National Defense Academy Pune	Presentation skills	07/11/2020
7	SE, TE, BE	Mr. Vikas Patil	IGS Pune chapter	Webinar on “Innovative solution for Earth retention structure”	06/10/2020
8	SE, TE, BE	Satadru Chaudhary	Director- Vaanahaa Edu	Entrepreneurial mindset,	17/10/2020



9	SE, TE, BE	Dr. Kiran Somavanshi	Chief Manager- Economics Times	Career opportunities in Civil engineering	01/08/2020
10	SE, TE, BE	Er. NaynishLadkat,	Technical Director	Introduction to Construction project management by	11/08/2020
11	SE,TE,BE	Mr. Shekhar Deshmukh,	Dy. SP, Mahaharshta. Police	Guidance for competitive exams preparation	12/09/2020
12	SE,TE,BE	Prof. Col. S.M. Adsar	(GM)- B. J. Shirke Co. ltd. Pune.	Precast Mass Housing Construction	05/06/2020

### Site Visits-Pedagogical Initiative

**Table No. B2.2.1 (c) Site Visits-Pedagogical InitiativesAY- 2020-21**

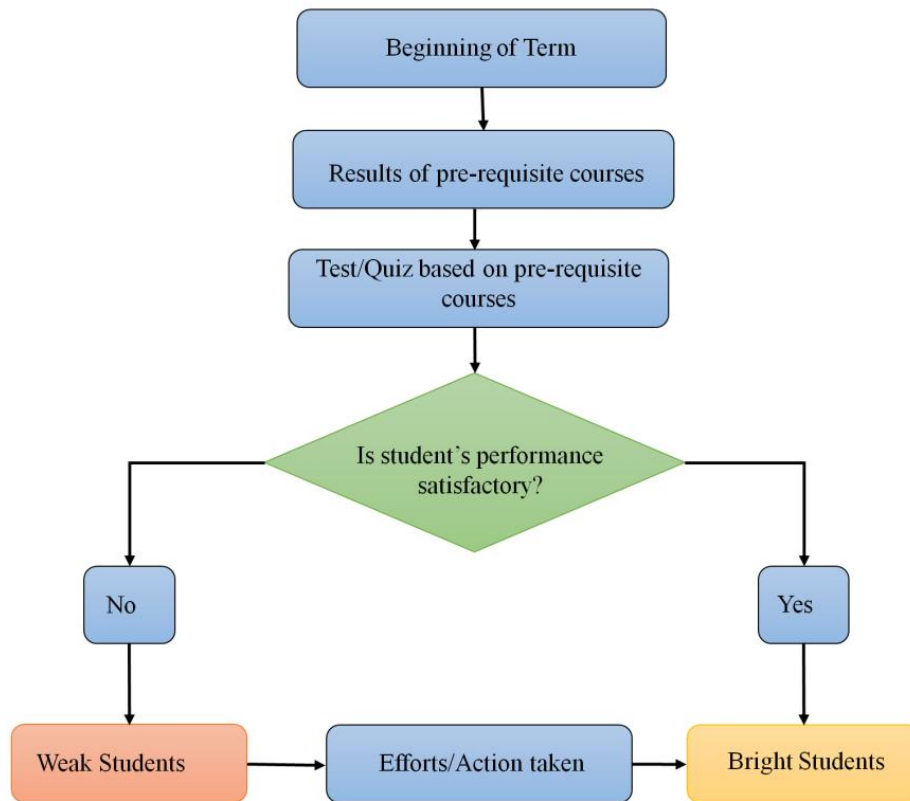
Sr. No.	Class	Name of the Industry	Date of Visit	No. of Students
1	TE and BE	Site visit Under ongoing activity in in percolation tank at Kalyan Village, taluka-Haveli, Dist -Pune	12/1/2021	28
2	FE to BE	Virtual tour to Asias largest cement manufacturing plant Rajashree cement works - Malkhed, Gurberga a Site visit for CT	26/05/2021	500

### 2.2.1 C. Methodologies to support weak students and encourage bright students (4)

Weak/Bright students - Identification process:

- Previous year's university examination result
- Unit test-1 result
- Classroom observations by individual faculty member
- Feedback from the mentor

The process to identify academically weak and bright students is shown in **Fig. B2.2.1 (e)**



**Fig. B2.2.1 (e) Process to identify academically weak and bright students**

❖ **Strategies for supporting weak students**

Mentors are appointed to enhance the performance of weak student as follows;

1. Regular counseling and providing moral support to them.
2. Encouraging them towards study through peer tutoring.
3. Encouraging them for regular attendance.
4. Parent's involvement
5. Proper guidance given to weak students through remedial support to clear their backlogs.
6. Constant monitoring their performance in internal tests.
7. Extra classes arranged for backlog subjects if needed.

❖ **Strategies for encouraging bright students**

1. Encouraging them to participate in conferences, seminars, competitions at different platforms
2. Encouraging them to take up open ended problems, requiring critical/creative thinking, through active participation in state and national and international level Competitions, such as AVISHKAR, Hackathon, Smart India, I2E
3. Encouragement for publishing research papers
4. Encouragement for participation in various MOOCs such as NPTEL, Coursera
5. Advanced topics for presentation



6. Guidance for Competitive exams such as GATE, MPSC, IES
7. Guidance for higher studies
8. Class toppers are felicitated at Department level to motivate them.
9. University rankers are felicitated at Department level as well as at Institute level in Shivanjali and Chhatrapati Shivaji Maharaj-jayantiprogram

Table No. B2.2.1(d) presents the Activities for Bright students during AY 2020-21 The evidence of winning Gold Medal in National Anvenshan 2020 is shown in Fig. B2.2.1 (f)

**Table No. B2.2.1 (d) Activities for Bright students during 2020-21**

Activities for Bright students AY 2020-21		
Sr. No.	Name of the student	Achievement
1	Mr. Gaurav Dudhe	Received an honorary job offer for the post of Graduate Engineer Trainee from Kloudq, Pune.
2	Mr. Kalpesh Patil	Won IGBC Students' chapter Debate competition 2020 organised by HOC Pillai College of Engineering & technology, Rasayani.
3	Mr. Kalpesh Patil	Won first rank in Seminar presentation at TechTantra 2K21 organised by Padm. Dr. V K Kolte College of Engineering, Malkapur in September 2020
4	Ms. Priyanka Shivankar	Got selected as Student innovation ambassador by Ministry of Education's Innovation Cell, India on 3 October 2020
5	Mr. Tejas More	Completed a course on "Learn to design your own solar system" developed by energy swaraj foundation on August 2020
6	Mr. Anuj Chaudhari	Completed a course in "CIVIL AUTOCAD" from Infinite Graphix technologies private limited Pune, in September 2020
7	Mr. Anuj Chaudhari	Completed course in "Cost & Schedule monitoring" on Udemy on 23 November 2020
8	Mr. Swaraj S. Chalke, Mr. Pranav A. Patil, Mr. Sundeep V. Punmiya, Mr. Sanket S. Rathi	Published a paper "Strengthening of Concrete by Utilization of Hypo Sludge and Fly Ashes Partial Replacing Material of Cement" in Gradiva Review Journal, 0363-8057, March 2021
9	Mr. Ashlesh P. Patil, Mr. Mahesh A. Patil,	Published paper "Analyzing the Strength of Concrete Blocks Reinforced by Half Portion of Coconut" in IJRASET 2321-9653



	Mr. Sanskrut P. Patil, Ms. Anuradha R. Rout	
10	Mr. Rohan Gandhi	Completed a course on “Initiating and planning projects” on Coursera in January 2021
11	Mr. Rohan Gandhi	Completed a course on “PRIMAVERA P6 Professional training” on Udemy in March 2021
12	Mr. Gaurav Dudhe	Won overall Gold Medal in National Anvenshan 2020 and first rank in Engineering and Technology representing SPPU and State of Maharashtra, Rajasthan, MP, Gujrat and Goa



**Fig. B2.2.1 (f) Gaurav Dudhe from TE Civil Won overall Gold Medal in National Anvenshan 2020**

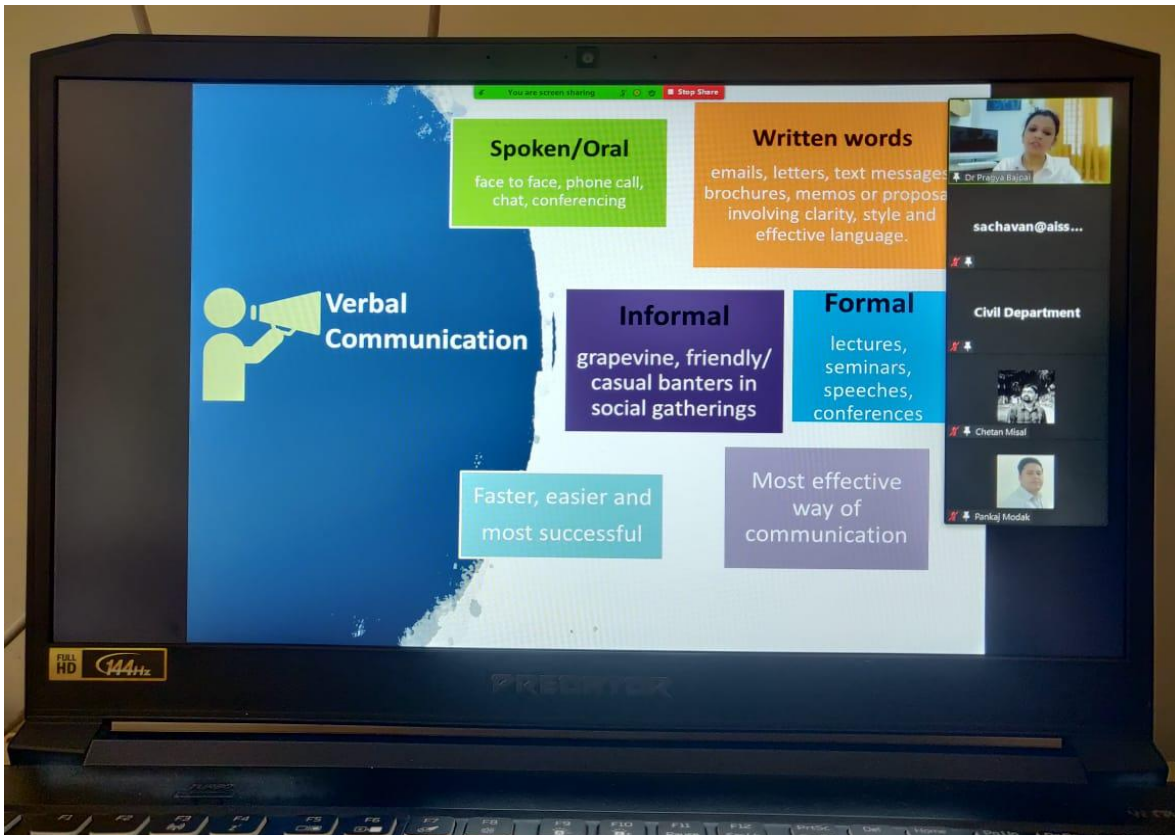
### Students Chapter Activities

Department of Civil Engineering, AISSMS College of Engineering successfully runs the Institution of Engineers (India) Students’ Chapter which since January 2016. This chapter is organizes various student activities throughout the year. Glimses of the activities conducted in AY 2020-21 are given in **Table No B 2.2.1(e)** and **FigB 2.2.1 (g)**.

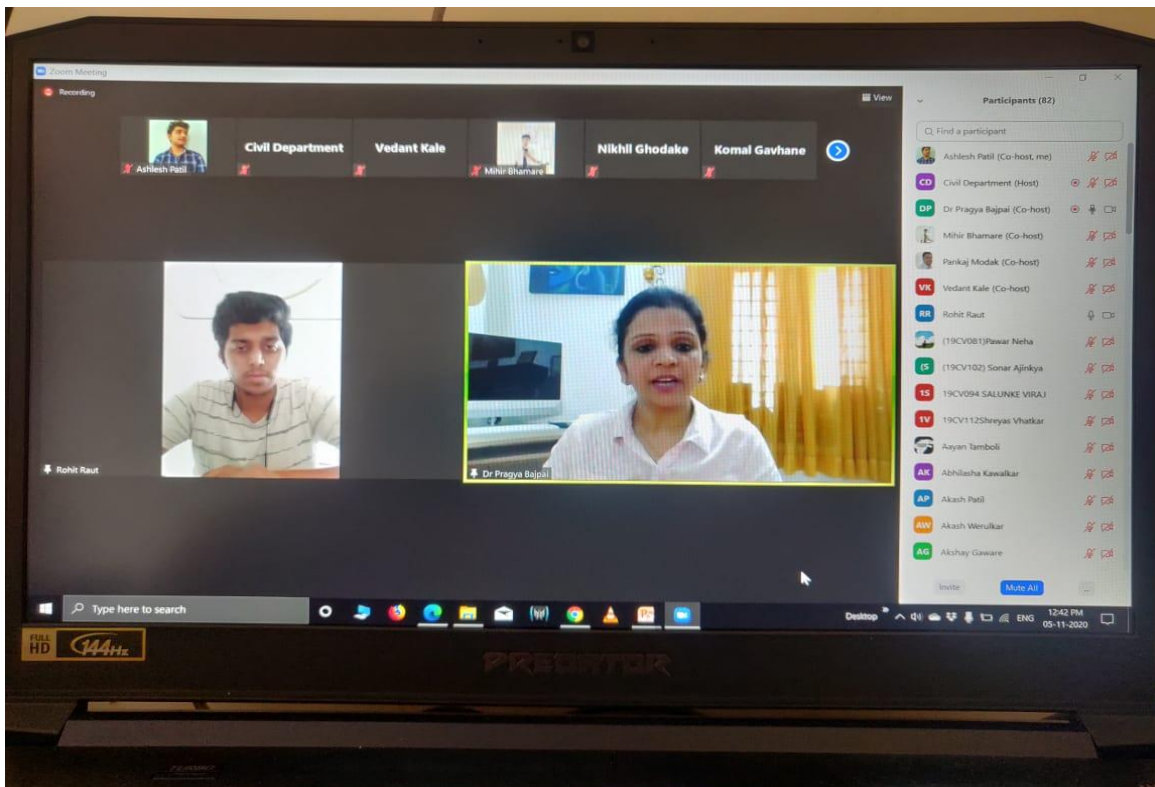


**Table No B 2.2.1 (e) Students Chapter Activities in Academic Year 2020-21**

Sr. No	Date	Guest/ Expert Name	Name of the Event	Coordinator	No of Students attended
1	20/03/2021	Dr. Utpal K Ganatra English Lecturer Government Polytechnic College, Dohod	Expert Lecture on “Soft Skills: A Must-Have Asset for Engineers”.	Ms M S Chiwande	67
2	04/06/2021	Mr. Anand Kumar Assistant professor ACE Engineering Academy	Expert Lecture on “Career Opportunities after Engineering”	Ms M S Chiwande	75
3	25/01/2021 to 31/01/2021	Dr S T Mali Professor PCCOE	One Week Student Development Program on “GATE Coaching tips and tricks”	Dr S R Parekar, Mr P R Modak, Mr C S Misal	100
4	01/08/2020	Ms. Kiran Somvanshi Chief manager Economic Times Intelligence group	Expert talk on “Career opportunities for Civil Engineers after COVID - 19”	Mrs S A Chavan	151
5	12/09/2020	Mr. Shekhar Deshmukh, DYPS/ACP, SSC AIR-3	Expert talk on “Competitive Exam Preparation”	Mrs S A Chavan	132
6	05/11/2020 And 07/11/2020	Mrs. Pragya Bhajpai Assistant Professor (English) NDA	Two days workshop on “Employability Skill Development	Mrs S A Chavan	85



**Mrs Pragya Bajpai delivering the lecture**



**Students interacting with Mrs Pragya Bajpai**

**Fig B 2.2.1 (g) Photographs of activities organized**



### 2.2.1 D. Quality of classroom teaching (3):

- The classrooms are supported with audio-visual facility and connected with internet connection.
- Seminar Hall is equipped with smart board to enhance effective delivery of lectures and teaching learning process
- During each lecture first five minutes are utilized for recalling content of the previous lecture, the next forty-five minutes are used to deliver the core content, presenting the students, the practical situations, in which the knowledge about the skills can be applied. Further, last ten minutes are utilized for discussion and doubt solving. Students are also motivated to raise the questions.

Photograph of actual classroom when students are writing test is presented in **Fig. B 2.2.1 (h)**



**Fig. B 2.2.1 (h) Class room photographs- Students appearing for internal tests**

### 2.2.1 E. Conduct of experiments (Observation in Lab) (3):

- The laboratories in the department are having display boards on which course objectives, course outcomes, list of experiments, safety measures, laboratory timetable are displayed. Actual laboratory photographs are shown in **Fig. B 2.2.1 (i)**.
- Lab manuals are prepared
- Dedicated instrumental area is provided where the students are briefed before proceeding towards

the demonstration and performance of the experiment.

- Maximum of 5 students perform experiment on each set up at a time
- In addition to this, virtual lab experiments are also being performed by students for subjects like Geotechnical Engineering, Hydraulics and Fluid mechanics, Surveying and Testing of Materials



Testing of Materials Laboratory



Environmental Engineering Laboratory

**Fig. B 2.2.1 (i) Laboratory photographs**

#### **2.2.1 F. Continuous Assessment in laboratory (3):**

Laboratory performance of each student is recorded in Continuous Assessment Sheet (CAS) and each student is assessed accordingly throughout the semester. Department academic coordinator and HOD approves the CAS sheets of each faculty member fortnightly. At the end of semester internal term-work marks are given to the student as per the calculations of the marks achieved by him/ her in the CAS sheets.

#### **CAS Sheet (Offline) includes:**


- Monitoring of attendance done using lab register.
- Monitoring of class attendance.
- Write up quality of experiment observed.
- Experimental performance of student considered.
- Timely submission observed.
- Students understanding, analyzed through questions and answers.
- Students punctuality and sincerity observed during lab sessions.
- All above parameters are considered and marked in Continuous Assessment Sheet.
- Timely updated Continuous Assessment Sheet used for assessment.

**CAS Sheet (Online) includes: AY 2020-21**

- Attendance
- Students understanding analyzed through questions and answers
- Timely submission observed


Sample of CAS Sheets taken during AY-2019-20 (Offline) and during Pandemic AY-2020-21 (Online) are given in **Fig. B 2.2.1 (j)** and **Fig. B 2.2.1 (k)**, respectively

SD II


 **AISSMS**  
COLLEGE OF ENGINEERING  
ज्ञानम् सकलजनहिताय  
Accredited by NAAC with "A+" Grade  
Department of Civil Engineering  
Practical Attendance sheet : Sem II - 2019-20

Class: TE (Civil) Division: A Batch: B Subject: SD II Name of Faculty: Dr. S.R. Parakekar Date: 3/12/2020

Sr. No	Roll No.	Name of the Student	Marks till last week	Expt No.	Attendance (05)	Experimental write ups (10)	Performance (10)	Total	SS	Expt No.	Attendance (05)	Experimental write ups (10)	Performance (10)	Total	SS	Total Marks
1	14CV034	GIRASE JUGAL RAJESING	135	08					AB	05	05	05	05	15	15	15
2	15CV033	DEVARE KIRAN RAJESH	198	05	10	10	25	10	10	05	05	05	05	15	15	40
3	15CV037	GAIKWAD SANKET SHIVAJI	272	05	10	10	25	10	10	05	05	05	05	15	15	40
4	16CV026	DESHMUKH VIRAJ VIKAS	00													
5	16CV034	GAVHANE KOMAL SUBHASH	227	05	10	10	25	10	10	05	05	05	05	15	15	40
6	17CV021	DEORE PRATHAM	273	05	10	10	25	10	10	05	05	05	05	15	15	40
7	17CV024	DESHIPANDE VIRAJ RAJENDRA	269	05	10	10	25	10	10	05	05	05	05	15	15	40
8	17CV026	DHORE NIHAL MANOJ	298	05	10	10	25	10	10	05	05	05	05	15	15	40
9	17CV027	DHUMAL SAURABH PRADIP	293	05	10	10	25	10	10	05	05	05	05	15	15	40
10	17CV030	DUSHING SHUBHAM SUNIL	260	05	10	10	25	10	10	05	05	05	05	15	15	40
11	17CV032	GAIKWAD PRAMOD MAHADEO	160	05	05	05	15	15	15	05	05	05	05	15	15	40
12	17CV033	GANDHI ROHAN RAJENDRA	293	05	10	10	25	10	10	05	05	05	05	15	15	40
13	17CV035	GATADE POONAM BALASHEB	294	05	10	10	25	10	10	05	05	05	05	15	15	40
14	18CV005	DANGE PRAMOD BALU	262	05	10	10	25	10	10	05	05	05	05	15	15	40
15	18CV006	GIRIGOSAVI MAHESH VYANKAT	289	05	10	10	25	10	10	05	05	05	05	15	15	40



Faculty Name & Signature:  SRP  
Attendance : Timekeeping  
SS : Students Signature

Experimental write ups: Originality & Presentation Skills

HOD Signature:   
Performance: Individual Contribution & Team work

**Fig. B 2.2.1 (j) Sample of CAS Sheet during AY-2019-20 (Offline)**



<div><div></div><div><div><h1>AISSMS</h1><h2>COLLEGE OF ENGINEERING</h2><p>ज्ञानम् सकलजनहिताय</p><p>Accredited by NAAC with "A+" Grade</p></div><div></div></div></div>												
<div>Department of Civil Engineering</div> <div>Practical Attendance sheet :</div>												
Class: BE (B)			Batch: G		Subject: CM		Name of Faculty: K N Kulkarni					
Sr No	Roll No.	Name of the Student	Mark s till last week	Expt No. 1	Date: 20/01/2021			Expt No.2	Date: 27/01/2021			Total Marks
				Attendanc e Practical	Understanin g (Oral) (04)	Timely Submissio n (04)	Total (Out of 10)	Attendanc e Practical (02)	Understani ng (Oral) (04)	Timely Submissio n (04)	Total (Out of 10)	
1	17CV104	SABLE SWAPNIL MAHADEO		2	3	3	8	2	3	4	9	17
2	17CV105	SAHARE SAURABH PRAKASH		2	3	3	8	2	3	3	8	16
3	17CV106	SAKARKAR ABHINAV		2	2	2	6	2	2	2	6	12
4	17CV108	SANAS SHANTANU AJAY		2	3	3	8	2	2	2	6	14
5	16CV096	SANGHAVI VRUSHABH SANTOSH		2	2	3	7	2	4	2	8	15
6	18CV323	SAPATE PRIYANKA ANANT		2	3	3	8	0	0	0	0	8
7	17CV110	SATPUTE SANKET SANJAY		2	0	0	0	0	0	0	0	0
8	17CV111	SAUDAGAR YOGESH SHARAD		2	3	2	7	2	2	4	8	15
9	17CV112	SAYYED TANVEER TAYYEB ALI		0	0	0	0	2	3	3	8	8
10	19CV404	SHAH NEEL HEMANT (COC)		0	0	0	0	2	3	3	8	8
11	16CV100	SHAH NIRANT VIKAS		2	3	3	8	2	2	3	7	15
12	18CV324	SHAIKH SHAHARUKH HUKUMUDDIN		2	3	3	8	2	3	3	8	16
13	18CV325	SHAIKH SHAHID HASAN		2	4	2	8	2	3	3	8	16
14	15CV089	SHIL PRIYANKA NANIGOPAL		2	4	3	9	2	3	4	9	18
15	18CV327	SHINDE AKASH RAM		2	3	4	9	2	3	2	7	16
16	15CV103	SHINDE VISHAL VIJAY		2	2	3	7	2	2	4	8	15
17	16CV105	SHIVARKAR RUSHIKESH		2	3	4	9	2	3	4	9	18
Faculty Name & Signature								HOD Signature				

**Fig. B 2.2.1 (k) Sample of CAS Sheet during Pandemic AY-2020-21 (Online)**

### 2.2.1 G. Student feedback of teaching learning process and actions taken (6):

- Students feedback are taken twice during the semester through ERP system
- HOD observes and shares the feedback to individual faculty and encourages for the specific scope of improvement (if any).
- In addition to this GFM's and Mentors also maintains a healthy communication with students to understand a specific concern
- Lectures are observed by HOD and Institute Academic coordinator
- If required training, orientation programs are organized with professional experts to master the skills of the faculty thus improving the teaching-learning process

### Two types of Feedback system are followed

**1. Student's Feedback on Course Delivery (course end survey):** Feedback is collected at the end of every semester for all the courses from students on a point scale. Students are invited to express their view on each course through Google form by faculty members.

**2. Feedback from student to faculty (ERP/ Moodle):** Two times, mid semester and end semester, feedback are taken, also corrective action is taken.



### Feedback Analysis Process:

- The suggestions are analyzed by the concerned HOD. Every question has a weightage up to 10 points. Based on the average points accrued for all the questions the faculty performance level is assessed.
- The teacher is subjected for any corrective measures as decided by Head of the Department.
- Performance rating of faculty through the student feedback system is one of the factors in evaluating the annual performance appraisal of the faculty.
- Based on the feedback received from the students the faculty is rewarded by issuing a letter of appreciation from the Head of the Department.

The parameters for performance assessment are presented in **Table No. B 2.2.1(f)** and sample of Feedback on teaching learning through ERP is given in **Fig. B2.2.1 (I)**

**Table No. B 2.2.1(f) Parameters for Performance assessment**

Sr. No.	Performance Parameter
1	Has the teacher covered entire syllabus as prescribed by university, college, board
2	Has the teacher covered relevant topics beyond syllabus
3	Effectiveness of teacher in terms of technical content course content, communication skills and teaching aids
4	Pace on which contents were covered
5	Motivation and inspiration for students to learn
6	Support for the development of students skill practical demonstration
7	Support for the development of students skill hands on training
8	Clarity of expectations of students
9	Feedback provided on students progress



<u>MID TERM FEEDBACK</u>									
TEACHER - MR. CHETAN MISAL		DEPARTMENT - CIVIL ENGINEERING					TOTAL STUDENTS - 7		
ACADEMIC YEAR - 2020-2021		SUBJECT - BUILDING TECHNOLOGY AND ARCHITECTURAL PLANNING (PRACTICAL)					SEMESTER 3 (B)		
DATE - 10/09/2020		TERM -							
SR NO	QUESTION	EXCELLENT	VERY GOOD	GOOD	SATISFACTORY	NOT SATISFACTORY	TOTAL MARKS	OUT OF	PERCENTAGE
1	HAS THE TEACHER COVERED ENTIRE SYLLABUS AS PRESCRIBED BY UNIVERSITY, COLLEGE, BOARD	4	2	1	0	0	31	35	89%
2	HAS THE TEACHER COVERED RELEVANT TOPICS BEYOND SYLLABUS	3	3	1	0	0	30	35	86%
3	EFFECTIVENESS OF TEACHER IN TERMS OF TECHNICAL CONTENT, COURSE CONTENT, COMMUNICATION SKILLS AND TEACHING AIDS	2	4	1	0	0	29	35	83%
4	PACE ON WHICH CONTENTS WERE COVERED	4	2	1	0	0	31	35	89%
5	MOTIVATION AND INSPIRATION FOR STUDENTS TO LEARN	3	3	1	0	0	30	35	86%
6	SUPPORT FOR THE DEVELOPMENT OF STUDENTS SKILL PRACTICAL DEMONSTRATION	2	4	1	0	0	29	35	83%
7	SUPPORT FOR THE DEVELOPMENT OF STUDENTS SKILL HANDS ON TRAINING	4	2	1	0	0	31	35	89%
8	CLARITY OF EXPECTATIONS OF STUDENTS	3	3	1	0	0	30	35	86%
9	FEEDBACK PROVIDED ON STUDENTS PROGRESS	3	3	1	0	0	30	35	86%
TOTAL		28	26	9	0	0	271	315	86%
TOTAL(%)		44%	41%	14%	0%	0%	PERFORMACE INDEX - 86		

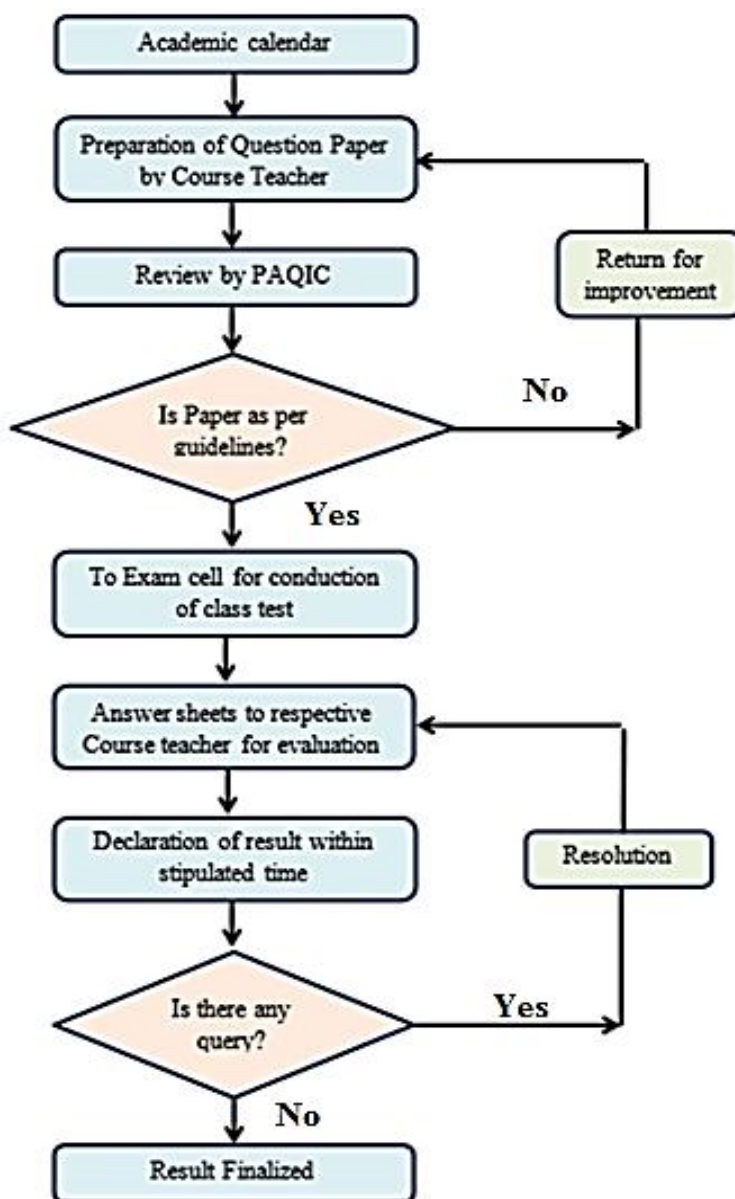
Fig. B2.2.1 (I) Sample of Feedback on teaching learning through ERP



2.2.2	<b>Quality of internal semester Question papers, Assignments and Evaluation (20)</b> <i>(Mention the initiatives, implementation details and analysis of learning levels related to quality of semester question papers, assignments and evaluation)</i>	20
-------	---	----

**2.2.2 A. Process for internal semester question paper setting and evaluation and effective process implementation (5)**

- Institute level Faculty development program on “Outcome based Learning Curriculum Design” was arranged for ensuring quality of question papers
- Guidelines are set for conduction of number of unit tests in HOD Meetings
- In HOD meeting, the policy of verification of course plan is decided
- Teaching plan with CO-PO-PSO is prepared by faculty members by using Anderson taxonomy
- Tests schedule is included as planned in Department academic calendar
- Question papers are set by faculty members by following Anderson Taxonomy to achieve course outcomes as shown in **Fig. B 2.2.2 (a)**
- Question papers are verified by Module coordinator / academic coordinator
- Six class tests are conducted course wise, after completion of the unit
- Model answer sheets are prepared by faculty members and assessment is done accordingly.
- Assessed answer sheets are shown to the students



**Fig. B 2.2.2 (a) Process of Setting of questionpaper, evaluation and effective process implementation by PAQIC**

### **2.2.2 B. Process to ensure questions from outcomes/learning levels perspective (5)**

**Step 1:** - Question of each unit test ( six unit test) are set according to Anderson taxonomy

**Step 2:** - Questions are set in alignment with Course Objective.

**Step 3:** - Question paper is verified by the Module coordinator

**Step 4:** -Corrections are made as per suggestions from theModule coordinator/ Academic Coordinator, and then paper is finalized

**Step 5:** - Answer Key for the Question papers are prepared by faculty members

Sample question papers in Offline and Online mode are shown in **Fig. B 2.2.2(b)** and **Fig. B 2.2.2(c)**



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COLLEGE OF ENGINEERING  
Department of Civil Engineering



Test: 1 (Unit I)

SET A

Class: TE Civil

Date: 25/03/2022

Max. Time: 01 hr

Subject: Design of Reinforced Concrete Structures

Max. Marks: 15

**Course Outcome Statement:**

01. Apply relevant IS provisions to ensure safety and serviceability of structures, understand the design philosophies and behavior of materials: steel and concrete.
02. Recognize mode of failure as per LSM and evaluate moment of resistance for singly, doubly rectangular, and flanged sections.

**Taxonomy Levels:**

I-Remember, II-Understand, III-Apply, IV-Analyze, V-Evaluate, VI- Create

Q. No	Question	Marks	Taxonomy level
Q. 1	State the pH value of water recommended by I.S. 456-2000.		
	a. equal to 6	[01]	I
CO-1	b. equal to 7		
	c. less than 6		
	d. between 6 and 7		
Q. 2	Calculate Neutral axis factor for M30 Fe 500 materials by LSM as per IS 456:2000		
	a. 0.53	[01]	III
CO-2	b. 0.46		
	c. 0.58		
	d. 0.48		
Q. 3	Select minimum grade of concrete for RCC, specified by IS 456:2000		
	a. 30		
CO-1	b. 15	[01]	I
	c. 25		
	d. 20		
Q. 4	State maximum cement content allowed by IS 456:2000		
	a. 300 kg/m <sup>3</sup>		
CO-1	b. 450 kg/m <sup>3</sup>	[01]	I
	c. 500 kg/m <sup>3</sup>		
	d. 600 kg/m <sup>3</sup>		
Q. 5	For a rectangular beam, 200 x 460 effective depth, reinforced with 3#16 mm diameter bars. Decide the type of Section by LSM. M20, Fe 415.		
	a. Over reinforced	[01]	IV
CO-2	b. Under reinforced		
	c. Balanced		
	d. Doubly reinforced		

Paper is as format.

Subject teacher of  
SPP  
Module co-ordinator

Fig. No. B 2.2.2(b) Sample Question paper (offline)





## BTAP Class Test-2

Form description

Email \*

Valid email

This form is collecting emails. [Change settings](#)

Image t...



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CO Statement - CO 2 - Make use of Architectural Principles and Building byelaws for building construction



1. Minimum size of Bathroom shall be \_\_\_\_ \*

- ☐ a) 1.8 sq mt
- ☐ b) 2 sq mt
- ☐ c) 2.5 sq mt
- ☐ d) 1.5 sq mt

2. As per NBC 2005, the minimum area of openings excluding doors should be more than \*

- ☐ a) 1/8 of the floor area
- ☐ b) 1/10 of the floor area
- ☐ c) 1/ 3 of the floor area
- ☐ d) 1/6 of the floor area

3. As per NBC 2005, Minimum floor area for the kitchen shall be \_\_\_\_ \*

- ☐ a) 7sq. mt

**Fig. B 2.2.2(c) Sample Question paper during Pandemic AY 2020-21(Online)**



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

**Step 1:** - After Examination Result is displayed.

**Step 2:** - Analysis of result is made by faculty members

**Step 3:** - For Evidence sample answer sheets (Good, Average, Poor) and are maintained by faculty members.

**Step 4:** - CO attainment is checked

### **2.2.2 D. Quality of assignment and its relevance with CO's (5)**

**Step 1:** - Assignment questions are set in alignment with Course objectives.

**Step 2:** - Designed Assignments are verified by the Module coordinators and Department academic coordinator.

**Step 3:** - Correction are made as per suggestions and assignments are finalized after approval from the Module coordinators and academic coordinator.

**Step 4:** - Evaluation of the assignments is done by faculty member.

**Step 5:-** For evidence proof sample assignment copies are maintained by faculty members.

**Step 6:-** CO attainment is checked

2.2.3

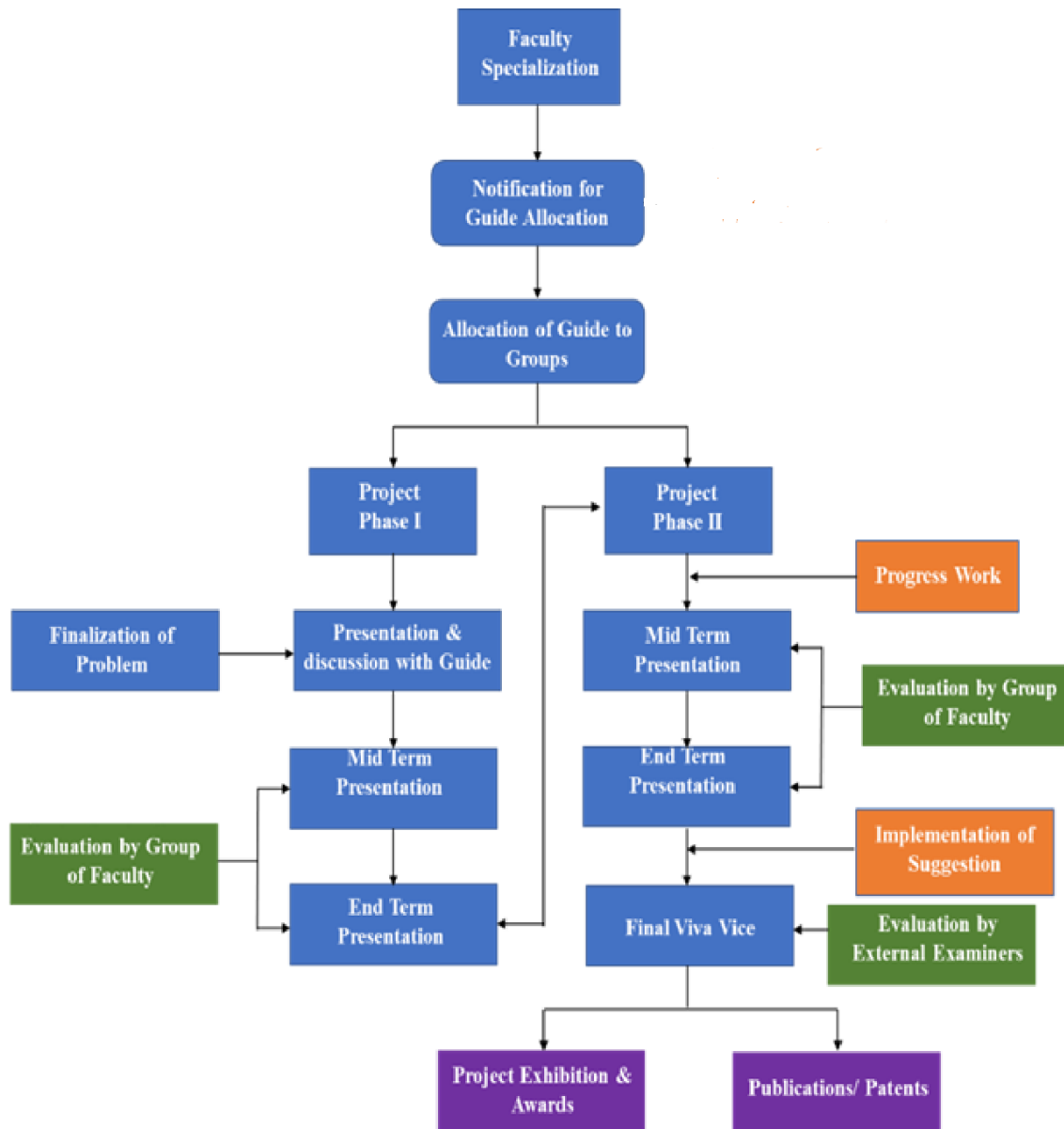
## Quality of student projects

(Quality of the project is measured in terms of consideration to factors including, but not limited to, environment, safety, ethics, cost, type (application, product, research, review etc.) and standards. Processes related to project identification, allotment, continuous monitoring, evaluation including demonstration of working prototypes and enhancing the relevance of projects. Mention Implementation details including details of POs and PSOs addressed through the projects with justification)

25

### 2.2.3 A. Identification of projects and allotment methodology of guides (3)

The process used for project allotment and assessment is presented in **Fig. B 2.2.3(a)**



**Fig. B 2.2.3(a) Project allotment and assessment methodology**

Allotment methodology of of students to guides:



1. Students submit their groups and area of interest and choices of guides at the beginning of the seventh semester. Notice for Project allotment is shown in **Fig. No. B 2.2.3(b)**
2. Allotment of students to project guides is based on the student's area of interest, choice of guide and area of specialization of guide
3. Each guide will be allotted with maximum 8 to 10 students, depending upon strength of students and availability of number of guides.
4. Students are divided in groups: Maximum 4 to 5 students per group and minimum 1 student per group
5. Review committee: 5-member review committee is formed.
6. Committee comprises of Project guide, Examiner / Subject expert, Project coordinator and Head of the department
7. Two internal reviews of 50 marks each are taken in one semester. Evaluation sheet along with the rubrics is given by the Project coordinator to the guide and examiners

#### **Identification of projects:**

1. Students are guided to refer at least ten papers from journals of reputed publishing houses (ASCE, Springer and Elsevier etc).
2. Comparative study of these papers in the tabular form should be submitted as literature review.
3. Details about proposal and probable contribution of students are presented in front of the review committee.
4. Review committee will assess the project feasibility and quality, and required suggestions are given to the project group in first review and then project work is initiated.

#### **2.2.3 B. Types of relevance of projects and their contribution toward attainment of PO's and PSO's (5)**

- Students are encouraged to work on different forefront areas in Civil Engineering. Projects addressing forefront areas.
- Project selection criteria are based on forefront areas such as environments sustainability, safety, ethics, cost, standards, advancements in technology, modern techniques.

#### **Project Course Outcomes and CO PO PSO Mapping:**

Course Outcomes: - On completion of the project, student will be able to

1. Finalise problem statement for project work as per needs environmental and social issues of society or industry.
2. Identify gap and technologies involved in the project through a literature review
3. Select methodologies, experiments, and investigations towards sustainable approach of project.



4. Interpret observation and finding of project work
5. Evaluating results justifying the problem statement and objectives
6. Analysing and applying finding of engineering problem with ethical and moral values.

Course Articulation Matrix of B E Project work is shown in **Table No. B 2.2.3(a)**

**Table No. B 2.2.3(a) Course Articulation Matrix of B E Project Work**

Course Articulation Matrix																
Course Outcomes	Program Outcomes												Program Specific Outcomes			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
C01	3			2		2	2	1	2	3		2	3	3	2	
C02	3			2		2			2	3		2	1			
C03	3	2	3	2	2		2	2	2	2	2	2	2	3	2	
C04	3	3	3	2	2				2	2		2	2			
C05	3	3	3	2	2				2	3		2	1		2	
C06	3	3	2	2	2	2	2	3	3	2	2	3	3	3	3	
Average Values	3.00	2.75	2.75	2.00	2.00	2.00	2.00	2.00	2.17	2.50	2.00	2.17	2.00	3.00	2.25	

### 2.2.3 C. Process for monitoring and evaluation (5)

1. Project slot of minimum 2 hours are assigned to students and faculty.
2. During project slot students meet the project guide and discuss project status
3. As per student's efforts, attendance, depth of knowledge in the project and remarks are made in continuous assessment sheet.
4. Project reviews are conducted twice in a semester by the project review committee. Notice for Project review is shown in **Fig. No. B 2.2.3(b)**
5. Suggestions are made and documented in project evaluation sheet by the project review committee.
6. Project coordinator takes care of compliance of suggestions by consulting with the project group and the respective project guide.
7. As per the project review reports, internal evaluation is done. Sample evaluation sheet is shown in **Fig. No. B 2.2.3(d)**
8. External examiner, preferably an industry expert or an experienced faculty member, evaluates the performance of the project group and individual student after consulting with the project guide at the end of the semester.
9. Same Process repeated in second semester too.
10. Students are encouraged to take part in project exhibitions, poster presentations, journal paper



writings, etc.

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**DEPARTMENT OF CIVIL ENGINEERING**

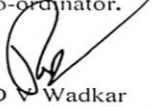
**NOTICE**


**Class : B.E Civil A & B Div.)**

**Academic year 2020-2021 (Semester I)**

**SUBJECT- PROJECT**

All the students of B.E. Civil are informed that they should submit application related to final year project guide along with signature of guide (max. 10 students per guide) on or before 20<sup>th</sup> June 2020 to the project co-ordinator.

  
D V Wadkar  
Project Coordinator

  
Dr. U R Awari  
Head of Department  
Civil Engineering

- 1) Copy to Notice Board
- 2) Circulate to faculty for information
- 3) Project Coordinator

Sr. No.	Name of Guide	Area
1	Dr. S R Parekar	Structural Engineering
2	P B Nangare	Hydraulic Engineering
3	R D Nalawade	Geotechnical Engineering
4	S D Nagrale	Construction Management
5	D V Wadkar	Environmental Engineering
6	V S Chavhan	Hydraulic Engineering
7	P R Modak	Environmental Engineering
8	K N Kulkarni	Construction Management
9	G C Chikute	Construction Management
10	M S Chiwande	Structural Engineering
11	P R Satarkar	Structural Engineering
12	Shilpi B	Structural Engineering
13	U J Jadhav	Structural Engineering
14	Dr V N Patil	Geotechnical Engineering
15	S A Chavan	Structural Engineering
16	M A D'Cruz	Structural Engineering
17	A M Deulkar	Hydraulic Engineering

**Fig. No. B 2.2.3(b) Notice for Project allotment**





**Department of Civil Engineering**

Date: 15/02/2021

**Notice -B.E. CIVIL (A & B)**

As per guidelines received from Programme Assurance and Quality Improvement (PAQC), BE Project review-I of semester II (2020-21) is scheduled from **23/2/2021 to 01/03/2021**. Detail schedule is given below for your reference. The project work shall consist of any one of the following nature in Civil Engineering related subjects.

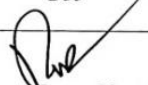
1. Experimental investigation.
2. Software development.
3. Benefit : Cost economic analysis.
4. Case study with own design.
5. Working model design and fabrication.
6. Case study with development of methodology using soft computing tools.

The details of report writing and preparation of report will be similar to that of as mentioned in Syllabus of Project Phase I in first semester.

Project guide need to submit **evaluation sheet on or before 03 March 2021** to project coordinator.

**\*Platform for Interaction – Microsoft team\***

Project Guide	Date & Time of project review	Subject Expert	Session coordinator	Session Chairman
SRP PRS SSB	23/2/2021 AT 2.30pm to 4.30 pm	SDN	RDN	DVW
PBN DVW PRM	24/2/2021 AT 2.30 pm to 4.30 pm	RDN	SDN	SRP
SDN KNK GCC SPK	25/2/2021 AT 2.30 pm to 4.30 pm	DVW	PBN	RDN
VNP VSC AMD MAD	26 /2/2021 AT 2.30 pm to 4.30 pm	SRP	DVW	PBN
RDN SAC UJJ	01/3/2021 AT 2.30 pm to 4.30 pm	PBN	SRP	SDN

  
Project Coordinator  
Dr D V Wadkar

  
HOD Civil  
Dr U R Awari



*Department Vision- "Nurture the Talent in Civil Engineers to work as Global Leader for development of Society"*

**Fig. No. B 2.2.3(c) Notice for Project review**



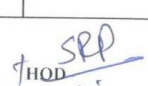


All India Shri Shivaji Memorial Society's College of Engineering, Pune -1								
Department of Civil Engineering								
BE (Civil) -Project Termwork: Phase II , 2019-20,Sem - II								
Date:		R D NALAWADE						
Sr. No.	Exam Seat No.	Name of student	Project Topic	Continuous assessment (P1) (20 Marks)	Progressive presentation (P2) (20 Marks)	Project Report (P3) (10 Marks)	Total (50) (P1+P2+P3)	Remark
1	17CV301	ANDHARE RUCHI UMESH	A Genetic Alogorithim bases approach for performance characteristics assessment of stabilized soil	17	18	7	42	
2	17CV303	BANSODE MANJUSHRI S		17	17	7	41	
3	17CV310	DHEKALE SUPRIYA R		18	17	7	42	
4	17CV322	PISAL AJIT H		16	17	7	40	
5	71705698J	CHOUDHARI NEERAJ M	A COMPARATIVE ANALYSIS OF SLOPE STABILITY BY USING SOFTWARE	15	17	6	38	
6	71705700D	CHOUDHARI RONIT N		16	16	7	39	
7	71705765J	GANGURADE CHIRAG D		15	17	6	38	
8	71705934M	MANE SHREYASH JAYANT		16	16	7	39	
9	71706053F	POTDAR AJINKYA A	Use of Pervious Pavement for Sustainable Drainage System	14	16	6	36	
10	71706105B	SAWANT OMKAR R		17	18	7	42	
R D NALAWADE								
Guide Name & Signature			Project Coordinator				HOD	

Fig. No. B 2.2.3(d) Project Evaluation sheet- Online (Pandemic) AY 2019-20

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BE (Civil) - Project Review I : Sem -II, 2020-21								
Sr. No.	Name of student	Project Topic	Introduction (10)	Experiment al investigation /software development/ case study/worki ng model (15)	Planning Schedule (10)	Discussion/p resentation (15)	Total (50)	Remark
1	Tanay Yerne	Solar Energy with canal water preservation in maharashtra.	9	12	8	12	41	
2	Omkar Tekawade		7	10	7	10	34	
3	Toshal Phadol		7	10	7	10	34	
4	Anikesh Mehta		6	9	6	9	30	
5	Akshay Pisal	Permeable Pavement	7	10	7	10	34	
6	Pradnya Patil		7	10	7	10	34	
7	Priyanka Sapate		7	10	7	10	34	
8	Usman Syed		7	10	7	10	34	
9								

Project Guide : Dr. V N Patil  
Date: 26/02/2021  
Department Vision- "Nurture the Talent in civil engineers to work as Global Leader for development of society"

Project Coordinator:  Subject Expert:  HOD: 

HEAD OF DEPARTMENT  
CIVIL ENGINEERING  
AISSMS's COE, PUNE-1.

Fig. No. B 2.2.3(e) Project Evaluation sheet -Offline AY 2020-21



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

Each Project group comprises maximum 5 students under each project guide. The project guide evaluates the project based on the following criteria:

1. Punctuality and regularity
2. Initiative in learning/working at site
3. Level/proficiency of practical skills acquired
4. Sense of responsibility
5. Self expression/Communication skills
6. Interpersonal skills
7. Report writing skills
8. Viva
9. Project evaluation parameters as shown **Fig. B 2.2.3(e)**

**Project evaluation**

Project Phase -I			
Semester	Reviews	Criteria	Weightage
I	Review I(Marks 50)	Introduction of topic	15
		Literature review	10
		Planning schedule	10
		Discussion/ presentation	15
		Total Marks of Review I	50
	Review II (Marks 50)	Objective of study	15
		Literature review	10
		Methodology of work	10
		Discussion/ presentation	15
		Total Marks of Review II	50
Phase –I evaluation: Total 100 marks given for review- I and II of semester I scaled to 50 marks of term work			
Project Phase -II			
II	Review I(Marks 50)	Introduction	10
		Experimental investigation/software development/case study/working model	15
		Effectiveness of Planning Schedule	10
		Discussion/ presentation	15
		Total Marks of Review I	50
	Review II (Marks 50)	Continuous assessment	20
		Progressive presentation	20
		Status of Project Report preparation	10
		Total Marks of Review II	50
Phase –II evaluation: Total 100 marks given for review- I and II of semester II scaled to 50 marks			
External oral: 100 marks evaluated by external examiner appointed by university			

**Fig. B 2.2.3(e) Project evaluation**



### 2.2.3 E. Quality of completed projects (5)

#### Quality of project observed by following parameters

1. Working of project is analyzed by project guide and external examiner.
2. Information collected by students is observed
3. User friendly features are observed.
4. Uses of project for the society are observed.
5. Testing details of project are analyzed.
6. Paper published; awards received by the project group are observed. Evidences of papers published /Awards received by projects is shown in **Table No. B 2.2.3(c) and Fig. B 2.2.3(f)**
7. At the time of the final evaluation, external examiner considers project report, presentations by students, and reviews conducted.

#### Students are Encouraged to take up the Live Project Problems with a view to:

- Understand the core problem and hence to provide an amicable solution.
- Develop an understanding regarding the size and scale of operations and nature of field work in which students are going to play their role after completing the program in Civil engineering.
- Develop an understanding of subject based knowledge given in the classroom in the context of its application at work places.
- Provide firsthand experience to develop confidence amongst the students to enable them to use and apply engineering knowledge and skills to solve practical problems.
- Develop special skills and abilities like interpersonal skills, communication skills, attitudes and values.
- Develop leadership quality and to work as a team.
- Industry – Sponsored Projects list is shown in **Table No. B 2.2.3 (d)** and Sample evidence for Industry – Sponsored Projects is shown **Fig. B 2.2.3(g)**

**Table No. B2.2.3 (a) Projects addressing forefront areas (AY 2020-21)**

Sr. No.	Title of the Project	Name of the Guide	Forefront areas
1	Use of SSA in concrete	Mr P. R. Modak	Environmental sustainability
2	Use of bioenzymes for soil stabilization	Mr P. R. Modak	Environmental sustainability
3	Porous asphalt pavement	Dr. V. N. Patil	Advancements in technology,
4	Solar energy with canal water	Dr. V. N. Patil	Advancements in technology,



	preservation in Maharashtra		
5	Bandra warli sea link case study and comparision	Mr G C Chikute	Advancements in technology,
6	Minimuzing traffic congestion at road intersection	Mr G C Chikute	Advancements in technology,
7	Use of biomedical waste in concrete	Mr G C Chikute	Enviromentalsustainability
8	Groundwater petential mapping for Pune district	Mrs K N Kulkarni	Environments sustainability, modern techniques.
9	Traffic monitoring system using sensor for a junction in Pune city	Mrs K N Kulkarni	Safety ethics, advancements in technology, modern techniques.
10	Planning and scheduling of a road project by MSP software	Mrs K N Kulkarni	Cost, standards, advancements in technology, modern techniques.
11	Removal of impurifies from waste water phytoremediation	Dr P B Nangare	Environmental sustainability
12	Utilization of solid waste for manufacturing eco friendly bricks	Dr P B Nangare	Environmental sustainability
13	Slope stability analysis of rainfall induceed landslide	Mr R D Nalawade	Modern techniques
14	Analysis of CRCCP using FRP and steel rebars	Mr R D Nalawade	Advancement in technology
15	Comperative study of normal aggregate logic and nemolishet aggregate concrete	Mr U J Jadhav	Advancements in technology
16	Comparative study of normal concrete and rice husk ash mixed concrete	Mr U J Jadhav	Advancements in technology
17	Estimation of internal temp in structure with and without green roof using BIM	Dr D V Wadkar	Environmental sustainability
18	Microbial fuel cell and innovative technology for waste water treatment and power generation	Dr D V Wadkar	Modern techniques
19	Manufacturing of bricks using WTP	Dr D V Wadkar	Advancements in technology





	sludge		
20	Experimental investigation of concrete blocks using SAP and subjected to vivid curing conditions	Mrs M AD'cruz	Advancements in technology
21	Experimental analysis of pavement blocks with the use of plastic	Mrs M AD'cruz	Advancements in technology, Environmental sustainability
22	Earthquake vibration control using new innovation material	Mrs P R Satarkar	Advancements in technology
23	The design and cost analysis o net zero energy residential building	Mrs P R Satarkar	Advancements in technology,ethics
24	Rapid decomposition of solid waste material by using composition cutter technique	Mrs P R Satarkar	Advancements in technology
25	Use of fly ash and copper slag as construction material in ferrocement to make it more sustainable and ecological	Mrs S A Chavan	Advancements in technology
26	Seismic design of multistorey steel building equipped with braced frames and friction dampers	Mrs S A Chavan	Modern techniques,Safety ethics
27	Municipal solidwaste management for Pune with new developed techniques	Dr S D Nagrale	Environmental sustainability
28	Desiging and analysis of geopolymers modified concrete using flyash	Dr S D Nagrale	Environmental sustainability
29	Behaviol Analysis of cpncrete using hypaludge and fly ash as partial replacement to cement	Ms S P Khedekar	Modern techniques
30	Analysing the strength of hollow concrete flyash blocks with holes reinforced by half portion of concrete	Ms S P Khedekar	Advancements in technology,Environmental sustainability
31	Flexural behavior of RC beams retrofitted with natural Banan fiber	Dr S R Parekar	Modern techniques
32	Study and improvement of structure by	Ms S S Bhuinyan	Advancements in technology





	using self healing concrete		
33	Seismic performance evaluation of G+1 structure equipped with fibre cement sheet	Ms S S Bhuinyan	Safety ethics
34	Hydraulic testing of ski jump bucket	Mr V S Chavhan	Modern techniques
35	CFD analysis of ski jump bucket	Mr V S Chavhan	Advancements in technology

**Table No. B 2.2.3 (b) Evidences of papers published /Awards received by projects (2)**
**Evidences of papers published**

Sr. No.	Name of the guide	Authors	Title of the project	Name of the Journal	Volume	Issue	Year	Page Nos.
1	A M Deulkar	A M Deulkar, Anuj Chaudhari, Ritu Killdar, Rutuja Chavhan, Shailesh Lahoti	Rainfall analysis and its prediction for Marathwada region	IOSR-JMCE	18	4	2021	28-40
2	S P Khedekar	Swaraj S. Chalke, Pranav A. Patil, Sundeep V. Punmiya, Sanket S. Rathi	Strengthening of Concrete by Utilization of Hypo Sludge and Fly Ash	GRADIV A REVIEW JOURNAL	7	6	2021	304-309
3	S P Khedekar	Ashlesh P. Patil, Mahesh A. Patil, Sanskrut P. Patil, Anuradha R. Rout	Analyzing the Strength of Concrete Blocks	IJRASET	9	4	2021	1684-1687



## Strengthening of Concrete by Utilization of Hypo Sludge and Fly Ash as Partial Replacing Material of Cement.

S. P. Khedekar, Swaraj S. Chalke, Pranav A. Patil, Sundeep

V. Punmiya, Sanket S. Rath

Department Of Civil Engineering,

All India Shri Shivaji Memorial Society, College Of Engineering, Pune

### Abstract

*For sustainable development, protection of environment is one of the major challenges. The concrete is an important material in construction. The major element in concrete is cement. The production process of cement from its raw material produces a lot of CO<sub>2</sub> which causes environmental pollution and global warming. About 7% of world carbon dioxide emission comes from Cement producing factories. To reduce the emission of CO<sub>2</sub> during cement manufacturing process, alternatives like fly ash, hypo sludge etc. can be utilized. The utilization of thermal industry waste fly ash and hypo sludge can reduce the consumption of natural resources, decrease of pointless land filling & environmental pollution.*

*This paper shows, proportionate use of hypo sludge and fly ash in M25 Mix Grade with respective varying percentage as: 5% + 5%, 10% + 10%, 15% + 15%.*

*Concrete mixtures were produced, tested and compared in terms of compressive strength to the conventional concrete. These tests were carried out to evaluate the mechanical properties for the test results for compressive strength up to 28 days are taken.*

**Keywords:** Hypo Sludge, Fly Ash, Compressive Strength, Environmental Pollution.

### 1. INTRODUCTION

Enhanced construction activities, shortage of conventional building materials and abundantly available industrial wastes have promoted the development of new building materials.

The most basic building material for construction is concrete. A significant quantity of cement is utilized in making of concrete. Use of cement in producing conventional concrete, creates environmental problems. The study is done on concrete with the use of Hyposludge & Flyash as the partial replacement of cement to solve the problems of environmental pollution and at the same time to build structures economically by utilizing industrial wastes.

Hypo Sludge, a waste derived from paper industry is plentiful in India causing health, environment and dumping problems. About 300 kg of sludge is produced for each tonne of recycled paper. Hypo Sludge concrete makes a 'greener' building material and the discarded natural wastes can be re-utilized, avoiding otherwise wasteful landfill and harmful open incineration. To make value added concrete for development of sustainable infrastructure there is a great need to study the technical details concerned with various industrial wastes in concrete and to reduce environmental hazards. It also reduces

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### Fig. B 2.2.3(f) Evidences of papers published



**Table No. B 2.2.3(c) Awards-winning Projects AY 2020-21**

Sr. No.	Name of the guide	Authors	Title of the project	Details of the Award	Year	College/University/State/ National/International level
1	Dr. V N Patil	Mr. Anurag Lambor and Mr. GuaravDudhe	“Automated railway crossing with auto train speed control and live tracking”	Best Innovation Project - Certificate, Memento, Cash prize Rs. 20,000/-	2021	Motivation prize on foundation Day of SPPU (SavitribaiPhule Pune University), 10th Feb, 2021
2	Dr. V N Patil	Mr. Anurag Lambor and Mr. GuaravDudhe	LoRa Based Agricultural Pumps/ Motors Control	Rank 1 - Students received Job offer in KloudQ company as SPPU Hackathon winner	2021	University level competition - Innofest Hackathon organised by SavitribaiPhule Pune University



**Table No. B 2.2.3 (d) Industry – Sponsored Projects (UG) (AY 2020-21)**

Sr. No	Name of Project Guide	Year	Title of IndustrySponsored Project	Name of Sponsoring Industry
1	S. S. Bhuinyan	2020-21	Study and improvement of structure by using self healing concrete	Shreeneelkanteshwar RMC plant
2	S. P. Khedekar	2020-21	Behavioral Analysis of cpncrete using hypaludge and fly ash as partial replacement to cement	Accurates RMC plant, Balewadi
3	S. P. Khedekar	2020-21	Analysing the strength of hollow concrete flyash blocks with holes reinforced by half portion of concrete	Matoshri Productions, cement block factory, wagholi, pune
4	M. A D’cruz	2020-21	Experimental investigation of concrete blocks using SAP and subjected to VIVID curing conditions	Shiv Developer, Wakad
5	M. A D’cruz	2020-21	Experimental Analysis of Pavement Blocks with the use of plastic	Maharashtra Plastro, Kudalwadi



## Sponsorship Letter

9/19/22, 4:00 PM

AISSMS College of Engineering Mail - Fw: Reply for Project Sponsorship Email



Shilpi Bhuinyan <ssbhuinyan@aissmscoe.com>

### Fw: Reply for Project Sponsorship Email

bhausaheb awhale <shreeneelkanteshwarrmc@yahoo.com>  
To: ssbhuinyan@aissmscoe.com

Thu, May 13, 2021 at 12:29 PM

----- Forwarded message -----

From: Aditya Dixit <aditya786dixit@gmail.com>

To: "shreeneelkanteshwarrmc@yahoo.com" <shreeneelkanteshwarrmc@yahoo.com>

Sent: Wednesday, 12 May, 2021, 03:15:21 pm IST

Subject: Reply for Project Sponsorship Email

### TO WHOMSOEVER IT MAY CONCERN

We are pleased to inform you that the following students from AISSMS COE, PUNE are given permission for performing their project as per their request for their BE project titled "STUDY AND IMPROVEMENT OF STRUCTURE BY USING SELF HEALING CONCRETE."

SAURABH DEORE  
NIKHIL KATARIYA  
NIHAL DHORE  
ADITYA DIXIT

Please note that during this period, you must follow necessary safety related rules and take all safety precautions and use safety equipment. Company will not be responsible for any mishap cause to you during your work at site.

Also note that the sponsorship will include only providing you the necessary materials for casting and equipment for testing. Any other expenses like the bacteria will not be included in the sponsorship.

Please contact me for any further information regarding your Sponsorship.

**Fig. B 2.2.3(g) Sample evidence for Industry – Sponsored Projects**

**2.2.4****Initiatives related to industry interaction**

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

**15**

To strengthen interaction with industries and to keep our students updated with the latest trends in Civil engineering, the Department organizes industrial visits, expert lectures, workshops, and internship programs with different industries. Industry interactions help the students to acquire the practical knowledge. Hence, in order to improve the technical abilities various industrial activities are carried out.

**2.2.4 A. Industry supported laboratories (5)**

1. VESBE, Hennef, Germany, has donated SCADA based Waste Water Treatment Plant.as shown in **Fig B 2.2.4(a)**. Objective of this system is to provide the skills of water treatment.



**Fig. B2.2.4 (a)SCADA based Waste Water Treatment Plant**

Centre of excellence in the field of robotics and automation is established in college on 12 April 2019 by Automation Anywhere Pvt. Ltd. The main motive of this engagement is to providing Industrial Exposure to the Students and faculties in order to sustain and enhance interaction with Industries. Faculties and students' undergone basic and advance level training under center of excellence. **Fig. B2.2.4 (b)** shows the BOT lab.





**Fig. B2.2.4 (b) Inauguration of BOT LAB**

#### **2.2.4 B. Industry involvement in the program design and partial delivery if any regular courses of students (5)**

- Initiatives are taken to strengthen industry-institute interaction through Industry visits, Industry expert lectures, Memberships of professional societies, Industry projects, MOUs signed with various industries; Value added programs and seminars are participated by students. List of MOUs is given **Table B2.2.4(a)**
- Students are continuously made aware to constructional activities such as building construction, Road works, Bridges etc.
- They are taken to site visits and observations are made and they are asked to make the report and present it.
- They are also taken to the dam site and various observations such as storage capacity, bund length and types of protective works are observed at the site.
- For second year students we have an extensive survey project for a period of two days. The survey is done for road construction, layout plans etc. Along with the survey the plotting works are carried out and detailed quantity surveys are done.
- At institute level DAB committee is established to enhance and support the program objectives and outcomes. DAB covers representation from industry
- Industry persons are involved in drafting the syllabus. List of Industry Experts involved in Design of TE 2019 pattern Syllabus is given in **Table B2.2.4(b)** and Evidence of involvement of Industry Experts is shown in **Fig. B 2.2.4 (b)**



**Table B2.2.4(a)List of MOUs**

Sr No	Name of faculty	Name of identified Industry, website, email address and contact number
1	Dr. U R Awari	Technology Consultants, Sinhgad Road, ManikBaug, Pune - 411018. 9503838638
2	Dr. S R Parekar	Nath Enterprises S T Nagar, Pimpri. 8149222449
3	Dr. V N Patil	Struengineers (India) Pvt. Ltd, Pune. 9665217998
4	Dr. P B Nangare	Sahyadri Engineers, Karvenagar, Kothrud, Pune Netaji Khandagale, 9422084744
5	Dr. R D Nalawade	Soiltech India Pvt. Ltd, Pune <a href="mailto:info@siiltech.in">info@siiltech.in</a> 020-67254128
6	Dr. S D Nagrale	MotilalDhoot Infrastructure Pvt.Ltd, Pune VikramDhoot. 98224448709
7	Dr. D V Wadkar	DnyanyashEnviro Infra Pvt. Ltd, 992270078
8	Dr. V S Chavhan	Samash Consultant, Pune, 8308820599
9	Mr. P R Modak	Jain Irrigation Systems Ltd. Jalgaon Mr. Sachin Patil Email-id- <a href="mailto:patil.ss@jains.com">patil.ss@jains.com</a> 9403080167
10	Mrs. K N Kulkarni	EXIGO Architecture, Interior design, Project management, turn key project. Mumbai Mr.MilindKulkarni
11	Dr. G C Chikute	Kunal Chawada and Associates, Pune 9373311672
12	Mrs. M S Chiwande	Dynamic Consultants D-103, First Floor JaiganeshVardhast opp. Kamgar bhavan, Pimpri.
13	Dr. M V Waghmare	Archistructure Consultancy, Pune <a href="mailto:sachinefunde@archistructure.in">sachinefunde@archistructure.in</a> 8446857550, Veracity structural Consultancy, Pune Varsha Jog-Kanetkar M-9881096302
14	Mr. U J Jadhav	Suraj Construction Company, Dhayari Pune.
15	Mrs. Sonal A Chavan	Struengineers India Pvt. Ltd
16	Mrs. S P Khedekar	Moco Design Studio, Amar Building, Pune 9923778787



17	Mrs. A M Deulkar	Mahavir Construction & Developer Pune 9422005862
18	Mr. C M Misal	Lord Balaji Associates, Pune
19	Mrs. K D Kashid	Nashik Phata (Electrofab) Engineering Services Pvt. Ltd) Pune Station Hinjawadi, Pune MonterozaSihgadroad, Pune

**Table No. B 2.2.4 (b) List of Industry Experts involved in Design of TE 2019 pattern Syllabus**

List of Industry Experts involved in Design of TE 2019 pattern Syllabus				
Sr No	Name	Designation	Industry/Organization	Course
1	Er. Rajendrakumar Saraf	Chairman	VirajEnvirozing India Pvt. Ltd.	Wastewater Engineering
2	Er. Vishwas Kale	Managing Director	M/s Klean Environmental Consultants (P) Ltd.	Wastewater Engineering
3	Mr. DhawalPatil	General Manager	Ecosan Services Foundation	Wastewater Engineering
4	Mr. Mahesh Pathak	Managing Director	Unity Consultants, Pune	Water Supply Engineering
5	Er. Guruddata Tendulkar	Consultant	Gayatri Eco Consultants, Pune	Solid Waste Management
6	Er. Richard Fernandes	Engineer	GOA Waste Management Corporation	Solid Waste Management
7	Dr. Milind Kulkarni	Consultant	Prachi Services, Mumbai	Solid Waste Management
8	Mr. SagarSavalia	Manager	Facile Maven Pvt. Ltd. Surat	Solid Waste Management
9	Er. H.T. Dhumal	Superintending Engineer	Kukadi Project, Pune	Hydrology and Water Resource Engineering
10	Er. C. N. Mali	Superintending Engineer	CDO (Canal), Nashik	Hydrology and Water Resource Engineering
11	Mr. Amit Kulhare	Scientist 'B',	CWPRS, Pune	Adv. Fluid Mechanics & Hydraulic Machines
12	Dr. Avinash Joshi	Chief Manager, Design,	STUP Consultants Pvt Ltd, Pune.	Design of Steel Structures

13	Dr. Arun Purandare	Consultant	ANP Consultants	Ferrocement Technolog
14	Er. Pushymitra Divekar	Engineer	PREFERCON Pvt Ltd	Ferrocement Technology
15	Er. Yusuf A. Inamdar	Managing Director	J. Kumar Concrete Research Centre	Green Structures and Smart Cities
16	Er. Aditya C. Sathe	Project Planner	Centre for Development Studies & Activities, Pune	Remote sensing and S & Geographic information system
17	Er. Vikrant Nikam	Founder	Albedo Foundation, Nashik	Remote sensing and S & Geographic information system



**Fig. B 2.2.4 (c) Evidence of involvement of Industry Experts in Design of TE 2019 pattern Syllabus**

#### 2.2.4 C. Impact analysis of industry-institute interaction and actions taken there of (5)

Effectiveness: Feedbacks from students about industrial visits and trainings are collected and impact of such interventions is assessed and based on which following actions are taken:

- Training report is collected and analyzed for positive response
- Student feedback is utilized for exposure to better industries



- Student are exposed to real working environment in the industry
- Students deliver presentation about their industry visit and training
- Feedback from the interns as well as industry persons is obtained. Sample of feedback is shown in **Fig. 2.2.4(d)**

Based on above feedbacks corrective actions are taken to streamline the internship and training, and to enhance employability of students

Initiatives were taken to meet out the tremendous need for Academic-Industry Interaction. Industry Institute Interaction is important for students as well as faculty. It helps in improving their morale through secured trainings and final placements for students and relationships established with industry.



**DEPARTMENT OF \_\_\_\_\_ ENGINEERING**

**FEEDBACK ON INTERACTION OF DEPARTMENT WITH INDUSTRY**

Industrial exposure to students through various activities with the support of industries and various professional bodies is one of the important aspects. In order to strengthen academics in the department with the involvement of industry, suggestions and feedback is expected from the students.

Academic Year: 20xx – 20xx

Class: FE/SE/TE/BE/ME

**FEEDBACK FORM**

Please rate on the scale of 1 to 5 (5 is at higher side)  
(5: Excellent; 4: Very Good; 3: Good; 2: Average; 1: Poor)

S N	Description	Rating	Remark
1	Awareness about industry institute interaction policy of the department		
2	Exposure to industrial aspects in teaching learning of the various courses		
3	Activities organized by the department for bridging the gap between academic and industry		
4	Availability of database of industries and industry experts		
5	Exposure to industrial aspects through industry visits, expert talks, etc.		
6	Guidelines and procedure for assessment and evaluation of industry internships , trainings, etc.		
<b>Total</b>			

Suggestions to improve Industry Institute Interaction activities:

Suggested Name of industry and industry expert with contact details	
Any other suggestion	

Signature of Student : \_\_\_\_\_  
Name of the Student: \_\_\_\_\_  
Date : \_\_\_\_\_

Internal Quality Assurance Cell, AISSMS COE PUNE – 411 001

**Fig. 2.2.4(d) Samlpe of feedback taken from students on initiatives taken by department**





2.2.5

**Initiatives related to industry internship/summer training**

*(Mention the initiatives, implementation details and impact analysis)*

15

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

The students are encouraged to take up internship programs during their semester break. Faculty members give their guidance, suggestions and scope and contact details of an industry where internship can be sought. 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 sought necessary guidance and supports for internships. **Table No. B 2.2.5(a)** shows the list of the industries identified for internship program.

Initiatives are taken to strengthen industry-institute interaction through Industry visits, Industry expert lectures, Memberships of professional societies, Industry projects, MOUs signed with various industries; Value added programs and seminars which are participated by students.

**Table No. B 2.2.5(a) List of the Industries Identified for Internship**

Sr. No.	Name of the Industry
1	T & T Infra Pvt. Ltd., Dehuroad, Elevated Road, Pune
2	M/S PanditLaxmanUndre Trimurti Complex Satavwadi, Hadapsar, Pune.
3	MD BangarInamdar Associates, Manchar, Pune.
4	Soham Promoters and Developers, Ratnagiri
6	Rajesh Groups, Lonikand
7	Rajendra V Jadhav Consultant Karad
9	The Myriad Group, Engineering & Designing Consultant Pune
10	Gayatri Constructions LLP, Eagleridge, near Hiranandani Foundation School Hiranandani Estate, PatlipadaGhodbandar Road Thane (W)
11	Panchshil Infrastructure Pvt. Ltd., Near ST Stand, Supa, Tal – Parner, Dist. Ahmadnagar
12	G.A Bhilare Construction PVT. Ltd. Pune
13	KoltePatil Building, Consultant and Govt. Contractor, Pune
14	Shah and Talati Design and Engineering Consultancy
15	Krupasindhu construction Karad
16	Prompt Project Management Consultancy
17	Rajgruhi Residency, Pune
18	Singh Structural Consultant
19	Makarand Deshpande and Associates



22	Shivam Construction
23	Morya Dreams
25	Mundada Builders Amalner
26	Navnath New Sangavi
27	Sandeep Ghate Consultant Engg.
28	Space Construction
29	Ekdanta Realtors
30	IR Solutions
31	Nandaraj Construction
33	Kothari Brothers
34	Nyati Developers
35	Prathemesh Infrastructure
36	Kokil Construction
37	SagarFulari& Associate
39	Vastushobha Construction
40	Rajgruhi Residence
41	Atharva Developers
42	ZCPL
43	Maharashtra Metro Rail Corporation
44	IVCON
45	Sri Projects, Pune

#### 2.2.5 B. Industrial/internship/summer training for more than 2 weeks and post training assessment (4)

Students are motivated to take up online/offline internships so that students get the training on live projects. In addition to the offline internship students are also encouraged to take online/offline internship through Construction Industry Development Council (CIDC), established by the Planning Commission, Government of India & the construction Industry. 20 students undergone the online internship in AY 2021-2022. **Fig. B2.2.5(a)** shows the internship competition certificate from CIDC. **Table No. B 2.2.5(b)** presents the list of the students undergone internship in Academic year 2020-21.



Fig. B2.2.5(a) Internship completion certificate from CIDC.

Table No. B 2.2.5(b) Students Undergone Internship Program (AY-2020-21)

Sr. No.	Name of the student and Class	Name of the Industry	Training duration		
			Start date	Last date	Duration (days)
1	NupurKolhe	Apex Consultant Training ServiceS.No.133/1 Gurudwara Colony Nigdi,	30/11/2020	14/12/2020	15
2	ChavaneKalyaniShivaji				
3	Ashwini Anil Katore				
4	Abhilasha Ganesh Kawalkar				
5	Mansi Holkar				
6	Pratik Bhosarekar				
7	Nakuldeo Prakash Ahirrao				
8	Adhiraj Shrikant Kotwal				
9	Digvijay Rajendra Anarase				
10	Nikita TanajiKurahde				
11	Pradnya Shankar Khatpe				



12	Samkit Sanjay Chhajed				
13	Vaishnavi Keshav Jogdand				
14	Khushboo Suresh Gunde	Apex Consultant Training ServiceS.No.133/1 Gurudwara Colony Nigdi,	30/11/2020	14/12/2020	15
15	Akshada Mahajan				
16	Khushali Pradeep Ekbote				
17	Amey Remaniche				
18	Mubin Munshi				
19	Wagh Neha Gulabrao				
20	Akash Shantaram Werulkar				
21	Himanshu Mahesh Shinde				
22	Mayur Vilas Salunkhe				
23	Sanket Shahaji Patil				
24	PratikshaPatil				
25	RiteshPatil				
26	Sagare Kiran Kashinath				
27	Sanket Anil Bhame	Executive Engineer PCMC, B&C Department Pimpri, Pune	30/11/2020	14/12/2020	15
28	RohitRaut				
29	RamshingNurshingKhakse				
30	ArpitKadu	M/S PanditLaxmanUndre Trimurti Complex, Pune Saswad Road, Satavwadi,	30/11/2020	14/12/2020	15
31	Dhanashree Ashok Bobade				
32	ShreyasJavalkoti				
33	Rani Jadhav				
34	SukanyaChavan				
35	Shloka Awari				
36	SauravAher				
37	Rutuja Sunil Raut				
38	Akhilesh Shashikant Salunkhe				
39	AshleshaPatange				
40	Bharadwaj Reddy				
41	Mihir Sunil Bhamare				



42	OmkarPatil	Hadapsar, Pune			
43	Zaid Shaikh				
44	Pragati Subhash Sannake				
45	Soham				
46	Atharv Rahul Yadav				
47	Vipul Sonawane				
48	Rohit Mote				
49	Rutuj Doshi	Desai Infra Project Pvt. Ltd A/P KhambatiPhata (Surli Camp) Tal. Karad Dist. Satara	30/11/2020	14/12/2020	15
50	Soniya Pharande				
51	Todkar Mrunal A				
52	Gaurav Wankhede	SadguruSadguru Developers & Builders, Kiwale, Pune	22/11/2020	17/12/2020	25
53	Gandhav Dhamdhere				
54	Raskar Meghraj				
55	Akash Phatak	Sri Kubera Constructions Pvt. Ltd, Kolhapur	22/11/2020	17/12/2020	25
56	Amey Remaniche				
57	Avdhoot Kokate	MD Consultant,"SNEH", B 30/31, Vastukalp Society, Bibwewadi, Pune	22/11/2020	17/12/2020	25
58	Khushali Ekbote	Infinite Graphix Technologies Pvt. Ltd. Pune	22/11/2020	17/12/2020	25
59	Vaibhav Chavan	Vasturachana Construction, Chopda	22/11/2020	17/12/2020	25
60	Harshad Sapkal	Kargav Incorporation,	22/11/2020	17/12/2020	25



		Aurangabad.			
61	Suraj B Sasane	SwarajyaBuildconG eorai, Beed	22/11/2020	17/12/2020	25
62	Mayur V Salunkhe	Mundada Builder's & Developers,	22/11/2020	17/12/2020	25
63	Tanushree Harish Khade	Apex Consultant	30/11/2020	14/12/2020	15
64	Tushar Sanjay Kapadnis	Training			
65	Rasika Ramesh Jagtap	ServiceS.No.133/1			
66	Saurabh Karad	Gurudwara Colony			
67	Pranav UdayWani	Nigdi,			
68	Kushal Ganesh Surwade	PimpriChinchwad.			
69	Nikhil Katariya	M/S	30/11/2020	14/12/2020	15
70	Rohan Rajendra Gandhi	PanditLaxmanUndre			
71	Pradnya Bhivaji Patil	Trimurti Complex,			
72	Sapate Priyanka Anant	Pune Saswad Road,			
73	Aditya Wagh	Satavwadi,			
74	Ajay SambhajiNikam	Hadapsar,			
75	Gaurav Wadekar	Pune			
76	Gaikwad Pramod	Executive Engineer	30/11/2020	14/12/2020	15
77	Saurabh P Sahare	PCMC, B&CDepartment Pimpri, Pune			
78	AmrutaVishvambharam	Sadguru Developers	30/11/2020	14/12/2020	15
79	MahimaNilepawar	&Builders,Kiwale,			
80	TanvirSaayad	Pune			
81	MohitKishorNeher	Pavetech Consultant, Hadapsar, Pune	30/11/2020	14/12/2020	15
82	Swaroop Godse	Goel Ganga Developers, Gangadham Market yard, Pune	30/11/2020	14/12/2020	15
83	Jugal Girase	Chaudhari	30/11/2020	14/12/2020	

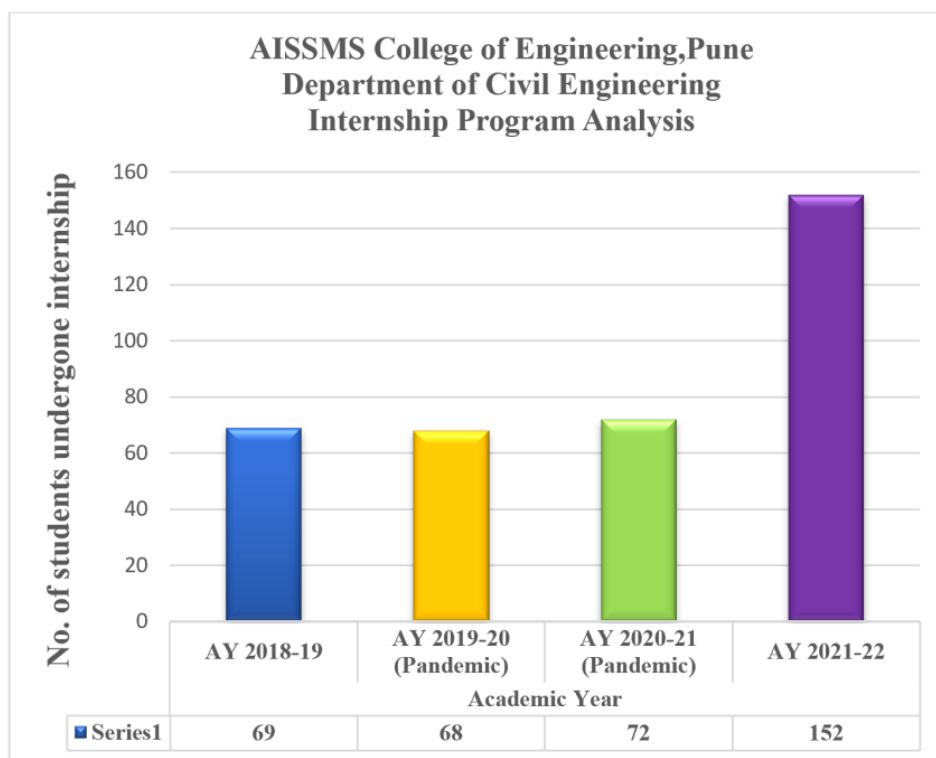




		Construction and Builders, Dondaicha, Dhule			15
84	Jadhav Jayaesh Indrashing	Amorapolis I Adjacent to porwal road, Dhanori, Pune	30/11/2020	14/12/2020	15
85	Vishal Shinde	PavetechConsultant, Alandi Road, Pune	30/11/2020	14/12/2020	15
86	Saad Inamdar	A R V Group 311, 3 <sup>rd</sup> Floor, City Tower, Dholepatil Road, Pune	30/11/2020	14/12/2020	15

#### 2.2.5 C. Impact analysis of industrial training (4)

- All these initiatives that are taken to strengthen Industry Institute Interaction have positively implemented a learning culture with students.
- Employees, parents, alumni who are working in the core companies helps in identifying industries for visits and industrial training
- With the help of Industry Institute Interaction cell, based on the analysis of student learning level,usefulness of the trainings, actions to sign more MOUs and tie ups with the companies and placements are undertaken
- It helps the students to identify their area of interest for their future career (Design, execution, testing, quality control)
- The number of students undergone internship program are shown in **Fig. B 2.2.5 (b)**



**Fig. B 2.2.5 (b) Internship program**

**Actions taken:**

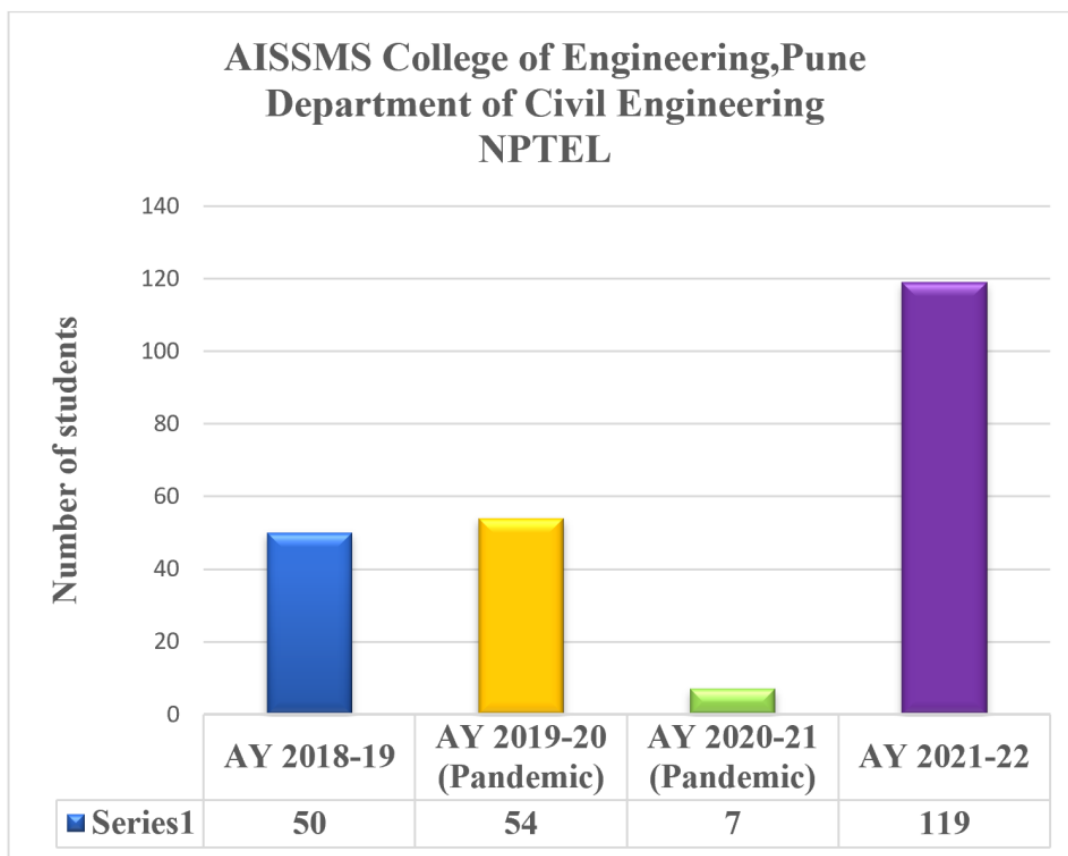
- Encouraged students to participate in certification courses on NPTEL/swayam. The improvement in student's participation is shown in **Fig. B 2.2.5 (c)**.
- Soft skill sessions are organized and conducted by institute for improving their aptitude and communication skills. **Fig. B 2.2.5(d)** shows MoU signed with Eduskills for imparting softskill training to the students.
- Hands on sessions for exposure of software
- Number of site visits increased. Report on Virtual site visit is shown in **Fig. B 2.2.5(e)**
- Number webinars/ expert talks have increased
- Students are motivated to participate in intership programs

**Table No. B 2.2.5(c)** summarizes the Impact analysis and action taken.

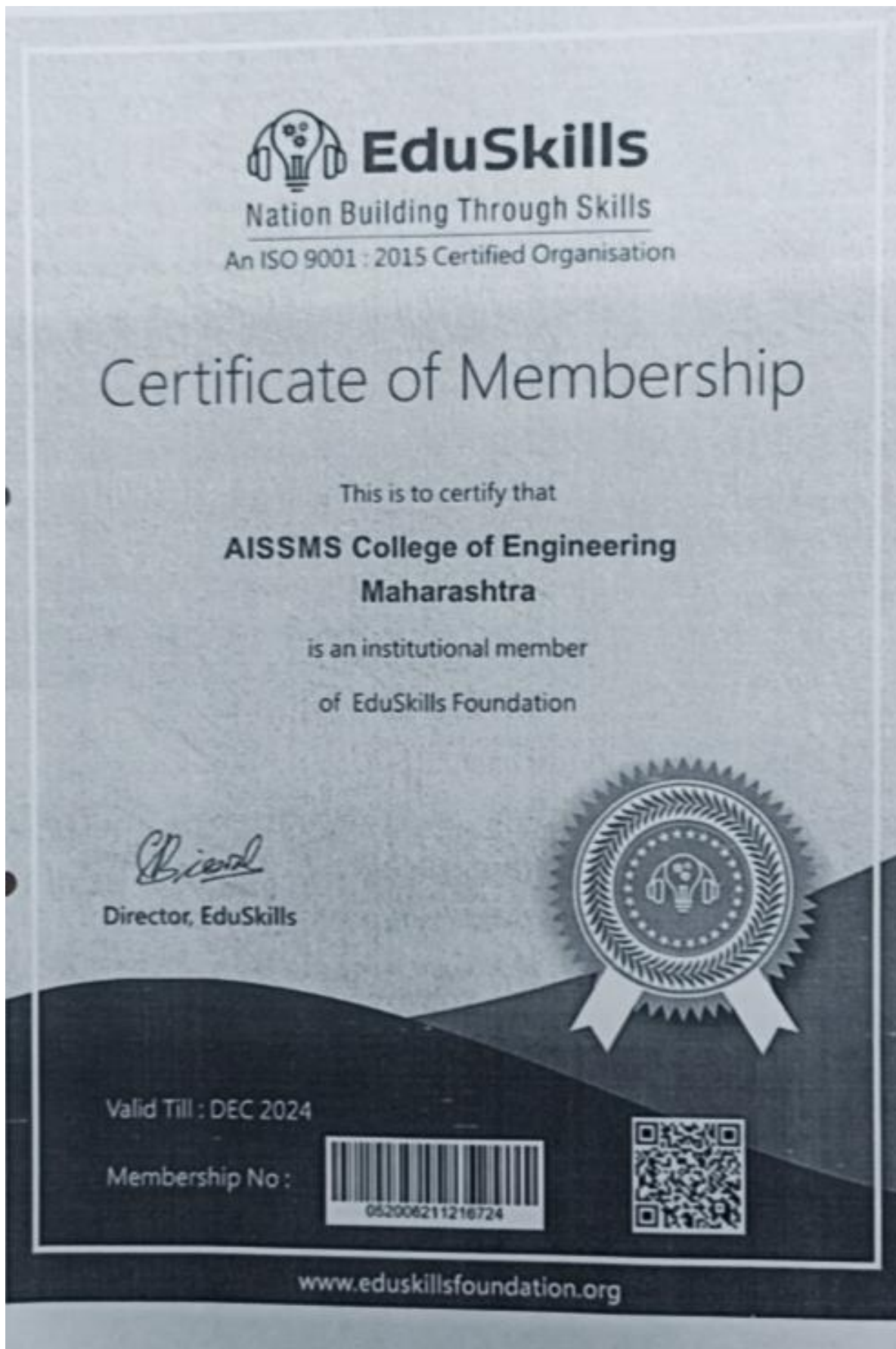


**Table No. B 2.2.5(c) Impact analysis and action taken**

Sr. No.	Impact analysis	Actions taken
1	During Industry Institute Interaction, Industry experts suggested that students should have more exposure to actual site conditions	Number of site visits has increased.
2	Industry experts suggest that the aptitude and communication skill of students need to be improved.	Soft skill training sessions are organized and conducted by institute for improving aptitude and communication skills
3	To upgrade the knowledge to meet the industry requirement it is a need to start online courses and use online study materials for teaching learning.	Motivation to students is provided by the institute to participate in certified courses e.g.Coursera, NPTEL, Swayam.



**Fig. B 2.2.5 (c) NPTEL courses**



**Fig. B 2.2.5(d) MoU signed with Eduskills for softskills**

**DEPARTMENT OF CIVIL ENGINEERING & FIRST YEAR ENGINEERING**

Report on  
**"Virtual Tour of India's Largest Cement Manufacturing Plant"**

**Rajashree Cement Works - Malkhed, Gulbarga**

**Activity:**  
One day Programme on "Virtual Tour of India's Largest Cement Manufacturing Plant" Rajashree Cement Works - Malkhed, Gulbarga organised by Department of Civil and First year Engineering in collaboration with UltraTech Cement Ltd. on 26<sup>th</sup> May 2021, 17:00 pm to (IST) onwards.

**Objective:**

- To provide Participants a sense of immersion in the area; viewers can easily see what they want to see in that specific location and listen to the sounds they want to hear.
- To go beyond academics, industrial visits provide students a practical perspective on the working world.

**Convenor:**

- Prof. Shilpi S Bhuiyan, Er. Harsh Shah

**Faculty Coordinators:**

- Prof C S Misal

**Student Coordinators:**

- Yedant Kale, Adhura Kotwal, Vaishnavi Chumbalkar, Akshada Mahajan, Atharva Yadav

**Tour Guided by:**  
Mr. Ram Pant  
RCM - UltraTech Cement Ltd.

Total No. of Participants Registered for Virtual Tour - 2485

Participants have registered from Across the India and outside the India

**Participants Details:**

Students	2111
Faculties	316
Industry Personnel	27
Others	31
<b>Total</b>	<b>2485</b>

**Sample Certificate:**

**Some Feedbacks Received:**

"Excellent industrial virtual tour of Ultratech cement plant Malkhed Gulbarga in association with AISSMS College Pune."

"This session was very useful. Thank you!"

"Everything is Good and New Experience to the entire Virtual Visit for Your Plant. Thank You Soooooooooo Much."

"Great full to be part in this meeting learned new things and thank you everyone who spent time for us."

"Very nice session."

"Session was good no need of suggestions."

"Kindly arrange such sessions in future too...All the best."

"Excellent and informative virtual tour. Well organised."

"It was a nice experience and will helpful in all of the fields."

"Good exposure of knowledge."

"It was very informative and having this virtual visit was very worth."

"Proper visuals."

"Please try to organise more such virtual tours of industries."

"Great full to be part in this meeting learned new things and thank you everyone who spent time for us."

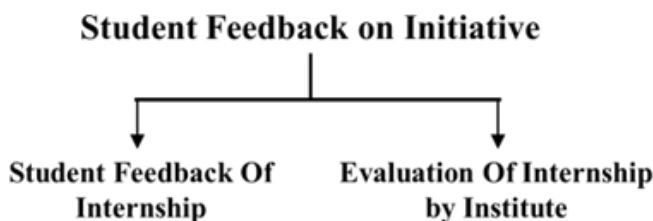
"It was great initiative by your organisation to give such a fantastic webinar ... Thank you so much."

"It was wonderful experience and wish to have same type in future."

**Fig. B 2.2.5(e) Report on Virtual site visit**

### 2.2.5D. Student feedback on initiative (4)

Student's feedback on the initiative is taken after they return from the internship/ summer training programs and their performance is evaluated by the department as presented in **Fig. B 2.2.5 (f)**. Sample of student's feedback form on internship and the perfermonace evaluation by department are presented in the **Fig. B 2.2.5 (g)** and **Fig. B 2.2.5 (h)**




**Fig. B 2.2.5 (f) Student feedback on initiative**

Following statements are considered for student feedback of internship:

1. Given me the opportunity to explore a career field
2. Allowed me to apply classroom theory to practice
3. Helped me develop my decision making and problem-solving skills
4. Expanded my knowledge about the work world prior to permanent employment




5. Helped me develop my written and oral communication skills
6. Provided a chance to use leadership skills (influence others, develop ideas with others, stimulate decision-making and action)
7. Expanded my sensitivity to the ethical implications of the work involved
8. Made it possible for me to be more confident in new situations
9. Given me a chance to improve my interpersonal skills
10. Helped me learn to handle responsibility and use my time wisely
11. Helped me discover new aspects of myself that I didn't know existed before
12. Helped me develop new interests and abilities
13. Helped me clarify my career goals
14. Provided me with contacts that may lead to future employment
15. Allowed me to acquire information and/ or use equipment not available at my Institute



# AISSMS

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DEPARTMENT OF CIVIL ENGINEERING  
INDUSTRY INSTITUTE INTERACTION  
(TE-INTERNSHIP 2021-2022)

### STUDENT FEEDBACK OF INTERNSHIP

(TO BE FILLED BY STUDENTS AFTER INTERNSHIP COMPLETION)

Student Name: GANPATI MADHAV SALUNKE Date: \_\_\_\_\_

Industrial Supervisor: MAHESH S. DESAI Title: SITE ENGG (RCC)

Supervisor Email: \_\_\_\_\_ Internship is: ☒ Paid ☒ Unpaid

Company/Organization: MILLENNIUM ENGINEERS & CONTRACTORS LTD

Internship Address: 43 PRIVET DRIVE, GALEWADI PUNE - 411045

Faculty Coordinator: \_\_\_\_\_ Department: CIVIL ENGG

Dates of Internship: From 11/01/2022 To 11/02/2022

\*\*\*Please fill out the above in full detail\*\*\*

Give a brief description of your internship work (title and tasks for which you were responsible):

Was your internship experience related to your major area of study?  
☒ Yes, to a large degree ☐ Yes, to a slight degree ☐ No, not related at all

Indicate the degree to which you agree or disagree with the following statements.

This experience has:	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
Given me the opportunity to explore a career field	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Allowed me to apply classroom theory to practice	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Helped me develop my decision making and problem-solving skills	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expanded my knowledge about the work world prior to permanent employment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Fig. B 2.2.5 (g) Sample of Student's feedback on the initiative**





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S.No.	Name of Students	Evaluation Ranking
a	Attendance and general behaviour	excellent
b	Relation with workers and supervisors	good
c	Initiative and efforts in learning	excellent
d	Knowledge and skills improvement	good
e	Contribution to the organization	excellent

Your efforts in this regard will positively enhance the knowledge and practical skills of the students, your cooperation will be highly appreciated and we shall feel obliged.

The students will abide by the rules and regulations of the organization and will maintain proper discipline with keen interest during their Internship. The students will report to you on a date along with a copy of this letter.

Yours sincerely,

  
Internship Coordinator  
Dr. P. D. Nangare


  
Head of the Department  
HEAD OF DEPARTMENT  
CIVIL ENGINEERING  
AISSMS's COE, PUNE-1.

Fig. B 2.2.5 (h) Sample of Students' evaluation by I<sup>3</sup> Cell and Department



## DEPARTMENT OF CIVIL ENGINEERING

### CRITERION III

## COURSE OUTCOMES AND PROGRAM OUTCOMES



<b>CRITERION III</b>	<b>COURSE OUTCOMES AND PROGRAM OUTCOMES</b>	<b>120</b>
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Define the Program specific outcomes

<b>3.1</b>	<b>Establish the correlation between the courses and the Program Outcomes (POs) and program Specific Outcomes (PSOs)</b>	<b>20</b>
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<b>PSO1</b>	Exhibit technical knowledge in planning, analysis, design and management for infrastructural development.
<b>PSO2</b>	Apply the innovative technologies to address Civil Engineering problems of the society.
<b>PSO3</b>	Enhance professional abilities to meet industrial need.

<b>3.1.1</b>	<b>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)</b>	<b>05</b>
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<b>Course Name: Building Technology and Materials</b>	<b>C 02 01</b>	<b>Course Year:</b>	<b>2017-18</b>
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<b>Course Name</b>	<b>Statements</b>
C2 01.1	Identify types of buildings and basic requirements of building components
C2 01.2	Explain types of masonry, formwork, casting procedure and necessity of underpinning and scaffolding
C2 01.3	Elucidate different types of flooring and roofing materials
C2 01.4	Describe types of doors, windows, arches & lintels
C2 01.5	Illuminate means of vertical circulation and protective coatings
C2 01.6	Explain different materials especially eco-friendly materials and safety measures to be adopted at any construction site

<b>Course Name: Fluid Mechanics</b>	<b>C 02 04</b>	<b>Course Year:</b>	<b>2017-18</b>
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<b>Course Name</b>	<b>Statements</b>
C2 04.1	Explain fluid properties, dimensional analysis for solving problems of fluid flow.
C2 04.2	Solve fluid statics problems.
C2 04.3	Explain fluid pressure measurement procedure
C2 04.4	Summarize Calibration of discharge measuring instrument like venturimeter, orifice meter
C2 04.5	Distinguish between various types of fluid flows and find the fluid velocity using principles of Kinematics and Dynamics.
C2 04.6	Design pipes to carry particular amount of discharge.



<b>Course Name: Structural Design I</b>	<b>C 03 03</b>	<b>Course Year:</b>	<b>2018-19</b>
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<b>Course Name</b>	<b>Statements</b>
C3 03.1	Ability to understand IS code of practice for the design of steel structural elements.
C3 03.2	Analyze and design axially loaded column & built-up column with lacing and batten system.
C3 03.3	Analyze and design the eccentrically loaded column and column bases.
C3 03.4	Ability to analyze and design the flexural member as laterally restrained and unrestrained beams
C3 03.5	Ability to design the connection between beam to beam , beam to column and Design of welded plate girder
C3 03.6	Analyze and design roof truss and gantry girder for industrial building

<b>Course Name: Environmental Engineering I</b>	<b>C 03 11</b>	<b>Course Year:</b>	<b>2018-19</b>
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<b>Course Name</b>	<b>Statements</b>
C3 11.1	Interpret source, control and effect of air and noise pollution
C3 11.2	Outline the fundamentals of water treatment units and parts of water supply system.
C3 11.3	Relate the importance of laboratory analysis for design of Water treatment unit
C3 11.4	Design of various units of water treatment plant
C3 11.5	Summaries Miscellaneous treatment systems
C3 11.6	Study of water distribution system and rain water harvesting

<b>Course Name: Transportation Engineering</b>	<b>C 04 02</b>	<b>Course Year:</b>	<b>2019-20</b>
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<b>Course Name</b>	<b>Statements</b>
C4 02.1	Understand history of road development, roads classification, traffic Engineering and controlling devices in India.
C4 02.2	Design of highway geometrics.
C4 02.3	Understand Traffic engineering & control
C4 02.4	Determine the quality of Materials used for pavements.
C4 02.5	Design of flexible and rigid pavements.
C4 02.6	Understand the modern trends in construction and maintenance of highways



<b>Course Name: Quantity surveying contracts and tender</b>	<b>C 04 08</b>	<b>Course Year:</b>	<b>2019-20</b>
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Course Name	Statements
C4 08.1	Understand the different methods of Estimations.
C4 08.2	Determine task Quantities and estimation of civil engineering project.
C4 08.3	Understand the specifications of tasks and Able to Rate analysis of tasks.
C4 08.4	Ability to determine Valuation of Building and Land.
C4 08.5	Understand the Tendering, and work Execution of Civil Engineering Project.
C4 08.6	Understand the Contracting, and Arbitration process of Civil Engineering Project.

3.1.2	<b>CO-PO-PSO matrices of courses selected in 3.1.1 (Six matrices to be mentioned; one per semester from 3<sup>rd</sup> to 8th semester)</b>	05
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**1. course name: C201**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
C201001.1	3	1			2				1			
C201001.2	3	1								1		
C201001.3	3		2					2			1	
C201001.4	3				2							1
C201001.5	3				2							
C201001.6	3					2	2					

**2. course name: C204**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
C201004.1	3	2	1	1			1		1	1		1
C201004.2	3	2	1	1					1	1		1
C201004.3	3	1	1	2					1	1		1
C201004.4	1	1	1	1					1	1		1
C201004.5	1	1	1	1					1	1		1
C201004.6	1	1	1	1		2	1		1	1		1

**3. course name: C303**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
C301003.1	3	1	2					1	2	1		1
C301003.2	3	1	3					1	2	1		1
C301003.3	3	1	3					1	2	1		1
C301003.4	3	1	2					1				1
C301003.5	3	2	3		1			1	2	1		1
C301003.6	3	3	3	2				1	2	1		1


**4. course name: C311**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO301011.1	2							1		1	1	
CO301011.2	2	2	2	1		2	2		1			1
CO301011.3	2	2	2	1		2			1			1
CO301011.4	2	2	2	1	2		2		1			1
CO301011.5	2	2	2	1	2	2						1
CO301011.6					2	2	2	1		1	1	

**5. course name: C402**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO401002.1	2		1			1	1			1	2	
CO401002.2	3	2	3	1						1		1
CO401002.3	2	3		2	1	1	1	1	1	2		1
CO401002.4	3	2		3	1	2		1	1	2	1	
CO401002.5	3	2	3	2	1	1				1		
CO401002.6	2		1	2	1	1	2			1		

**6. course name: C408**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO401008.1	1								1			
CO401008.2	2	1			1	1			2		3	
CO401008.3	2	1		2				2	2		2	
CO401008.4	1	1										
CO401008.5	1				2			2	1	1		
CO401008.6			1			2			1	1		1

**1. course name: C201**

CO	PO1	PO2	PO3
C201001.1	1		1
C201001.2	2		2
C201001.3	1		1
C201001.4	1		1
C201001.5	1		1
C201001.6	1		

**2. course name: C204**

CO	PO1	PO2	PO3
C201001.1	1		1
C201001.2	1		1
C201001.3	1		1
C201001.4	1		1
C201001.5	1		2
C201001.6	1		2




**3. course name: C303**

CO	PO1	PO2	PO3
<b>C201001.1</b>	1		
<b>C201001.2</b>	1		
<b>C201001.3</b>	1		
<b>C201001.4</b>	1		
<b>C201001.5</b>	2		2
<b>C201001.6</b>	3		2

**4. course name: C311**

CO	PO1	PO2	PO3
<b>CO301011.1</b>			1
<b>CO301011.2</b>	1	2	
<b>CO301011.3</b>	1	2	
<b>CO301011.4</b>	1	2	
<b>CO301011.5</b>	1	2	1
<b>CO301011.6</b>			1

**5. course name: C402**

CO	PO1	PO2	PO3
<b>CO401002.1</b>			
<b>CO401002.2</b>	1		
<b>CO401002.3</b>	1		1
<b>CO401002.4</b>		1	
<b>CO401002.5</b>	2		1
<b>CO401002.6</b>	1		

**6. course name: C408**

CO	PO1	PO2	PO3
<b>CO401008.1</b>	1		
<b>CO401008.2</b>	1	1	1
<b>CO401008.3</b>			
<b>CO401008.4</b>	2		
<b>CO401008.5</b>	1	1	
<b>CO401008.6</b>	1	2	



3.1.3

**A Program level Course-PO matrix of all courses INCLUDING first year courses**

05

Course Code	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
<b>First Year</b>													
107001	Engineering Mathematics – I	3.00	2.00	1.00									
107009	Engineering Chemistry	2.00	1.00	1.00									
102006	Engineering Graphics - I	2.00	2.00								1.00		
103004	Basic Electrical Engineering	1.67	1.00	1.00									
101005	Basic Civil and Environmental Engineering	1.00	1.00	1.00		1.00							
110003	Fundamentals of Programming Language – I	2.00	1.00	1.00		1.00							
107002	Workshop	1.00	1.00	1.00	1.00		1.00						
107008	Engineering Mathematics – II	3.00	2.00	1.00									
107002	Engineering Physics - I	2.00	1.33	1.00		1.00							
101013	Basic Mechanical Engg	2.00	2.00										
101011	Engg Mechanics	2.00	1.00										
104012	Basic Electronics Engg.	2.00	1.00	1.00		1.00							
110010	Fundamentals of Programming Language-II	2.00	1.00	1.00		1.00							
104012	Engineering Graphics II	1.00	1.00			1.00							
<b>Second Year</b>													
201001	Building Technology and Materials	3.00	1.00	2.00		2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00
201006	Surveying	2.83	2.00						1.00	1.00	2.17		2.83
201003	Geotechnical Engineering	2.67	2.17	2.00	2.00					2.00	2.50		2.00
201002	Strength Of Materials	3.00	2.00	1.00					1.00	1.00			
207001	Engg. Maths-III	3.00	2.00	1.00									
201005	Architectural Planning and Design of Buildings	2.83		1.67		2.00	3.00	1.00					2.00
201007	Concrete Technology	2.00		2.00	1.00	1.00	1.00	2.00					
201004	Fluid Mechanics I	2.00	1.33	1.00	1.17		2.00	1.00		1.00	1.00		1.00
201008	Structural Analysis I	3.00	2.17										
207009	Engineering Geology	3.00	2.33	2.00			1.75	1.40		1.20	1.67		1.50
201010	Soft Skills						2.00			2.00	3.00	3.00	2.00
<b>Third Year</b>													
301005	Fluid Mechanics II	2.00	2.00	1.67	1.67	1.00				2.00	2.00		1.20



301001	Hydrology and water resource Engineering	1.83	2.00	1.50	1.00	2.00		1.00			1.17		
301002	Infrastructure Engineering & Construction Techniques	1.00	2.00	1.20	1.00	2.00							
301004	Structural Analysis II	3.00	2.00										
301003	Structural Design I	3.00	2.00	2.33	1.33	1.00	1.00		1.00	2.00	1.00		
301007	Advanced Surveying	1.00	2.00	1.00	1.00	1.00		1.00				1.00	
301011	Environmental Engineering I	2.00	2.00	2.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00
301009	Foundation Engineering	2.00	2.00	1.00	1.20	1.67	1.75	1.00			1.17		
301008	Project Management and Engineering Economics	1.33	2.00	1.00	1.25	1.00	1.00	1.00				1.67	
301001	Structural Design II	3.00	2.00	2.83	1.40	1.00	2.00		1.83	2.00	1.00		
301012	Seminar	2.00	2.00	1.00	1.67	1.00	1.17	2.00	1.00	2.00	2.00	1.00	1.33
301006	Employability Skills	1.00	2.00	1.00		1.00	1.00		1.00	2.00	3.00		3.00
<b>Final Year</b>													
401001	Environmental Engineering II	2.00	2.00	2.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00
401002	Transportation Engineering	2.50	2.00	2.00	2.00	1.00	1.20	1.33	1.00	1.00	1.33	1.50	1.00
401003	Structural Design and Drawing-III	3.00	2.00	3.00	2.00	2.00	1.00		2.00	2.00	1.00		
401004	Systems Approach in Civil Engineering	1.00	2.00	1.00	1.00	1.00					1.00		
401004	Advanced Concrete Technology	3.00	1.00	1.50				2.00					
401005	TQM & MIS in Civil Engineering (Elective 2)		2.00	1.33	1.20	1.00	2.00		1.00				
401008	Quantity surveying contracts and tender	1.40	2.00	1.00	2.00	1.50	1.50		2.00	1.40	1.00	2.50	1.00
401007	Dams and hydraulic structure	2.00	2.00	2.00	2.00	2.00	2.00	1.33	1.50	2.00	1.75	1.50	1.67
401009	Air Pollution and Control	1.20	2.00	1.00		1.00	1.50	1.50	2.00		1.00	2.00	1.00
401010	Construction Management	1.00	2.00			2.00	1.00		2.00		1.00	2.00	1.00
401006	Project Work	1.83	2.00	2.00	2.00	2.00	2.00		1.80	1.67	1.50	1.00	1.83

Course Code	Course	PSO1	PSO2	PSO3
<b>First Year</b>				
107001	Engineering Mathematics - I	2.00		
107009	Engineering Chemistry	1.40		1.00
102006	Engineering Graphics - I	1.50		
103004	Basic Electrical Engineering	1.20		1.00



101005	Basic Civil and Environmental Engineering	2.00	1.00	1.67
110003	Fundamentals of Programming Language - I	1.00		
107002	Workshop	1.00		
107008	Engineering Mathematics - II	2.00		
107002	Engineering Physics - I	1.25		
101013	Basic Mechanical Engg	1.20		
101011	Engg Mechanics	2.00		1.00
104012	Basic Electronics Engg.	1.33		
110010	Fundamentals of Programming Language-II	1.00		
104012	Engineering Graphics II	1.67		
<b>Second Year</b>				
201001	Building Technology and Materials	1.17		1.20
201006	Surveying	1.00	1.00	1.00
201003	Geotechnical Engineering	2.17	2.00	2.67
201002	Strength Of Materials	1.00		1.00
207001	Engg. Maths-III	2.00		
201005	Architectural Planning and Design of Buildings	1.00	1.50	1.00
201007	Concrete Technology	2.00	2.00	
201004	Fluid Mechanics I	1.00		1.33
201008	Structural Analysis I	1.00	1.00	
207009	Engineering Geology	1.75	1.67	2.00
201010	SOFT SKILLS	1.00	1.00	1.00
<b>Third Year</b>				
301005	Fluid Mechanics II	1.00	2.00	2.50
301001	Hydrology and water resource Engineering	1.25	1.00	1.50
301002	Infrastructure Engineering & Construction Techniques	1.00		
301004	Structural Analysis II	1.00		
301003	Structural Design I	2.00	1.00	1.00
301007	Advanced Surveying	1.00		
301011	Environmental Engineering I	1.00	2.00	1.00
301009	Foundation Engineering	1.33	1.33	1.25
301008	Project Management and Engineering Economics	1.00		



301001	Structural Design II	2.00	1.00	1.00
301012	Seminar	1.67	1.50	1.33
301006	Employability Skills	1.00		3.00
<b>Final Year</b>				
401001	Environmental Engineering II	1.00	2.00	1.00
401002	Transportation Engineering	1.25	1.00	1.00
401003	Structural Design and Drawing-III	1.83	1.00	1.00
401004	Systems Approach in Civil Engineering			
401004	Advanced Concrete Technology	1.00		
401005	TQM & MIS in Civil Engineering (Elective 2)	1.00		
401008	Quantity surveying contracts and tender	1.20	1.33	1.00
401007	Dams and hydraulic structure	1.00	2.00	2.50
401009	Air Pollution and Control (Elective III)	1.20	1.33	1.00
401010	Construction Management	1.17		1.25
401006	Project Work	1.00	2.00	1.00

3.2	<b>Attainment of Course Outcomes</b>	50
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3.2.1	<b>Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based</b>	10
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### Process Details: Assessment of Course Outcome

Assessing course outcomes is an important part of evaluating the effectiveness of a course and determining whether it has achieved its intended goals. This process is carried out using following steps:

1. Define the Course outcomes: The first step is to clearly define the course outcomes of the course using Bloom's Taxonomy. This includes identifying the specific knowledge, skills, and abilities that students are expected to gain by the end of the course. For each course six Course Outcome statements are defined.
2. Develop assessment tools: Once the course outcomes have been defined, the next step is to develop assessment tools that measure whether students have achieved those outcomes.
3. Collect data: Collect data from students' performance on the assessment tools. This is done by grading exams, projects, through surveys.

4. Analyze data: Once data has been collected; it is analyzed to determine how well students have achieved the course outcomes.
5. Use data to improve the course: Finally, the data collected is used to identify areas where the course could be improved.

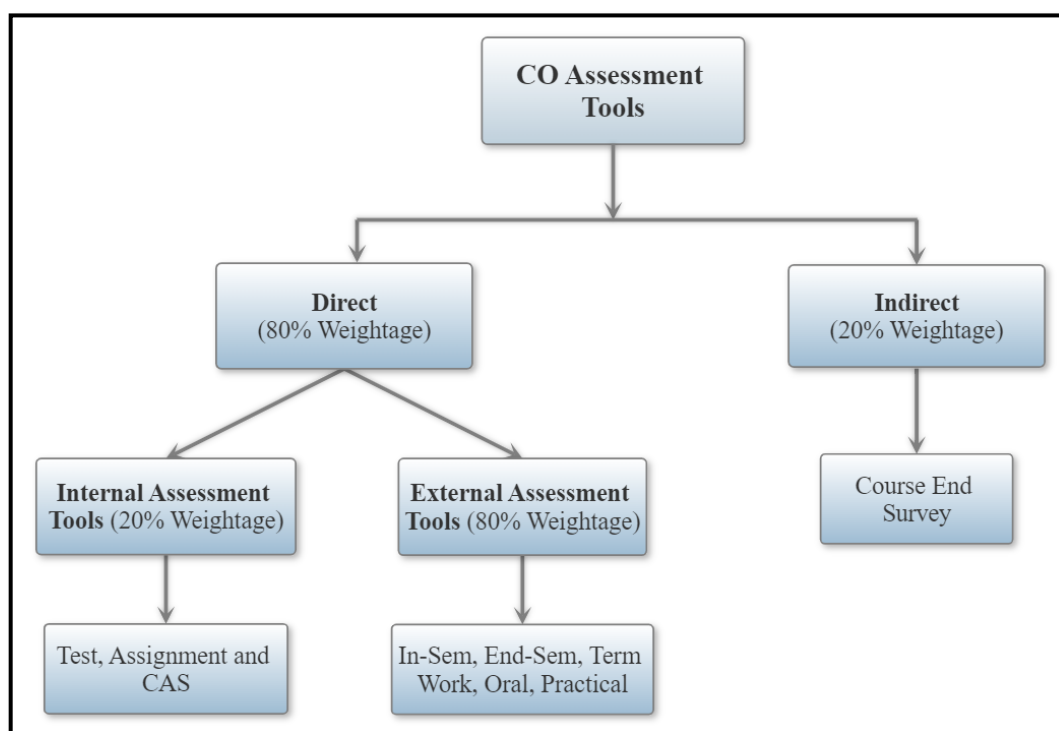
Assessing course outcomes is an iterative process that involves continuous refinement and improvement. By carefully defining course outcomes, developing appropriate assessment tools, and analysing data, course teacher ensure that their courses are effective in achieving their intended goals.

### Assessment Tools

Assessment tools are designed to evaluate the attainment of the course outcomes (COs). It is important to select assessment tools that align with the specific COs of the course and to use multiple assessment tools to provide a comprehensive evaluation of student learning. The assessment tools are chosen based on the specific course outcomes being assessed and the teaching methods being used in the course.

The evaluation of the Course Outcome (CO) involves the use of both direct and indirect assessment tools, with greater weightage assigned to the former. Specifically, 80% weightage is given to direct assessment tools, which include both internal assessments (20%) and external assessments (80%). Meanwhile, indirect assessment tools are assigned a weightage of 20%.

The CO is assessed through a combination of direct and indirect methods, with greater emphasis placed on the former. The performance of students in both internal and external assessments is taken into account, with appropriate weightage assigned to each.



**Figure B3.2.1a: Assessment tools and its weightage**



**Direct Assessment Tools:**

The assessment of Course Outcomes (COs) is evaluated using direct assessment tools, which include internal and external assessments. Internal assessments contribute 20% and external assessment contributes 80% to the overall assessment of COs.

**Theory:**

**Internal Tests and Assignments:** In order to ensure that students are keeping up with the course content, internal tests and assignments are used as effective measures of their progress. The course is divided into six units, each of which is evaluated through a corresponding test. Additionally, three assignments are given, each based on two units of the course. The questions in these assessments are designed in accordance with Bloom's Taxonomy and are mapped to the specific Course Outcomes (COs) of the course. The department sets target level for COs, against which the students' performance is evaluated.

**External Assessment:**

**University Examination:** The university conducts both in-semester and end-semester examinations to evaluate students' understanding of the course contents. The in-semester examination covers three units of the course and assesses three specific Course Outcomes (COs), while the end-semester examination covers the entire syllabus and evaluates all of the COs. These examinations are designed to test students' knowledge and comprehension of the course contents, as well as their ability to apply that knowledge to real-world situations.

**Practical:**

**Internal Assessment:** Lab courses offer students a valuable opportunity to gain hands-on experience in applying the concepts they learn in class and to develop the skills necessary for success in their field of study. To assess students' performance in these practical aspects of the course, a Continuous Assessment Sheet (CAS) is used. This sheet evaluates several parameters, including regularity, quality of experiment write-ups, and overall performance during each experiment. By using the CAS, teachers are able to track students' progress and provide constructive feedback to help them improve their skills and understanding of the lab work.

**External Assessment:**

Practical courses conclude in an end-semester examination, which may take the form of a term work, oral examination, or practical examination. This evaluation is conducted by both an external examiner and an internal examiner to ensure that the assessment is fair and objective. Through this examination, students are tested on their ability to apply the knowledge and skills they have acquired throughout the course to practical scenarios. By employing a variety of assessment formats, instructors are able to evaluate students' abilities from multiple perspectives

To assess the achievement of Course Outcomes (COs), Program Outcomes (POs), and Program



Specific Outcomes (PSOs), a range of assessment tools are used at different intervals throughout the course. Table B 3.2.1a presents a comprehensive overview of these assessment tools, including the frequency at which they are administered. By utilizing a variety of methods to evaluate learning outcomes, course teachers are able to gain a more complete understanding of students' knowledge and skills, and ensure that the curriculum is meeting the desired standards.

**Table – B3.2.1a: Mapping of assessment tools to COs, POs/PSOs with frequency**

Sr. No.	Assessment Tool	Description	Evaluation of Course Outcomes	Related POs/PSOs	Frequency of assessment per term
<b>Internal Assessment Tools</b>					
1.	Test	Written examination	Questions in the test are mapped against CO of respective course.	Corresponding mapped POs/PSOs with the CO	Six (One for each CO)
2.	Assignment	Set of question to solve to home. (Open Book)	Questions in the assignment are mapped against two CO of respective course.	Corresponding mapped POs/PSOs with the Cos	Three (one for Two COs)
3	Continues Assessment Sheet (CAS)	Assessment of students during practical	Based on the COs mapped with the experiments / assignments	Corresponding mapped POs/PSOs with the Cos	For each experiment/ assignment during practical.
<b>External Assessment Tools</b>					
4	In-Sem Exam	Written examination	Questions in the exam are mapped against COs corresponds to first three units of respective course.	Corresponding mapped POs/PSOs with the Cos	One (Mid of the Term)
5	End-Sem Exam	Written examination	Questions in the exam are mapped against COs corresponds to complete syllabus of respective	Corresponding mapped POs/PSOs with all Cos	One (End of the Term)



			course.		
6	Term Work	Based on the continues assessment during practical sessions –CAS is used	Based on the COs mapped with the experiments / Assignments	Corresponding mapped POs/PSOs with the Cos	One (End of the Term)
7	Oral/Practical	Based on the experiments / assignment performed during practical session	Based on the COs mapped with the experiments / Assignments	Corresponding mapped POs/PSOs with the Cos	One (End of the Term)
8	Seminar	Based on the continues assessment during practical sessions – CAS is used	Based on the COs mapped	Corresponding mapped POs/PSOs with the Cos	One (End of the Term)
9	Project	Based on the continues assessment during internal review and university exams, CAS and rubrics are used	Based on the COs mapped	Corresponding mapped POs/PSOs with the Cos	External – One (End of the Term) and Internal Review – Two in Term

### Indirect assessment tool – Course End Survey

A course end survey is a feedback tool used to gather information from students at the conclusion of a course. Its purpose is to assess the effectiveness of the course. Typically administered in the final week of the course, the survey covers course content in the form of CO statements.

To be effective, course end surveys are well-designed and focused on relevant and meaningful questions. Course teacher carefully analyze the results of the survey and make necessary changes to their course design and teaching methods based on the feedback received.

The weightage assigned to the indirect assessment tool in CO attainment highlights its importance in evaluating the effectiveness of the course design and teaching methods. By using this feedback to make informed decisions about course improvements, Course teacher ensure that future iterations of the course are even more effective in helping students to achieve their learning goals.

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

*Program shall have set Course Outcome attainment levels for all courses.*

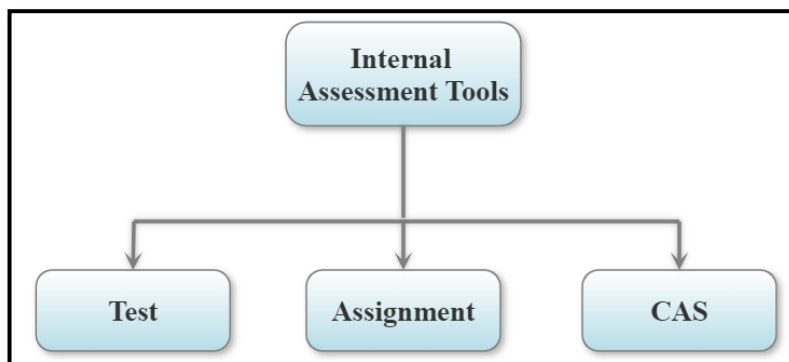
*(The attainment levels shall be set considering average performance levels in the university examination or any higher value set as target for the assessment years. Attainment level is to be measured in terms of student performance in internal assessments with respect to the Course Outcomes of a course in addition to the performance in the University examination)*

### Evaluation of CO Attainment by Direct Assessment Tool

The evaluation of course outcome (CO) attainment by assessment tool involves a systematic process of collecting and analyzing data to determine the extent to which the course objectives have been met. The following steps are taken for this evaluation:

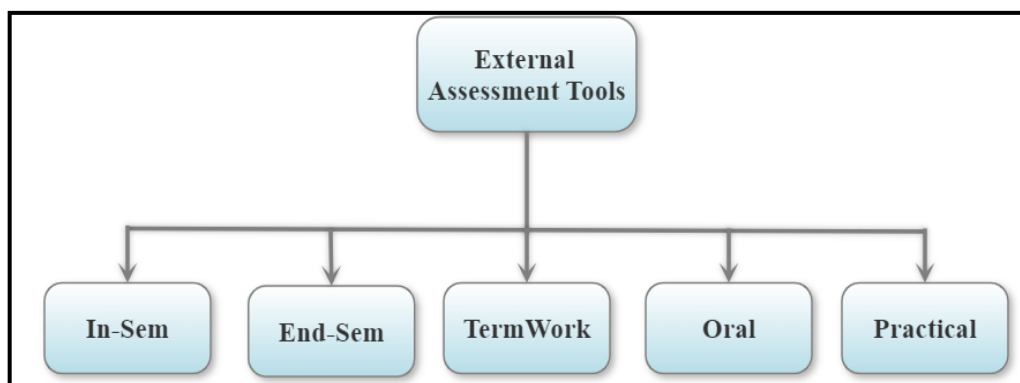
- a) Choose an appropriate assessment tool: Different tools internal and external assessment tools that are used. The choice of tool is aligning with the objectives and course outcomes of the course.
- b) Determine assessment criteria: The assessment criteria are clearly defined and communicated to students. So that students will understand what is expected from them and how their performance will be evaluated.
- c) Administer assessment: The assessment tools are administered in a fair and consistent manner.
- d) Analyse results: The results of the assessment should be analyzed to determine the extent to which the course objectives have been met. This analysis should take into account the strengths and weaknesses of the students and the course. This analysis can be used to inform future instructional strategies and to improve the course content.
- e) Evaluate the effectiveness of the assessment: It is important to evaluate the effectiveness of the assessment to determine if it has been successful in achieving its intended purpose. This evaluation may involve soliciting feedback from students or conducting a review of the assessment process.

Internal assessment tools consist of Test, Assignment, Continuous Assessment Sheet for Practical (CAS) to evaluate CO attainment level.



**Figure B 3.2.2a: Internal assessment tools**

External assessment tools consist of university examination such as In-Sem Exam, End Semester Exam, Oral, Practical, Seminar and Project examinations.



**Figure B3.2.2b: External assessment tools**

### Attainment Levels

Attainment levels for Course Outcomes (COs) are a measure of students' achievement in meeting the course objectives. These levels are assessed using a variety of tools, and the attainment level may be stated as a percentage of students expected to achieve a certain threshold of marks. The attainment level is then measured as the actual percentage of students who meet or exceed the set threshold.

The defined attainment levels are;

Attainment Level 1: **20% to less than 60%** students scoring more than **60%** marks out of the relevant maximum marks.

Attainment Level 2: **60% to less than 70%** students scoring more than **60%** marks out of the relevant maximum marks.

Attainment Level 3: More than **70%** students scoring more than **60%** marks out of the relevant maximum marks.

### Mapping of Assessment Tools and COs

Mapping assessment tools and COs is an important part of the assessment process and can help to ensure that student performance is evaluated consistently and effectively.

Mapping of assessment tools and course outcomes (COs) involves identifying which assessment tools are appropriate for evaluating specific COs. This process ensures that the assessment tools align with the intended learning outcomes and measure the desired knowledge, skills, and abilities. This process also helps to ensure that the assessment methods are valid and reliable, and that they provide accurate and meaningful information about student learning.

### Weighted average method

The weighted average method is a technique used to calculate the CO attainment from attainment values by tools. To use the weighted average method, weights are assigned to each tool based on maximum marks assigned to it, its relative importance, contribution to the overall attainment.

The steps involved in using the weighted average method to calculate CO attainment are as follows:

- i. Decide on the assessment tools to be employed in calculating CO attainment.



- ii. Establish the level of attainment for each tool used in the process, which will be measured on a scale of 1 to 3.
- iii. Assign weights to each tool based on its Maximum Marks. The weight for each tool will be calculated as the ratio of its Maximum Marks to the total marks assigned to all selected tools for calculating CO attainment.
- iv. Multiply each tool's level of attainment by its corresponding weight
- v. Sum up the weighted attainment values for all the tools to get CO attainment.

For example, if three tools are used with maximum marks assigned as 20, 30, 40 (Total Maximum Marks = 90), and the CO attainment values for the tools are 2, 1, and 3, weights assigned as (20/90), (30/90) and (40/90), respectively, based on the maximum marks for each tool in measuring the CO attainment.

To calculate the weighted average CO attainment, following formula is used:

Weighted average CO attainment = (Tool 1 attainment \* Weight 1) + (Tool 2 attainment \* Weight 2) + (Tool 3 attainment \* Weight 3) + ...

In the example above, the weighted average CO attainment would be:

Weighted average CO attainment =  $(2 * 20/90) + (1 * 30/90) + (3 * 40/90) = 2.11$

Therefore, the weighted average CO attainment for the three tools is 2.11.

Let's take an another example of a course that has six Course Outcomes (CO.1 to CO.6), and for each CO, specific assessment tools are used along with their corresponding maximum marks ( $M_i$ ), as shown in the table below. Based on the performance of students and target values, CO attainment levels can be determined for each assessment tool as  $A_i$ .

**Table B3.2.2a: Mapping of Cos with Assessment Tools**

Assessment Tool	Internal				External		
	Test-1	Test-2	Assignment	CAS	In-Sem	End Sem	Term Work
COs Mapped	<i>CO.1</i>	<i>CO.2</i>	<i>CO.1 &amp; 2</i>	<i>All COs</i>	<i>CO.1 &amp; 2</i>	<i>All COs</i>	<i>All COs</i>
Maximum Marks	<i>M1</i>	<i>M2</i>	<i>M3</i>	<i>M4</i>	<i>M5</i>	<i>M6</i>	<i>M7</i>
CO Attainment Level	<i>A1</i>	<i>A2</i>	<i>A3</i>	<i>A4</i>	<i>A5</i>	<i>A6</i>	<i>A7</i>

Since different assessment tools are used to evaluate each Course Outcome, the average attainment of each CO will depend on the attainment level obtained from each tool. For instance, the average attainment level of CO.1 will depend on the attainment levels obtained through various internal assessment tools, such as Test 1, Assignment 1, and CAS, as well as external assessment tools, such as In-Sem, End Sem, and Term work. If an assessment tool is used for multiple COs, the maximum marks can be distributed equally among those COs.





For example, if Assignment 1 is used as an assessment tool for CO.1 and CO.2, the maximum mark can be distributed equally between both COs, i.e., M3/2 for each CO. When calculating the attainment levels for external tools, such as End Sem Exam, CO-wise mark distribution should be considered. Additionally, the average CO attainment for internal tools and external tools should be calculated separately.

Average CO Attainment for particular CO using multiple assessment tools can be calculated as  $\Sigma \text{weightage} * \text{CO attainment}$

**Table B3.2.2b: CO Attainment calculations for Internal Assessment Tools**

Average CO Attainment by Internal Assessment Tools				
CO	Assessment Tool, Weightage and Attainment Level			Total
CO.1	Test-1	Assig.-1	CAS	
Marks for CO.1	M1/1	M1/2	M4/6	<b>Mint1</b>
Weightage	WT1 = M1 / (1*Mint1)	WA1 = M1 / (2*Mint1)	WCS = M4 / (6*Mint1)	<b>1</b>
CO Attainment	A1	A3	A4	
<b>Average CO Attainment (Aint)</b>		<b>= WT1*A1 + WA1*A3 + WCS*A4</b>		

**Table B3.2.2c: CO Attainment calculations for External Assessment Tools**

Average CO Attainment by External Assessment Tools				
CO	Assessment Tool, Weightage and Attainment Level			Total
CO.1	In-Sem	End Sem	Term Work	
Marks for CO.1	M5/2	M6/6	M7/6	<b>Mext1</b>
Weightage	WI1 = M5 / (2*Mext1)	WE1 = M6 / (6*Mext1)	WTW = M7 / (6*Mext1)	<b>1</b>
CO Attainment	A5	A6	A7	
<b>Average CO Attainment (Aext)</b>		<b>= WI1*A5 + WE1*A6 + WTW*A7</b>		

The CO attainment level by direct tools is calculated by giving 20% weightage to the average CO attainment level obtained from internal assessment tools and 80% weightage to the average CO attainment level obtained from external assessment tools.

CO attainment for CO1 = 0.2 X Aint + 0.8 X Aext

### CO Attainment Level by Indirect Assessment Tool

Mapping the survey questions to the COs enables course teacher to better understand the degree to which students have achieved the desired course outcomes. Standardizing the survey form ensures consistency across different courses, while a rating scale allows for a more nuanced and

detailed assessment of student performance.

At the end of each course, a customized survey form is created with questions directly linked to the Course Outcomes (COs). Responses to these questions are collected through forms that typically use a 1-3 scale (with low to high ratings). Average of all the responses to respective CO is considered as CO attainment. The data is then used to compute the indirect CO attainment, which is given a weightage of 20% in the overall CO attainment assessment.

### Overall CO Attainment Level for Course

To evaluate and assess COs, multiple tools are used, including direct assessment tools such as internal assessment and external assessment tools (university exams). When calculating CO attainment using direct assessment tools, 20% weightage is given to internal assessment tools, and 80% weightage is given to external assessment tools.

The weightage for CO attainment by direct assessment tools is 80%, while the weightage for the indirect assessment tool (Course End Survey) is 20%.

Thus, CO attainment using all the tools is



### Target for CO attainment

Target for CO attainment refers to the desired level of achievement or proficiency that a student is expected to reach for a particular course outcome (CO). It should be set by the department offering the course, and it serves as a benchmark for evaluating the effectiveness of the course in achieving its intended learning outcomes.

By setting clear targets for CO attainment, course teacher and institutions can monitor student progress and make adjustments to the course as needed to ensure that students are meeting the desired learning outcomes.

### Action upon CO attainment values

- **All of CO targets are not attained**

Corrective actions are taken based on the CO attainment values in order to improve the quality of education provided. If the attainment value for all COs is consistently low, it indicates that students are not achieving the expected learning outcomes for COs. In this case, the following corrective actions can be taken:

a) Teaching methodology: Teaching methodology can be evaluated and revised to ensure that it is effective and aligns with the COs. This could involve adopting new instructional methods or revising existing ones to better support student learning.

b) Assessment tools: Assessment tools can be reviewed and revised to ensure they accurately measure student learning and achievement of the COs. This could involve creating new assessment tools or revising existing ones to better align with the COs.

c) Faculty development: Faculty can be provided with professional development opportunities to enhance their teaching skills and keep up with the latest pedagogical techniques and strategies.

d) Learning resources: The availability and accessibility of learning resources can be improved to better support student learning and achievement of the COs.

e) Student support services: Student support services can be improved to provide additional assistance to students who may be struggling to achieve the COs.

By taking these corrective actions, the attainment of COs is improved, and the overall quality of education provided can be enhanced. In this case maintain the same CO targets.

- **Some of CO targets are not attained**

When deciding whether to change CO targets for the next academic year based on the attainment values, it is important to consider multiple factors. Here are some suggestions for improving this approach:

a) Analyze the distribution of CO attainment values: It's important to analyze the distribution of CO attainment values to identify any gaps or areas of improvement. For example, if some COs are consistently below the target value while others are above it, it may be more effective to focus on improving the performance in the weaker areas before changing the target value for COs.

b) Consider the difficulty level of COs: The difficulty level of COs can vary, and some COs may be more challenging than others. Therefore, it's important to consider the difficulty level of COs when deciding whether to increase the target value. COs that are already at a high level of attainment may not require an increase in the target level, whereas those that are below the target level and have higher difficulty levels may require more attention.

c) Align CO targets with program and industry standards: CO targets should be aligned with the program and industry standards to ensure that students are adequately prepared for their future careers.

By taking these factors into consideration, course teacher can make informed decisions about whether to increase the CO target values based on attainment values, and if so, how much to increase them. This approach can help ensure that CO targets are tailored to the needs of the learners and the demands of the industry, while also providing students with the necessary skills and competencies.

- **All of CO targets are attained**

When all CO targets are attained, it is important to reassess the CO targets and set new targets for the next academic year. Here are some suggestions to improve this process:

a) Analyze the CO attainment values: Before setting new CO targets, it is important to analyze the CO attainment values to identify areas of strength and areas for improvement. This analysis can help inform the setting of new targets that are challenging and realistic.

b) Consider industry and program standards: CO targets should be aligned with industry and program standards to ensure that students are well-prepared for their future careers. Therefore, it is important to consider these standards when setting new CO targets.

d) Use a data-driven approach: Setting new CO targets based on the average of all CO attainment values may be the one of the approaches. Instead, a data-driven approach that takes into account the distribution of CO attainment values and the difficulty level of each CO can help ensure that new targets are appropriately challenging and achievable.

By following these suggestions, educators can set new CO targets that are tailored to the needs of the learners and the demands of the industry. This can help ensure that students are well-prepared for their future careers and have the necessary skills and competencies to succeed.

- **CO attainment values at Maximum Level (nearly equal to 3.00)**

When CO attainment values are already at the maximum level, further improvements can still be made to the course outcomes by adopting the following strategies:

a) Increase the level of challenge: When the attainment level is already at the maximum, one way to improve the COs is to increase the level of challenge for the students. This can be achieved by adding more complex and advanced course content, assessments, and/or projects. By doing this, students can continue to learn and grow even if they have already reached the maximum attainment level.

b) Update the criteria for attainment level: When the attainment level is already at the maximum, it may be necessary to update the criteria for the attainment level to ensure that it remains challenging and relevant.

For example, new target value and criteria can be,

Attainment Level 1: 20% to 60% students scoring more than **65% marks** out of the relevant maximum marks.

Attainment Level 1: **40% to 70%** students scoring more than 60% marks out of the relevant maximum marks.

By adopting these strategies, course teacher continues to improve the course outcomes even when the attainment level is already at the maximum. It is important to remember that course outcomes should be designed to provide students with the knowledge, skills, and competencies.

Course Outcome of all courses are listed in table below:


**Table B 3.2.2d CO – Attainment for Cycle 1**

Course Code	Course	CO1	CO2	CO3	CO4	CO5	CO6
<b>First Year</b>							
107001	Engineering Graphics - I	1.74	1.74	1.15	1.15	0.80	0.80
107009	Basic Electrical Engineering	1.34	1.31	1.34	1.29	1.00	0.97
102006	Basic Civil and Environmental Engineering	1.07	1.05	1.15	1.07	0.80	0.79
103004	Fundamentals of Programming Language - I	1.78	1.60	1.63	1.40	0.92	1.29
101005	Workshop	2.60	2.56	2.40	2.40	1.63	1.61
110003	Engineering Mathematics - II	0.60	0.60	1.32	1.24		
107002	Engineering Physics - I	2.98	2.98	2.98	2.98		
107008	Basic Mechanical Engg	1.41	1.40	1.09	1.09	0.96	0.96
107002	Engg Mechanics	1.44	1.43	1.66	1.66	1.66	1.65
101013	Basic Electronics Engg.	1.39	1.46	1.23	1.31	1.25	1.08
101011	Fundamentals of Programming Language-II	1.57	1.33	1.57	1.33	1.62	1.61
104012	Engineering Graphics II	1.62	1.58	1.56	1.56	1.14	1.11
110010	Engineering Graphics - I	1.45	1.52	1.61	1.57		
104012	Basic Electrical Engineering	1.77	1.77	1.77	1.77	1.77	1.77
<b>Second Year</b>							
201001	Building Technology and Materials	1.84	1.82	1.84	1.84	1.93	1.90
201006	Surveying	1.63	1.62	1.60	1.63	1.61	1.60
201003	Geotechnical Engineering	1.57	1.53	1.54	1.56	1.39	1.37
201002	Strength of Materials	1.57	1.56	1.55	1.56	1.72	1.72
207001	Engineering mathematics III	1.55	1.53	1.55	1.55	1.67	1.65
201005	Architectural Planning and Design of Buildings	2.10	2.07	2.25	2.25	1.78	1.76
201007	Concrete Technology	2.11	2.10	2.11	2.11	1.95	1.94
201004	Fluid Mechanics I	1.66	1.65	1.66	1.66	1.73	1.71
201008	Structural Analysis I	1.41	1.41	1.43	1.48	1.48	1.44
207009	Engineering Geology	1.62	1.59	1.62	1.61	1.48	1.45
201010	Soft Skills	3.00	3.00	3.00	3.00	3.00	3.00
<b>Third Year</b>							
301005	Fluid Mechanics II	1.57	1.60	1.58	1.58	1.56	1.56
301001	Hydrology and water resource Engineering	1.09	1.10	1.09	0.96	0.96	0.96
301002	Infrastructure Engineering & Construction Techniques	1.50	1.72	1.68	1.40	1.42	1.42
301001	Structural Analysis II	2.43	2.47	2.43	1.65	1.66	1.63



301003	Structural Design I	1.78	1.80	1.77	1.63	1.61	1.61
301007	Advanced Surveying	1.66	1.68	1.70	1.68	1.66	1.68
301011	Environmental Engineering I	2.22	2.27	2.23	1.70	1.68	1.70
301009	Foundation Engineering	1.27	1.28	1.27	1.10	1.09	1.10
301008	Project Management and Engineering Economics	2.28	2.32	2.26	1.63	1.59	1.62
301001	Structural Design II	1.87	1.91	1.88	1.71	1.62	1.62
301012	Seminar	2.92	2.97	2.93	2.93	2.92	2.91
301006	Employability Skills	3.00	3.00	3.00	3.00	3.00	3.00
<b>Final Year</b>							
401001	Environmental Engineering II	2.54	2.64	2.60	2.12	2.10	2.10
401002	Transportation Engineering	2.43	2.47	2.43	1.95	1.93	1.93
401003	Structural Design and Drawing-III	1.91	1.97	1.90	2.00	1.98	1.98
401004	Systems Approach in Civil Engineering	2.42	2.44	2.43	2.15	2.14	2.30
401005	TQM & MIS in Civil Engineering	2.42	2.47	2.42	2.16	2.14	2.24
401008	Quantity surveying contracts and tender	2.34	2.37	2.33	2.90	2.89	2.90
401007	Dams and hydraulic structure	2.42	2.41	2.42	2.94	2.94	2.92
401009	Air Pollution and Control	2.33	2.33	2.40	2.71	2.73	2.73
401010	Construction Management	2.76	2.74	2.78	2.74	2.94	2.96
401006	Project Work	2.96	2.94	2.96	2.95	2.93	2.91




**Table B 3.2.2 e CO – Attainment for Cycle 2**

Course Code	Course	CO1	CO2	CO3	CO4	CO5	CO6
<b>First Year</b>							
107001	Engineering Graphics - I	1.39	1.38	1.36	1.36	1.18	1.18
107009	Basic Electrical Engineering	1.28	1.26	1.34	1.34	1.06	1.03
102006	Basic Civil and Environmental Engineering	1.91	1.88	1.85	1.85	1.27	1.26
103004	Fundamentals of Programming Language - I	1.10	1.10	1.35	1.32		
101005	Workshop	2.91	2.91	2.91	2.91		
110003	Engineering Mathematics - II	1.01	0.99	0.89	0.89	0.46	0.46
107002	Engineering Physics - I	1.31	1.29	1.28	1.28	1.17	1.14
107008	Basic Mechanical Engg	1.18	1.17	1.18	1.18	1.31	1.29
107002	Engg Mechanics	1.29	1.29	1.29	1.29	1.57	1.55
101013	Basic Electronics Engg.	1.34	1.33	1.40	1.40	1.44	1.42
101011	Fundamentals of Programming Language-II	1.48	1.48	1.49	1.54		
104012	Engineering Graphics II	2.89	2.89	2.89	2.89	2.89	2.89
110010	Engineering Graphics - I	1.39	1.38	1.36	1.36	1.18	1.18
104012	Basic Electrical Engineering	1.28	1.26	1.34	1.34	1.06	1.03
<b>Second Year</b>							
201001	Building Technology and Materials	1.95	1.95	1.96	1.97	2.51	2.49
201006	Surveying	1.42	1.39	1.41	1.41	1.41	1.39
201003	Geotechnical Engineering	1.39	1.39	1.39	1.41	1.21	1.19
201002	Strength of Materials	1.59	1.59	1.59	1.62	1.69	1.68
207001	Engineering mathematics III	1.49	1.46	1.49	1.49	1.50	1.47
201005	Architectural Planning and Design of Buildings	1.99	1.92	1.75	1.75	1.97	1.93
201007	Concrete Technology	1.53	1.51	1.52	1.51	1.75	1.74
201004	Fluid Mechanics I	1.15	1.16	1.15	1.15	1.40	1.41
201008	Structural Analysis I	0.91	0.91	0.96	1.07	1.19	1.16
207009	Engineering Geology	1.47	1.46	1.48	1.84	1.72	1.69
201010	Soft Skills	3.00	3.00	3.00	3.00	3.00	3.00
<b>Third Year</b>							
301005	Fluid Mechanics II	1.80	1.73	1.80	1.85	1.83	1.83
301001	Hydrology and water resource Engineering	1.62	1.47	1.54	1.63	1.30	1.30
301002	Infrastructure Engineering & Construction Techniques	1.57	1.50	1.49	1.52	1.53	1.63
301001	Structural Analysis II	1.64	1.55	1.48	1.47	1.46	1.63



301003	Structural Design I	1.87	2.02	1.99	1.57	1.61	1.61
301007	Advanced Surveying	1.92	1.98	1.96	1.87	1.85	1.84
301011	Environmental Engineering I	2.35	2.38	2.36	2.07	1.98	2.03
301009	Foundation Engineering	1.68	1.61	1.65	1.49	1.42	1.33
301008	Project Management and Engineering Economics	2.32	2.32	2.37	2.08	2.18	2.31
301001	Structural Design II	2.39	2.36	2.34	2.62	2.59	2.60
301012	SEMINAR	3.00	3.00	3.00	3.00	3.00	3.00
301006	Employability Skills	3.00	3.00	3.00	3.00	3.00	3.00
<b>Final Year</b>							
401001	Environmental Engineering II	2.92	2.92	2.92	2.93	2.84	2.90
401002	Transportation Engineering	2.93	2.93	2.92	2.93	2.91	2.92
401003	Structural Design and Drawing-III	2.88	2.88	2.86	2.80	2.96	2.78
401005	TQM & MIS in Civil Engineering	2.91	2.89	2.88	2.75	2.70	2.75
401008	Quantity surveying contracts and tender	2.93	2.94	2.94	2.93	2.94	2.92
401007	Dams and hydraulic structure	2.93	2.92	2.92	2.76	2.75	2.75
401009	Air Pollution and Control	2.86	2.84	2.84	2.86	2.86	2.87
401010	Construction Management	2.65	2.62	2.63	2.61	2.62	2.64
401006	Project Work	2.92	2.93	2.93	2.93	2.92	2.92


**Table B 3.2.2 f CO – Attainment for Cycle 3**

Course Code	Course	CO1	CO2	CO3	CO4	CO5	CO6
<b>First Year</b>							
107001	Engineering Graphics - I	1.42	1.42	1.25	1.36	1.28	1.28
107009	Basic Electrical Engineering	1.74	1.72	1.48	1.48	1.43	1.41
102006	Basic Civil and Environmental Engineering	1.70	1.67	2.09	2.09	0.96	0.96
103004	Fundamentals of Programming Language - I	1.26	1.24	1.10	1.10	0.75	0.73
101005	Workshop	2.19	2.16	2.05	2.05	1.57	1.57
110003	Engineering Mathematics - II	0.95	0.95	1.03	1.03		
107002	Engineering Physics - I	2.88	2.88	2.88	2.88		
107008	Basic Mechanical Engg	1.01	1.00	1.01	1.09	0.88	0.88
107002	Engg Mechanics	1.26	1.24	1.26	1.26	1.20	1.17
101013	Basic Electronics Engg.	1.40	1.39	1.40	1.40	1.51	1.49
101011	Fundamentals of Programming Language-II	1.31	1.28	1.31	1.31	1.02	0.98
104012	Engineering Graphics II	1.45	1.44	1.45	1.45	1.55	1.53
110010	Engineering Graphics - I	1.10	1.10	1.34	1.34		
104012	Basic Electrical Engineering	2.89	2.89	2.89	2.89	2.89	2.89
<b>Second Year</b>							
201001	Building Technology and Materials	1.79	1.82	1.85	1.85	2.02	1.98
201006	Surveying	1.30	1.23	1.23	1.31	1.46	1.45
201003	Geotechnical Engineering	1.92	1.90	1.81	1.90	1.85	1.93
201002	Strength of Materials	1.55	1.67	1.60	1.60	1.81	1.83
207001	Engineering mathematics III	2.17	2.29	2.17	2.17	1.78	1.76
201005	Architectural Planning and Design of Buildings	2.90	2.93	2.89	2.93	2.94	2.94
201007	Concrete Technology	2.82	2.89	2.97	2.89	2.97	2.97
201004	Fluid Mechanics I	2.57	2.65	2.65	2.65	2.65	2.65
201008	Structural Analysis I	2.77	2.82	2.89	2.85	2.85	2.84
207009	Engineering Geology	2.90	2.91	2.91	2.90	2.90	2.91
201010	Soft Skills	3.00	3.00	3.00	3.00	3.00	3.00
<b>Third Year</b>							
301005	Fluid Mechanics II	2.95	2.95	2.95	2.95	2.95	2.95
301001	Hydrology and water resource Engineering	2.90	2.90	2.89	2.90	2.90	2.90
301002	Infrastructure Engineering & Construction Techniques	2.89	2.91	2.90	2.92	2.92	2.91
301001	Structural Analysis II	2.78	2.86	2.70	2.93	2.95	2.94



301003	Structural Design I	2.59	2.87	2.83	2.83	2.77	2.83
301007	Advanced Surveying	2.95	2.95	2.95	2.95	2.95	2.95
301011	Environmental Engineering I	2.91	2.91	2.91	2.91	2.91	2.90
301009	Foundation Engineering	2.84	2.82	2.88	2.90	2.90	2.66
301008	Project Management and Engineering Economics	2.86	2.93	2.95	2.92	2.93	2.93
301001	Structural Design II	2.75	2.82	2.94	2.94	2.84	2.81
301012	Seminar	3.00	3.00	3.00	3.00	3.00	3.00
301006	Employability Skills	3.00	3.00	3.00	3.00	3.00	3.00
<b>Final Year</b>							
401001	Environmental Engineering II	2.91	2.92	2.90	2.91	2.89	2.91
401002	Transportation Engineering	2.88	2.89	2.88	2.89	2.89	2.89
401003	Structural Design and Drawing-III	2.72	2.94	2.83	2.95	2.67	2.74
401004	Advanced Concrete Technology	2.85	2.94	2.92	2.93	2.92	2.92
401005	TQM & MIS in Civil Engineering	2.82	2.81	2.57	2.85	2.81	2.73
401008	Quantity surveying contracts and tender	2.50	2.54	2.50	2.02	2.00	2.00
401007	Dams and hydraulic structure	2.21	2.22	2.08	2.09	2.08	2.01
401009	Air Pollution and Control	2.50	2.54	2.50	2.29	2.27	2.26
401010	Construction Management	2.44	2.39	2.42	2.92	2.91	2.91
401006	Project Work	2.96	2.96	2.95	2.95	2.97	2.97

<b>3.3</b>	<b>Attainment of Program Outcomes and Program Specific Outcomes</b>	<b>50</b>
<b>3.3.1</b>	<b>Describe the assessment tools and processes used for measuring the attainment of each of the Program Outcomes and Program Specific Outcomes</b>	<b>10</b>

Assessment of program outcomes (POs) and program-specific outcomes (PSOs) is an essential part of the evaluation and improvement of academic programs.

In outcome-based education, program outcomes (POs) serve as a guide for curriculum design, delivery, and assessment of student learning. To ensure alignment, a "design down" process is employed, where outcomes are cascaded from POs to Course Outcomes (COs) and outcomes for individual learning experiences.

To connect high-level learning outcomes (POs) with course content, course outcomes, and



assessment, there is a need to bring further clarity and specificity to the program outcomes. This can be achieved through a two-step process of identifying competencies and defining performance indicators (PIs). Competencies are different abilities implied by program outcome statements, while PIs are explicit statements of expectations of student learning.

Once the competencies and PIs are identified, the assessment of COs for all courses is designed by connecting assessment questions to the PIs. By following this process, where examination questions map with PIs, there is better resolution for the assessment of COs and POs. Ultimately, the achievement of POs is crucial for the effectiveness of the program and needs to be proven through accurate and reliable assessments.

Assessing POs and PSOs typically involves gathering evidence of student learning, analysing that evidence, and using it to improve teaching and learning. The key steps involved in the assessment process:

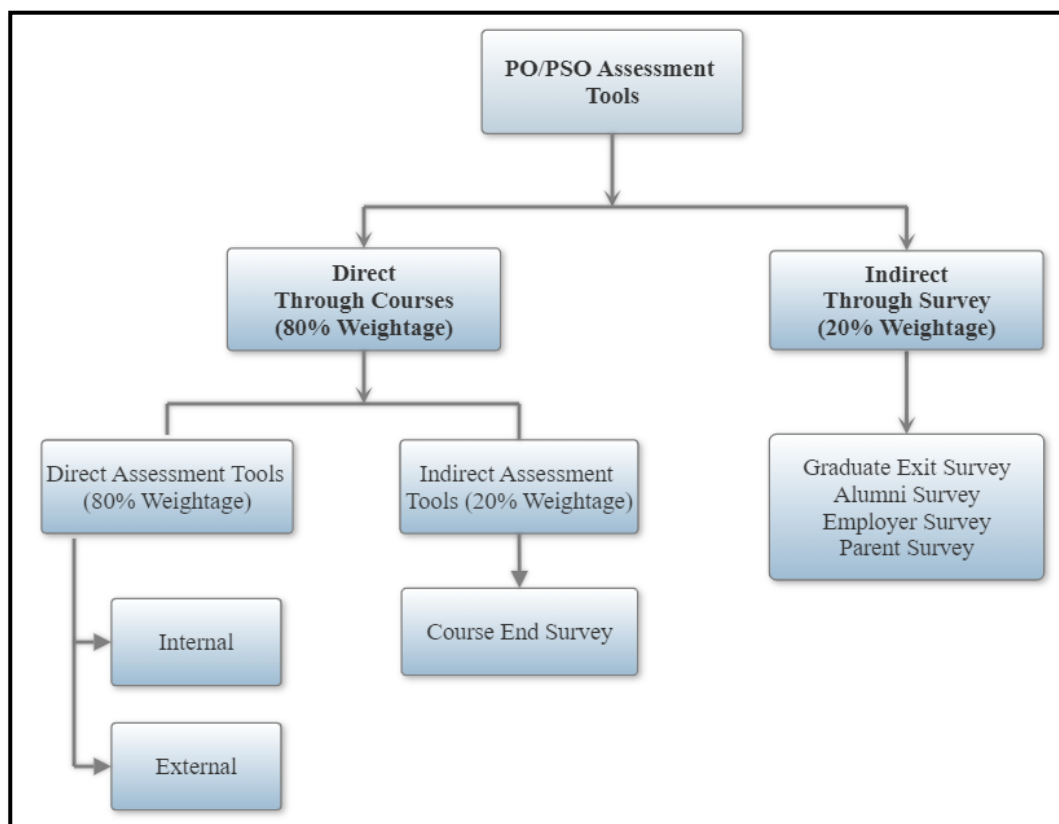
1. **Develop assessment criteria:** Develop criteria for assessing program outcomes and PSOs. The criteria are measurable, observable, and achievable. This includes developing rubrics or other assessment tools that allow for objective and consistent evaluation.
2. **Collect data:** Collect data on student performance related to program outcomes and PSOs. This includes assessments of student work, surveys of student.
3. **Analyse data:** Analyse the data to assess how well the program is meeting its outcomes and PSOs. This includes comparing student performance to the established criteria and identifying areas of strength and weakness.
4. **Use results for improvement:** Use the results of the assessment to identify areas where improvement is needed and develop strategies to address these areas. This involves changes teaching methods, or assessment methods or providing additional resources to students to help them meet the Program Outcomes and PSOs.

### **PO and PSO Assessment tools**

PO (Program Outcomes) and PSO (Program Specific Outcomes) assessment tools are used to evaluate the overall effectiveness of a program and to ensure that it meets the required standards. There are various tools and techniques that can be used to assess POs and PSOs, some of which include:

- a) **Direct assessment tools:** These tools assess the students' achievement of POs/PSOs through internal and external assessment. Internal assessment tools include assignments, test, CAS, etc. whereas external assessment tools include university theory exams, Oral, Term work, Practical, Seminar, Project etc. Direct assessment tools are used to measure students' performance against the pre-defined performance indicators.
- b) **Indirect assessment tools:** These tools evaluate the effectiveness of the program in terms of student satisfaction, feedback, and perception. Indirect assessment tools include surveys. Exit

surveys are conducted with graduating students to evaluate the overall effectiveness of the program. Exit surveys can provide feedback on areas of strength and areas for improvement. The tools used for assessment of POs/PSOs are same which are used for assessment of COs. These tools are defined in **Table – B 3.2.1a**.



**Figure B3.3.1a: PO/PSO assessment tools**

The steps taken are

- Weightage Distribution:** A balanced distribution of weightage is used for direct and indirect assessment methods. A suggested distribution is 80% weightage for direct assessment and 20% weightage for indirect assessment, as both methods have their own strengths and limitations.
- Direct Assessment:** Direct assessment of POs and PSOs is based on the attainment of COs, where COs are mapped to POs and PSOs.
- Indirect Assessment:** Indirect assessment of POs and PSOs is conducted through surveys targeting different stakeholders. These surveys include graduate exit survey, employer survey, parent survey, and alumni survey. The weightage for each survey is equal.

### Attainment Levels of POs/PSOs

The various direct assessment tools used to evaluate COs, PO/PSOs and the frequency with which the assessment processes are carried out are listed in **Table 1**.

Tools used to evaluate PO/PSO attainment are same as that of CO attainment. Attainment Levels for internal as well as external assessment tools are also same for PO/PSO attainment and defined as;





**Attainment Level 1: 20% to 60 %** students scoring more than **60%** marks out of the relevant maximum marks.

**Attainment Level 2: 60% to 70 %** students scoring more than **60%** marks out of the relevant maximum marks.

**Attainment Level 3: More than 70%** students scoring more than **60%** marks out of the relevant maximum marks.

In order to assess attainment levels of program outcomes (POs) and program-specific outcomes (PSOs), the same tools and criteria used to define course outcomes (COs) attainment levels are applied. As a result, the attainment levels of COs are used to calculate the attainment levels of PSOs and POs. Direct assessment of PSOs and POs is based on the attainment levels of COs and the degree of correlation between them.

Sample calculation for PO/PSO attainment is described in following three steps:

### Step – 1

CO Attainment and CO – PO/PSO mapping is defined for course by correlation level low to high (1 to 3).

**Table B3.3.1a: CO - PO Mapping**

Course Outcomes	CO Attainment	Program Outcomes			
		PO1	PO2	PO3	PSO1
CO207002.1	2.5	3	1		
CO207002.2	2.8	3	2	1	1
CO207002.3	2.3	2	2		2
CO207002.4	1.5	2	1	1	1
CO207002.5	2.0	1	1		
CO207002.6	3.0	3	3		

### Step – 2

The program-specific outcome (PSO) or program outcome (PO) attainment is based on the level of mapping between the POs and course outcomes (COs) and the CO attainment level.

Direct PO/PSO attainment is calculated using following formula:

**PO/PSO attainment = (Level of Mapping of PO with CO X CO attainment Level) / 3**

**Table B3.3.1b: PO/PSO Attainment Calculations**



Course Outcomes	CO Attainment	Program Outcomes			
		PO1	PO2	PO3	PSO1
CO207002.1	2.5	=2.5x3/3	=2.5x1/3		
CO207002.2	2.8	=2.8x3/3	=2.8x2/3	=2.8x1/3	=2.8x1/3
CO207002.3	2.3	=2.3x2/3	=2.3x2/3		=2.3x2/3
CO207002.4	1.5	=1.5x2/3	=1.5x1/3	=1.5x1/3	=1.5x1/3
CO207002.5	2.0	=2.0x1/3	=2.0x1/3		
CO207002.6	3.0	=3.0x3/3	=3.0x3/3		

### Step – 3

Direct PO/PSO attainment is evaluate by taking average of PO/PSO attainment by each CO attainment.

**Table B 3.3.1c: Average PO/PSO Attainment by Course**

Course Outcomes	CO Attainment	Program Outcomes			
		PO1	PO2	PO3	PSO1
CO207002.1	2.5	2.50	0.83		
CO207002.2	2.8	2.80	1.87	0.93	0.93
CO207002.3	2.3	1.53	1.53		1.53
CO207002.4	1.5	1.00	0.50	0.50	0.50
CO207002.5	2.0	0.67	0.67		
CO207002.6	3.0	3.00	3.00		
Average PO/PSO Attainment		1.92	1.40	0.72	0.99

Using direct tools to assess PO/PSO attainment provides objective evidence of students' learning outcomes and helps department to identify areas for improvement in the program. Additionally, it allows for a more accurate evaluation of the effectiveness of the program's curriculum, instructional methods, and teaching strategies.

### Attainment of POs/PSOs through Indirect Tools

Indirect tools provide valuable information about students' perceptions of their learning experiences and the extent to which they perceive that they have achieved program outcomes.

While indirect tools have limitations, they can provide valuable insights into students' experiences and perceptions of the program, as well as how well it aligns with the needs of employers and the community.

By combining direct and indirect tools, department gain a more comprehensive understanding of the program's effectiveness in achieving its intended learning outcomes.

Graduate Exit Survey, Employer Survey, Parents Feedback and Alumni Survey are conducted at the end of program and equal weightage is given each.

The department conducts surveys using a relevant questionnaire in order to assess the attainment of Program Outcomes (POs) and Program Specific Outcomes (PSOs). The questionnaire provides 5 response options, namely Excellent, Very Good, Good, Average, and Poor, which are assigned scores of 5, 4, 3, 2, and 1, respectively. The survey results are then tabulated, and the average

scores for each PO and PSO are calculated. To determine the attainment level for each PO and PSO, the average score is converted to a scale of 0 to 3.

For indirect PO/PSO attainment 20% weightage is given.

Total PO/PSO attainment is calculated as:

Direct Attainment by all courses X 0.8 + Indirect Attainment X 0.2

**The templates used to execute different surveys are as follows.**

**Graduate Exit Survey:** Relevant questionnaire in graduate Exit survey form to evaluate attainment of POs and PSOs is given in section (i) and relation of POs & PSOs with questionnaire is given in section (ii).

**i. Questionnaire Format:**

Kindly rate the following criteria on a scale of 1-5. Your genuine response will be helpful for the continuous quality improvement of our UG programme.

5. Excellent 4. Very Good 3. Good 2. Average 1. Poor

Q No.	Parameters
Q1	Ability acquired by you to apply knowledge of Mathematics, Science and Engineering in real time from value added certifications, workshops and training programs conducted during your stay in college.
Q2	Ability acquired to apply engineering knowledge to design experiments, analyze and interpret data to obtain valid conclusions.
Q3	Ability to identify and design a solution for Civil engineering problem with an appropriate consideration for the public health and safety and the cultural, societal, and environmental considerations.
Q4	Ability acquired to conveniently investigate complex problems using research-oriented knowledge and methods to provide appropriate solution through design-oriented courses and project.
Q5	Ability to use techniques, skills and modern engineering and IT tools necessary for engineering practice through internship, state of art labs
Q6	Ability to grasp the impact of professional engineering solutions in the context of society and environment and apply it for sustainable development.
Q7	Ability to understand that you have about the available resources and ensure judicious use of them without affecting the environment for sustainable progress.
Q8	Ability to apply ethical principles and commitment to professional ethics and responsibilities acquired through courses, project, seminar and Gymkhana activities.
Q9	Ability acquired to lead team / work in team / work as an individual gained from the co-curricular and extracurricular activities.



Q10	Ability developed to communicate effectively, write precise reports, design documentation applying the engineering knowledge, speaking in a large group which you have acquired.
Q11	Ability to do interdisciplinary projects and carry them out in time and utilize fund in a meaningful way with the training provided by the department, through various activities of student chapter such as ICI, ISTE, IWA. IGS.
Q12	Ability to work as a successful self-reliant engineer with the training provided by department, entrepreneurship development cell, Innovation cell and Audit courses etc.
Q13	Exhibit technical knowledge in planning, analysis, design and management for infrastructural development
Q14	Apply the innovative technologies to address Civil Engineering problems of the society.
Q15	Enhance professional abilities to meet industrial need.

## ii. Relation of POs and PSOs with questionnaire

Question	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
PO/PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
Question	Q9	Q10	Q11	Q12	Q13	Q14	Q15	
PO/PSO	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO	

**Alumni Survey:** Feedback is taken from alumni. Relevant questionnaire in alumni survey form to evaluate attainment of POs and PSOs is given in section (i) and relation of POs & PSOs with questionnaire is given in section (ii).

### i. Questionnaire Format:

Kindly rate the following criteria on a scale of 1-5. Your genuine response will be helpful for the continuous quality improvement of our UG programme

5. Excellent 4. Very Good 3. Good 2. Average 1. Poor

Q No.	Parameters
1	Your ability to apply knowledge for analysis and design of civil engineering field to meet desired specifications and needs. (PO1, PO3)
2	Benefit from value added certifications, workshops and training programs conducted during your course.
3	Your ability to use techniques, skills and modern engineering tools necessary for engineering practice.

4	Benefit from communication skills, presentation skills and leadership qualities gained from the co-curricular and extracurricular activities.
5	Your ability to engage in, to resolve contemporary issues and acquire lifelong learning.
6	Skills attained to create, select and apply appropriate techniques, resources and modern engineering and IT tools.
7	Extent of Ethical, social and environmental values inculcated, helping you to relate Civil engineering issues with societal needs.
8	Ability acquired to meet the industry needs.

## ii. Relation of POs and PSOs with questionnaire

Question	Q1	Q2	Q3	Q4
PO	PO1, PO3	PO1, PO5	PO5, PO11	PO9, PO10
Question	Q5	Q6	Q7	Q8
PSO	PO12	PO2, PO4	PO6, PO7, PO8	PSO1, PSO2, PSO3

**Employer Survey:** Feedback is taken from employer. Relevant questionnaire in employer survey form to evaluate attainment of POs and PSOs is given in section (i) and relation of POs & PSOs with questionnaire is given in section (ii).

### i. Questionnaire Format:

Kindly rate the following criteria on a scale of 1-5. Your genuine response will be helpful for the continuous quality improvement of our UG programme

5: Strongly Agree, 4: Agree, 3: Moderate, 2: Disagree, 1: Strongly Disagree

Q No.	Parameters
Q1	AISSMS COE Civil Engineering graduate exhibits an ability to apply engineering knowledge to design and develop the product.
Q2	AISSMS COE Civil Engineering graduate has the ability to communicate effectively both written and verbal communication
Q3	AISSMS COE Civil Engineering graduate is well aware of Modern Engineering Tools(PO5)
Q4	AISSMS COE Civil Engineering graduate has an understanding of ethical and social responsibility
Q5	AISSMS COE Civil Engineering graduate has desire for learning new areas, engaging in professional development, and adapting to technological changes to solve complex engineering problems
Q6	AISSMS COE Civil Engineering graduate has an ability to function as a member or leader



	in multi-disciplinary teams
Q7	AISSMS COE Civil Engineering graduate has an ability to manage multidisciplinary projects
Q8	AISSMS COE Civil Engineering graduate is able to provide solutions to societal problems for sustainable development.
Q9	AISSMS COE Civil Engineering graduate exhibit technical knowledge in planning, analysis, design and management for infrastructural development
Q10	AISSMS COE Civil Engineering graduate will apply the innovative technologies to address Civil Engineering problems of the society.
Q11	AISSMS COE Civil Engineering graduate will enhance professional abilities to meet industrial need.

**i. Relation of POs and PSOs with questionnaire**

Question	Q1	Q2	Q3	Q4	Q5	Q6
PO	PO1, PO2, PO3 PO4	PO 10	PO 5	PO 8, PO6	PO 12	PO 9
Question	Q7	Q8	Q9	Q10	Q11	
PSO	PO 11	PO 7	PSO 1	PSO 2	PSO 3	

**Parent Feedback:** Parent feedback is taken to signify holistic development of their ward through a conducive teaching-learning environment. Relevant questionnaire in parent feedback form to evaluate attainment of POs is given in section (i) and relation of POs with questionnaire is given in section (ii).

**i. Questionnaire Format:**

Kindly rate the following criteria on a scale of 1-5. Your genuine response will be helpful for the continuous quality improvement of our UG programme

5: Strongly Agree, 4: Agree, 3: Moderate, 2: Disagree, 1: Strongly Disagree

Q. No.	Parameter
Q1	My ward has gained Engineering knowledge through teaching learning process at the institute.
Q2	My ward will be able to pursue research and higher studies.
Q3	Co-curricular and Extra-curricular activities conducted in institute helped to develop my wards communication, leadership and team work skills.
Q4	My ward is aware of social, cultural, environmental, global, public health and safety related issues and tries to resolve them.
Q5	My ward has ability to manage activities and financial issues.
Q6	My ward follows professional ethics.
Q7	My ward is able to use modern tools and techniques.
Q8	My ward converted into a lifelong learner.





Q9	My ward is able to apply innovative technology in planning, analysis, design and management for infrastructural development
Q10	My ward has professional abilities to meet industrial needs

ii. **Relation of POs and PSOs with questionnaire**

**Table B3.3.1d: PO/PSO Attainment for 2017-18 to 2020-21 Batch (Cycle – 2)**

Question	Q1	Q2	Q3	Q4	Q5
<b>PO</b>	PO 1	PO 2, PO 3, PO 4	PO 9, PO10	PO 6, PO7	PO11
Question	Q6	Q7	Q 8	Q9	Q10
<b>PO</b>	PO8	PO 5	PO 12	PSO1, PSO2	PSO3

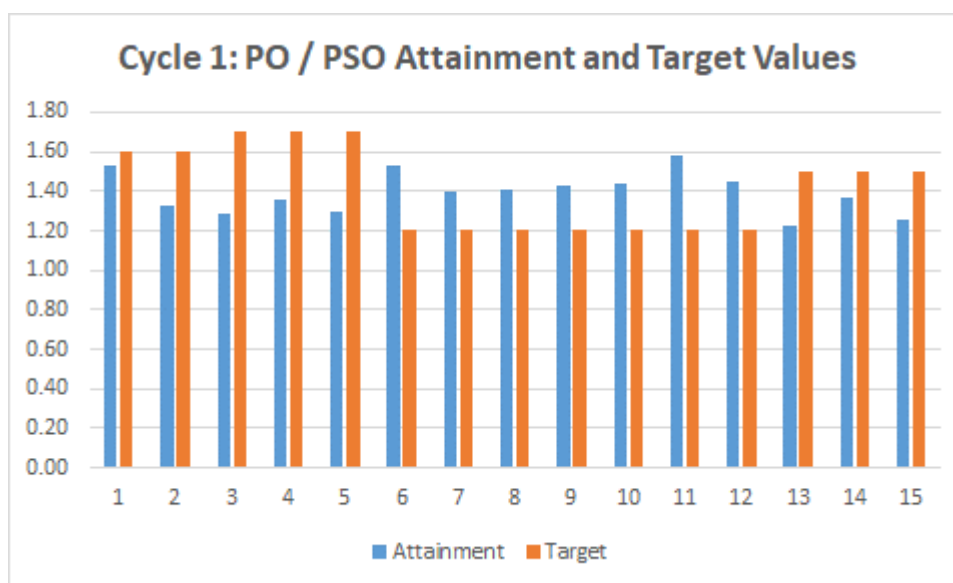


Course Code	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
<b>First Year</b>																
107001	Engineering Mathematics - I	1.23	0.82	0.41										0.82		
107009	Engineering Chemistry	0.81	0.44	0.40										0.55		0.39
102006	Engineering Graphics - I	0.66	0.65								0.33			0.49		
103004	Basic Electrical Engineering	0.84	0.48	0.48										0.58		0.53
101005	Basic Civil and Environmental Engineering	0.73	0.67	0.54		0.80								1.47	0.73	1.19
110003	Fundamentals of Programming Language - I	0.63	0.35	0.35		0.31								0.31		
107002	Workshop	0.99	0.99	0.99	0.99		0.99							0.99		
107008	Engineering Mathematics - II	1.15	0.77	0.38										0.77		
107002	Engineering Physics - I	1.05	0.70	0.52		0.55								0.63		
101013	Basic Mechanical Engg	0.86	0.78											0.52		
101011	Engg Mechanics	1.01	0.50											1.01		0.50
104012	Basic Electronics Engg.	0.95	0.49	0.45		0.53								0.56		
110010	Fundamentals of Programming Language-II	1.02	0.51	0.51		0.52								0.53		
104012	Engineering Graphics II	0.59	0.59			0.59								0.98		
<b>Second Year</b>																
201001	Building Technology and Materials	1.86	0.61	1.23		1.25	1.27	1.27	1.23	0.61	0.61	0.61	0.61	0.72		0.74
201006	Surveying	1.52	1.08						0.54	0.54	1.16		1.52	0.54	0.53	0.54
201003	Geotechnical Engineering	1.33	1.08	0.98	1.04					1.05	1.31		1.05	1.08	1.00	1.35
201002	Strength of Materials	1.61	1.08	0.53					0.52	0.54				0.54		0.52
207001	Engineering mathematics III	1.58	1.06	0.53										1.06		
201005	Architectural Planning and Design of Buildings	1.92		1.07		1.36	1.76	0.59					1.36	0.68	1.06	0.68
201007	Concrete Technology	1.37		1.39	0.70	0.66	0.70	1.41						1.30	1.41	
201004	Fluid Mechanics I	1.11	0.74	0.56	0.65		1.14	0.56		0.56	0.56		0.56	0.56		0.75
201008	Structural Analysis I	1.44	1.04											0.48	0.48	
207009	Engineering Geology	1.56	1.21	1.01			0.89	0.72		0.63	0.88		0.77	0.89	0.84	1.08
201010	SOFT SKILLS						2.00			2.00	3.00	3.00	2.00	1.00	1.00	1.00
<b>Third Year</b>																
301005	Fluid Mechanics II	1.05	1.05	0.87	0.87	0.52				1.05	1.05		0.63	0.88	0.92	0.70
301001	Hydrology and water resource Engineering	0.64	0.58	0.50	0.36	0.70		0.36			0.40			0.42	0.34	0.55
301002	Infrastructure Engineering & Construction Techniques	0.73	0.64	0.57	0.73	0.93								0.88	0.70	0.48
301001	Structural Analysis II	2.05	1.36											0.68		
301003	Structural Design I	1.70	0.84	1.51	1.07	0.54			0.57	1.14	0.57		0.57	0.84		1.07
301007	Advanced Surveying	1.68			1.12				1.12	1.12			1.12	1.12		
301011	Environmental Engineering I	1.35	1.31	1.31	0.66	1.13	1.31	1.26	0.65	0.69	0.65	0.65	0.66	0.66	1.31	0.62
301009	Foundation Engineering	0.79	0.71	0.41	0.49	0.69	0.72	0.39			0.47			0.53	0.51	0.50
301008	Project Management and Engineering Economics	0.95	1.08	0.76	0.79	0.69	0.75	0.65				1.06		0.99	0.61	0.89
301001	Structural Design II	1.77	1.18	1.66	0.82	0.59	1.16		1.07	1.16	0.58			1.18		0.59
301012	SEMINAR	1.95	1.96	0.97	1.63	0.97	1.14	1.94	0.97	1.95	1.95	0.97	1.30	1.63	1.46	1.30
301006	Employability Skills	1.00	1.00	1.00		1.00	1.00		1.00	2.00	3.00		3.00	1.00		3.00
<b>Final Year</b>																
401001	Environmental Engineering II	1.57	1.58	1.58	0.79	1.40	1.57	1.52	0.77	0.82	0.77	0.77	0.79	0.79	1.58	0.75
401002	Transportation Engineering	1.81	1.67	1.46	1.39	0.69	0.84	0.97	0.73	0.73	0.97	1.14	0.82	0.89	0.65	0.73
401003	Structural Design and Drawing-III	1.96	1.96	1.97	1.31	1.32	0.65		1.31	1.31	0.65			1.20	0.65	0.65
401004	Systems Approach in Civil Engineering	1.04	1.06	1.21	0.76	0.76				0.77		1.17		1.37	1.11	0.75
401005	TQM & MIS in Civil Engineering	1.08		1.04	0.91	0.72	1.45		0.77					0.77	1.21	0.72
401008	Quantity surveying contracts and tender	1.17	0.85	0.97	1.56	1.36	1.36		1.74	1.17	0.97	1.96	0.97	1.09	1.23	0.79
401007	Dams and hydraulic structure	1.78	1.82	1.79	1.73	1.62	1.82	1.24	1.46	1.73	1.58	1.46	1.49	0.89	1.78	2.24
401009	Air Pollution and Control	2.54					1.82	1.56		1.56	1.81				1.81	
401010	Construction Management	0.95	0.91			1.83	0.94	1.45	1.85		0.94	1.84	0.94	1.09	0.96	1.16
401006	Project Work	1.80	1.96	1.96	1.96	1.95	1.96		1.77	1.64	1.47	0.98	1.80	0.98	1.96	0.98

**Table B 3.3.1d: PO/PSO Attainment for 2016-17 to 2019-20 Batch (Cycle – 1)**


**PO/PSO Attainment: Cycle - 1**

PO/PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Direct	1.29	0.98	0.94	1.02	0.93	1.24	1.06	1.06	1.13	1.12	1.30	1.16	0.85	1.03	0.89
Indirect (Exit Survey)	2.25	2.25	2.25	2.25	2.25	2.50	2.50	2.50	2.25	2.25	2.25	2.25	2.25	2.25	2.25
Indirect (Employer Survey)	2.70	2.70	2.70	2.70	2.90	2.90	3.00	2.90	2.70	2.90	3.00	2.60	3.00	2.80	2.70
Indirect (Alumni Survey)	2.70	3.00	2.70	3.00	2.90	2.80	2.80	2.80	2.70	2.70	2.70	2.80	2.80	2.80	2.80
Indirect (Parent Feedback)	2.40	3.00	3.00	3.00	3.00	2.64	2.64	3.00	3.00	3.00	2.88	2.76	2.88	2.88	3.00
Average Indirect	2.51	2.74	2.66	2.74	2.76	2.71	2.74	2.80	2.66	2.71	2.71	2.60	2.73	2.68	2.69
<b>Attainment</b>	<b>1.53</b>	<b>1.33</b>	<b>1.29</b>	<b>1.36</b>	<b>1.29</b>	<b>1.53</b>	<b>1.39</b>	<b>1.41</b>	<b>1.43</b>	<b>1.44</b>	<b>1.58</b>	<b>1.44</b>	<b>1.22</b>	<b>1.36</b>	<b>1.25</b>
<b>Target</b>	<b>1.60</b>	<b>1.60</b>	<b>1.40</b>	<b>1.40</b>	<b>1.40</b>	<b>1.20</b>	<b>1.20</b>	<b>1.20</b>	<b>1.20</b>	<b>1.20</b>	<b>1.20</b>	<b>1.20</b>	<b>1.50</b>	<b>1.50</b>	<b>1.50</b>
<b>Gap</b>	<b>0.07</b>	<b>0.27</b>	<b>0.11</b>	<b>0.04</b>	<b>0.11</b>	<b>-0.33</b>	<b>-0.19</b>	<b>-0.21</b>	<b>-0.23</b>	<b>-0.24</b>	<b>-0.38</b>	<b>-0.24</b>	<b>0.28</b>	<b>0.14</b>	<b>0.25</b>



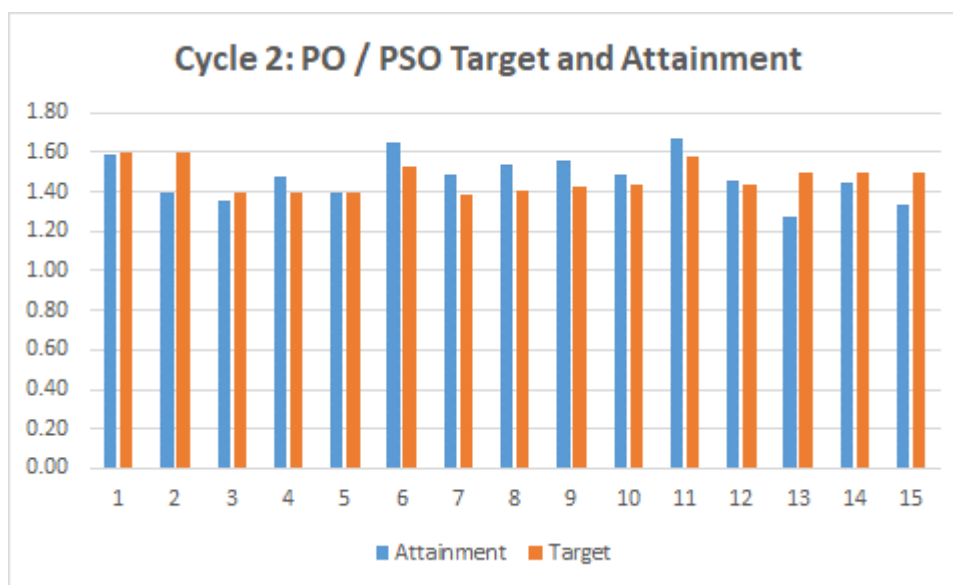


Course Code	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
<b>First Year</b>																
107001	Engineering Mathematics - I	1.17	0.78	0.39										0.78		
107009	Engineering Chemistry	0.76	0.42	0.38										0.52		0.35
102006	Engineering Graphics - I	0.87	0.86								0.44			0.66		
103004	Basic Electrical Engineering	0.69	0.40	0.41										0.51		0.43
101005	Basic Civil and Environmental Engineering	0.56	0.52	0.42		0.62								1.11	0.56	0.91
110003	Fundamentals of Programming Language - I	0.81	0.42	0.42		0.41								0.40		
107002	Workshop	0.97	0.97	0.97	0.97		0.97							0.97		
107008	Engineering Mathematics - II	0.79	0.52	0.26										0.52		
107002	Engineering Physics - I	0.83	0.56	0.42		0.43								0.53		
101013	Basic Mechanical Engg	0.81	0.87											0.49		
101011	Engg Mechanics	0.92	0.46											0.92		0.46
104012	Basic Electronics Engg.	0.93	0.46	0.47		0.44								0.63		
110010	Fundamentals of Programming Language-II	1.00	0.50	0.50		0.50								0.51		
104012	Engineering Graphics II	0.96	0.96			0.96								1.61		
<b>Second Year</b>																
201001	Building Technology and Materials	2.14	0.65	1.30		1.43	1.66	1.66	1.30	0.65	0.65	0.65	0.66	0.82		0.82
201006	Surveying	1.40	1.41							0.94	0.94		0.94	0.94		0.94
201003	Geotechnical Engineering	1.19	0.96	0.87	0.93					0.93	1.17		0.93	0.96	0.89	1.20
201002	Strength of Materials	1.63	1.08	0.54					0.53	0.54				0.54		0.53
207001	Engineering mathematics III	1.48	0.99	0.50										0.99		
201005	Architectural Planning and Design of Buildings	1.78		1.06		1.27	1.93	0.64					1.26	0.63	0.93	0.63
201007	Concrete Technology	1.06		1.16	0.51	0.50	0.53	1.02						1.16	1.01	
201004	Fluid Mechanics I	0.80	0.54	0.41	0.48		0.94	0.43		0.41	0.41		0.41	0.41		0.57
201008	Structural Analysis I	1.03	0.75											0.34	0.34	
207009	Engineering Geology	1.61	1.25	1.17			1.00	0.76		0.67	0.88		0.83	1.00	0.98	1.23
201010	SOFT SKILLS						2.00			2.00	3.00	3.00	2.00	1.00	1.00	1.00
<b>Third Year</b>																
301005	Fluid Mechanics II	1.20	1.20	1.01	1.02	0.60				1.21	1.20		0.71	1.00	1.05	0.80
301001	Hydrology and water resource Engineering	0.92	0.83	0.74	0.51	1.03		0.51			0.58			0.63	0.49	0.75
301002	Infrastructure Engineering & Construction Techniques	0.76	0.69	0.63	0.75	1.04								0.94	0.77	0.52
301001	Structural Analysis II	1.54	1.02											0.51		
301003	Structural Design I	1.78	0.86	1.59	1.07	0.54			0.59	1.21	0.61		0.59	0.86		1.07
301007	Advanced Surveying	1.90			1.27				1.27	1.27			1.27	1.27		
301011	Environmental Engineering I	1.48	1.46	1.46	0.73	1.35	1.46	1.44	0.73	0.76	0.73	0.73	0.73	0.73	1.46	0.71
301009	Foundation Engineering	1.02	0.93	0.52	0.63	0.90	0.91	0.49			0.60			0.68	0.65	0.65
301008	Project Management and Engineering Economics	1.01	1.54	0.78	0.93	0.75	0.79	0.75				1.23		1.13	0.75	1.05
301001	Structural Design II	2.48	1.66	2.35	1.16	0.83	1.67		1.52	1.67	0.83			1.66		0.83
301012	SEMINAR	2.00	2.00	1.00	1.67	1.00	1.17	2.00	1.00	2.00	2.00	1.00	1.33	1.67	1.50	1.33
301006	Employability Skills	1.00	1.00	1.00		1.00	1.00		1.00	2.00	3.00		3.00	1.00		3.00
<b>Final Year</b>																
401001	Environmental Engineering II	1.93	1.93	1.93	0.97	1.93	1.93	1.94	0.97	0.97	0.97	0.97	0.97	0.97	1.93	0.96
401002	Transportation Engineering	2.44	2.19	1.95	1.95	0.97	1.17	1.30	0.98	0.98	1.30	1.47	0.98	1.22	0.98	0.97
401003	Structural Design and Drawing-III	2.86	2.86	2.86	1.90	1.85	0.95		1.91	1.91	0.95			1.75	0.95	0.95
401004	TQM & MIS in Civil Engineering	1.32		1.25	1.12	0.92	1.82		0.94					0.94	1.52	0.91
401008	Quantity surveying contracts and tender	1.37	0.98	0.97	1.96	1.47	1.46		1.96	1.37	0.98	2.45	0.97	1.17	1.30	0.98
401007	Dams and hydraulic structure	1.89	1.88	1.89	1.91	1.95	1.88	1.24	1.37	1.91	1.65	1.37	1.58	0.95	1.89	2.36
401009	Air Pollution and Control	2.85					1.91	1.90		1.90	1.91				1.91	
401010	Construction Management	0.88	0.87			1.75	0.88	1.32	1.75		0.88	1.75	0.88	1.02	0.88	1.10
401006	Project Work	1.79	1.95	1.95	1.95	1.95	1.95		1.75	1.62	1.46	0.97	1.79	0.97	1.95	0.97

Table B3.3.1d: PO/PSO Attainment for 2017-18 to 2020-21 Batch (Cycle – 2)


**PO/PSO Attainment: Cycle - 2**

PO/PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Direct	1.35	1.06	1.02	1.16	1.05	1.36	1.16	1.22	1.28	1.18	1.42	1.15	0.89	1.12	0.97
Indirect (Exit Survey)	1.95	2.43	2.43	2.36	2.35	2.35	2.43	2.47	2.45	2.43	2.13	2.35	2.36	2.43	2.43
Indirect (Employer Survey)	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.70	2.89	2.70	2.56	3.00	2.79	3.00
Indirect (Alumni Survey)	2.59	2.89	2.59	2.89	2.89	3.00	3.00	3.00	2.59	2.59	2.89	2.79	3.00	3.00	3.00
Indirect (Parent Feedback)	2.70	2.80	2.80	2.80	2.90	2.80	2.80	2.80	3.00	3.00	2.90	3.00	2.90	2.90	2.80
Average Indirect	2.56	2.78	2.70	2.76	2.78	2.79	2.81	2.82	2.69	2.73	2.66	2.68	2.82	2.78	2.81
<b>Attainment</b>	<b>1.59</b>	<b>1.40</b>	<b>1.35</b>	<b>1.48</b>	<b>1.40</b>	<b>1.65</b>	<b>1.49</b>	<b>1.54</b>	<b>1.56</b>	<b>1.49</b>	<b>1.67</b>	<b>1.45</b>	<b>1.27</b>	<b>1.45</b>	<b>1.33</b>
<b>Target</b>	<b>1.60</b>	<b>1.60</b>	<b>1.40</b>	<b>1.40</b>	<b>1.40</b>	<b>1.53</b>	<b>1.39</b>	<b>1.41</b>	<b>1.43</b>	<b>1.44</b>	<b>1.58</b>	<b>1.44</b>	<b>1.50</b>	<b>1.50</b>	<b>1.50</b>
<b>Gap</b>	<b>0.01</b>	<b>0.20</b>	<b>0.05</b>	<b>-0.08</b>	<b>0.00</b>	<b>-0.12</b>	<b>-0.10</b>	<b>-0.13</b>	<b>-0.13</b>	<b>-0.05</b>	<b>-0.09</b>	<b>-0.01</b>	<b>0.23</b>	<b>0.05</b>	<b>0.17</b>





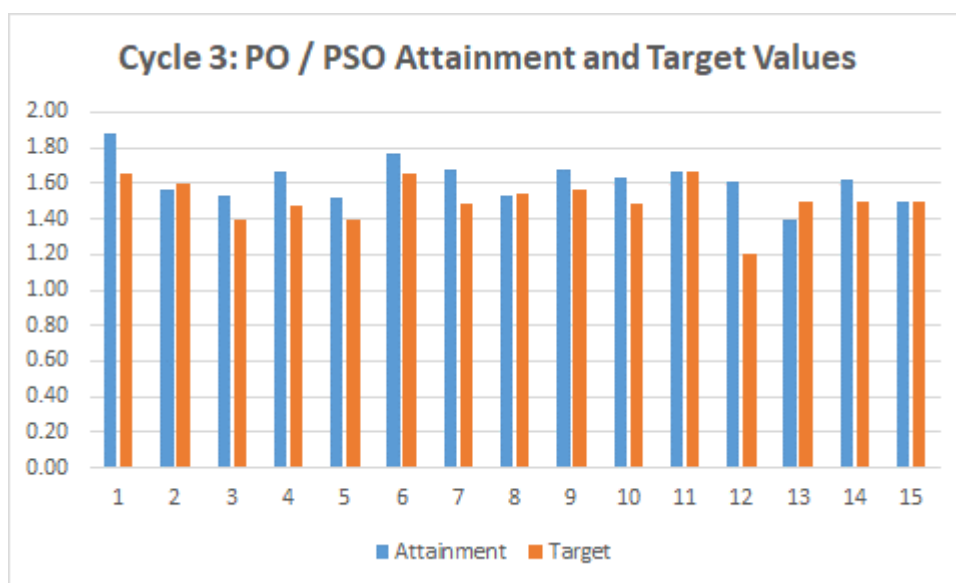
Course Code	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
<b>First Year</b>																
107001	Engineering Mathematics - I	1.33	0.89	0.44										0.89		
107009	Engineering Chemistry	1.03	0.54	0.50										0.71		0.53
102006	Engineering Graphics - I	1.05	1.03								0.53			0.77		
103004	Basic Electrical Engineering	0.60	0.34	0.35										0.44		0.40
101005	Basic Civil and Environmental Engineering	0.64	0.60	0.52		0.68								1.29	0.64	1.05
110003	Fundamentals of Programming Language - I	0.66	0.34	0.34		0.33								0.33		
107002	Workshop	0.96	0.96	0.96	0.96		0.96							0.96		
107008	Engineering Mathematics - II	0.98	0.65	0.33										0.65		
107002	Engineering Physics - I	0.82	0.55	0.41		0.42								0.52		
101013	Basic Mechanical Engg	0.96	1.00											0.57		
101011	Engg Mechanics	0.80	0.40											0.80		0.40
104012	Basic Electronics Engg.	0.98	0.49	0.50		0.48								0.68		
110010	Fundamentals of Programming Language-II	0.81	0.41	0.41		0.42								0.45		
104012	Engineering Graphics II	0.96	0.96			0.96								1.60		
<b>Second Year</b>																
201001	Building Technology and Materials	1.89	0.60	1.23		1.26	1.32	1.32	1.23	0.60	0.61	0.62	0.62	0.73		0.74
201006	Surveying	1.26	0.87						0.43	0.43	0.97		1.26	0.43	0.41	0.44
201003	Geotechnical Engineering	1.68	1.36	1.27	1.27					1.28	1.59		1.28	1.36	1.28	1.70
201002	Strength of Materials	1.68	1.12	0.55					0.53	0.56				0.56		0.52
207001	Engineering mathematics III	2.06	1.37	0.69										1.37		
201005	Architectural Planning and Design of Buildings	2.76		1.62		1.95	2.94	0.98					1.95	0.97	1.46	0.97
201007	Concrete Technology	1.95		1.98	0.98	0.96	0.97	1.88						1.98	1.93	
201004	Fluid Mechanics I	1.75	1.17	0.88	1.03		1.77	0.87		0.88	0.88		0.88	0.88		1.17
201008	Structural Analysis I	2.84	2.05											0.95	0.95	
207009	Engineering Geology	2.90	2.26	1.93			1.69	1.36		1.16	1.61		1.45	1.69	1.61	1.93
201010	SOFT SKILLS						2.00			2.00	3.00	3.00	2.00	1.00	1.00	1.00
<b>Third Year</b>																
301005	Fluid Mechanics II	1.97	1.97	1.64	1.64	0.98				1.97	1.97		1.18	1.64	1.72	1.31
301001	Hydrology and water resource Engineering	1.77	1.61	1.45	0.96	1.93		0.96			1.13			1.21	0.97	1.45
301002	Infrastructure Engineering & Construction Techniques	1.45	1.29	1.16	1.45	1.94								1.78	1.46	0.97
301001	Structural Analysis II	2.86	1.91											0.95		
301003	Structural Design I	2.79	1.40	2.48	1.88	0.92			0.93	1.85	0.93		0.93	1.40		1.87
301007	Advanced Surveying	2.20	1.67	1.00	1.80	1.00			1.93	1.97	2.00		1.57	1.47	2.00	2.50
301011	Environmental Engineering I	1.94	1.94	1.94	0.97	1.94	1.94	1.94	0.97	0.97	0.97	0.97	0.97	0.97	1.94	0.97
301009	Foundation Engineering	1.89	1.67	0.95	1.15	1.58	1.63	0.93			1.10			1.25	1.23	1.17
301008	Project Management and Engineering Economics	1.30	1.95	0.97	1.22	0.98	0.98	0.97				1.62		1.46	0.98	1.37
301001	Structural Design II	2.85	1.90	2.70	1.33	0.94	1.91		1.75	1.91	0.96			1.90		0.95
301012	SEMINAR	2.00	2.00	1.00	1.67	1.00	1.17	2.00	1.00	2.00	2.00	1.00	1.33	1.67	1.50	1.33
301006	Employability Skills	1.00	1.00	1.00		1.00	1.00		1.00	2.00	3.00		3.00	1.00		3.00
<b>Final Year</b>																
401001	Environmental Engineering II	1.94	1.93	1.93	0.97	1.93	1.93	1.94	0.97	0.97	0.97	0.97	0.97	0.97	1.93	0.97
401002	Transportation Engineering	2.41	2.16	1.92	1.92	0.96	1.15	1.28	0.96	0.96	1.28	1.44	0.96	1.20	0.96	0.96
401003	Structural Design and Drawing-III	2.81	2.81	2.82	1.86	1.82	0.94		1.87	1.87	0.94			1.72	0.94	0.94
401004	Advanced Concrete Technology	2.91	0.97	1.46				1.90						0.97		
401005	TQM & MIS in Civil Engineering	1.30		1.21	1.12	0.95	1.87		0.92					0.92	1.55	0.94
401008	Quantity surveying contracts and tender	1.11	0.78	0.67	1.67	1.09	1.09		1.50	1.11	0.67	2.10	0.67	0.87	0.95	0.85
401007	Dams and hydraulic structure	1.41	1.40	1.41	1.42	1.39	1.40	0.92	1.02	1.42	1.22	1.02	1.18	0.70	1.40	1.76
401009	Air Pollution and Control (Elective III)	2.39					1.52	1.69		1.69	1.52				1.52	
401010	Construction Management (Elective 4)	0.93	0.89			1.59	0.86	1.37	1.61		0.89	1.60	0.89	1.02	0.89	1.05
401006	Project Work	1.81	1.97	1.98	1.98	1.98	1.97		1.78	1.64	1.48	0.99	1.81	0.99	1.97	0.99

Table B3.3.1f: PO/PSO Attainment for 2018-19 to 2021-22 Batch (Cycle – 3)




**PO/PSO Attainment: Cycle - 3**

PO/PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Direct	1.66	1.27	1.21	1.39	1.19	1.50	1.40	1.20	1.39	1.34	1.39	1.31	1.06	1.33	1.17
Indirect (Exit Survey)	2.66	2.72	2.67	2.70	2.67	2.73	2.68	2.69	2.66	2.66	2.68	2.55	2.70	2.72	2.69
Indirect (Employer Survey)	2.86	2.86	2.86	2.86	2.80	2.80	2.86	2.80	2.93	2.86	2.86	2.80	2.73	2.73	2.73
Indirect (Alumni Survey)	2.89	2.59	2.89	2.59	2.79	2.89	2.89	2.89	2.79	2.79	2.79	2.89	2.79	2.79	2.79
Indirect (Parent Feedback)	2.70	2.85	2.85	2.85	3.00	2.85	2.85	3.00	2.85	2.85	2.70	3.00	2.85	3.00	3.00
Average Indirect	2.78	2.76	2.82	2.75	2.81	2.82	2.82	2.84	2.81	2.79	2.76	2.81	2.77	2.81	2.80
<b>Attainment</b>	<b>1.88</b>	<b>1.56</b>	<b>1.53</b>	<b>1.66</b>	<b>1.52</b>	<b>1.76</b>	<b>1.68</b>	<b>1.53</b>	<b>1.68</b>	<b>1.63</b>	<b>1.67</b>	<b>1.61</b>	<b>1.40</b>	<b>1.62</b>	<b>1.49</b>
<b>Target</b>	<b>1.66</b>	<b>1.60</b>	<b>1.40</b>	<b>1.48</b>	<b>1.40</b>	<b>1.65</b>	<b>1.49</b>	<b>1.54</b>	<b>1.56</b>	<b>1.49</b>	<b>1.67</b>	<b>1.20</b>	<b>1.50</b>	<b>1.50</b>	<b>1.50</b>
<b>Gap</b>	<b>-0.22</b>	<b>0.04</b>	<b>-0.13</b>	<b>-0.18</b>	<b>-0.12</b>	<b>-0.11</b>	<b>-0.19</b>	<b>0.01</b>	<b>-0.12</b>	<b>-0.14</b>	<b>0.00</b>	<b>-0.41</b>	<b>0.10</b>	<b>-0.12</b>	<b>0.01</b>





## DEPARTMENT OF CIVIL ENGINEERING

### CRITERION IV

#### Student's Performance



CRITERION IV	Student's Performance	150
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Table B.4a

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2022- 23	CAY 2021-22	CAYm1 2020-21	CAYm2 2019-20	CAYm3 2018-19	CAYm4 2017-18	CAYm5 2016-17	CAYm6 2015-16
Sanctioned intake of the program (N)	120	120	120	120	120	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)	119	101	127	114	122	121+2 (COC at TE*)	124	124
Number of students admitted in 2nd year in the same batch via lateral entry (N2)	--	50	31	46	26	31	30	30
Separate division students, if applicable (N3)	--	--	--	--	--	--	--	--
Total number of students admitted in the Program (N1 + N2 + N3)	119	151	158	160	148	154	154	154

**CAY – Current Academic Year**

**CAYm1- Current Academic Year minus1= Current Assessment Year**

**CAYm2 - Current Academic Year minus2=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.4b

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 (2021-22)	151	17			
CAY m1(2020-21)	158	123	92		
CAYm2 (2019-20)	160	93	138	120	
CAYm3 LYG (2018-19)	148	49	56	56	55
CAYm4 LYGm1 (2017-18)	154	44	49	36	36
CAYm4 LYG m2 (2016-17)	154	49	53	46	46
CAYm4 LYGm3 (2015-16)	154	28	38	34	34



Table B.4c

Year of entry	N1 + N2 + N3 (As defined above)	Number of students who have successfully graduated with backlogs and 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 (2021-22)	151	100			
CAY m1(2020-21)	158	128	157		
CAYm2 (2019-20)	160	105	150	149	
CAYm3 LYG (2018-19)	148	92	113	113	112
CAYm4 LYGm1 (2017-18)	154	88	119	107	107
CAYm4 LYG m2 (2016-17)	154	91	116	104	104
CAYm4 LYGm3 (2015-16)	154	94	128	123	122

4.1	Enrolment Ratio	20
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Enrolment Ratio= N1/N

Table B.4.1

Item (Students enrolled at the First Year Level on average basis during the previous three academic years starting from current academic year)	Marks
$\geq 90\%$ students enrolled	20
$\geq 80\%$ students enrolled	18
$\geq 70\%$ students enrolled	16
$\geq 60\%$ students enrolled	14
$\geq 50\%$ students enrolled	12
Otherwise	0

Year of entry	N	N1	N1/N	Marks
CAY (2022-23)	120	119	0.99	20
CAY m1 (2021-22)	120	101	0.84	
CAY m2(2020-21)	120	127	1.05	
CAYm3 (2019-20)	120	114	0.95	
CAYm4 LYG (2018-19)	120	122	1.01	
CAYm3 LYG m1(2017-18)	120	121	1.008	
CAY LYG m2 (2016-17)	120	124	1.03	
CAY LYG M2 (2015-16)	120	124	1.03	



4.2	Success Rate in the stipulated period of the program	40
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4.2.1	Success rate without backlogs in any semester/year of study	25
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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 =  $25 \times \text{Average SI} = 7.4$

Item	Last Year of Graduate, LYG (2018-19)	Last Year of Graduate, LYG (CAYm1) (2017-18)	Last Year of Graduate, LYG (CAYm2) (2016-17)
Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry and separate division, if applicable	148	154	154
Number of students who have graduated without backlogs in the stipulated period	55	36	46
Success Index (SI)	0.37	0.23	0.29
Average SI	<b>0.296</b>		

4.2.2	Success rate in stipulated period of study	15
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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 =  $15 \times \text{Average SI} = 10.65$

**Table B.4.2.2**

Item	Last Year of Graduate, LYG (2018-19)	Last Year of Graduate, LYG (CAYm1) (2017-18)	Last Year of Graduate, LYG (CAYm2) (2016-17)
Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry and separate division, if applicable	148	154	154
Number of students who have graduated in the stipulated period	112	107	104
Success Index (SI)	0.756	0.694	0.675


**Average Success Index**
**0.71**

**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 =  $1.5 * \text{Average API (Academic Performance Index)} = 9.93$

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

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

**Table B.4.3**

Academic Performance	CAYm1 (2018-19)	CAYm2 (2017-18)	CAYm3 (2016-17)
Mean of CGPA or Mean Percentage of all successful students (X)	8.84	6.22	6.2
Total no. of successful students (Y)	113	107	104
Total no. of students appeared in the examination (Z)	113	119	116
API = $X * (Y/Z)$	8.84	5.53	5.51
Average API = $(AP1 + AP2 + AP3)/3$	<b>6.62</b>		

**4.4**
**Academic Performance in Second Year**
**15**

Academic Performance =  $1.5 * \text{Average API (Academic Performance Index)} = \mathbf{10.215}$

API = ((Mean of 2nd Year Grade Point Average of all successful Students on a 10-point scale) or (Mean of the percentage of marks of all successful students in Second Year/10)) x (number of successful students/number of students appeared in the examination)

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

**Table B.4.4**

Academic Performance	CAYm1 (2019-20)	CAYm1 (2018-19)	CAYm2 (2017-18)
Mean of CGPA or Mean Percentage of all successful students (X)	7.86	6.89	5.81
Total no. of successful students (Y)	150	113	119
Total no. of students appeared in the examination (Z)	151	114	119
API = $X * (Y/Z)$	7.80	6.82	5.81
Average API = $(AP1 + AP2 + AP3)/3$	<b>6.81</b>		





4.5

**Placement, Higher Studies and Entrepreneurship**

40

 Assessment Points =  $40 \times \text{average placement} = 26.00$ 
**Table B.4.5**

Item	LYG (2017-18)	LYGm1(2016-17)	LYGm2(2015-16)
Total No. of Final Year Students (N)	107	104	122
No. of students placed in companies or Government Sector (x)	19	35	53
No. of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level Tests, GRE, GMAT etc.) (y)	25	34	27
No. of students turned entrepreneur in engineering/technology (z)	3	12	11
$x + y + z =$	47	81	91
Placement Index: $(x + y + z)/N$	0.44	0.77	0.75
Average placement = $(P1 + P2 + P3)/3$	<b>0.65</b>		

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

**Table B.4.5a**
**LYG (2017-18)**

S. No	Student Name	Enrollment No	Employee Name	Appointment No
1	Pratik Danavale	71925765E	Yashraj Global Infracon LLP, Pune	YGILLP/1.12.20
2	Gaurav Mahajan	71925767M	Tata Consultancy Services, Lucknow	TCSL/CT20213818966/Lucknow
3	Nikita Sabban	71925782E	Jitendra P Paithankar, Chartered Engineers, Govt. registered Valuers, Pune	JPPCE/06.06.21
4	Anuj Chaudhari	71811674H	LTI Lets Solve, Pune	LTI/HR/Campus/EN1/2021
5	Shahid Shaikh	71925785K	Shree Sant Megastructures, Pune	SSM/01.12.21
6	Pradnya Patil	71925777J	Estimators Online Pvt. Ltd. Pune	EOC/11.10.21
7	Vikas Mhetre	71925774D	Buildcon Construction Pvt Ltd, Pune Metro	BCPL/11.10.21
8	Priyanka Sapate	71925783C	CADD Centre, Wadia College Bund Garden Road, Pune	CADDC/14.07.22
9	Priya Pachpute	71812070B	Accenture, Pune	ACC/01.12.21
10	Gaurav Wadekar	71812335C	Vikas Bhatewara Ventures Pune	VBV/01.02.22
11	Pandurang Kadam	71811882M	Pratik Constructions Engineers and PMC	PCEPC/22.8.22
12	Sahil More	71812027C	Plannerfy, Pune	PBI/24.4.22
13	Priyanka Karale	71811914C	Wipro Ltd Pune	WIPRO/1.6.22
14	Akash Shinde	71925761B	Bhoomi Abhilekh Vibhag Govt of Maharashtra	GOM/28.04.23
15	Sagar Mankar	71812007J	TULIP GOI. Ministry of Housing and Urban Affairs, Pune	TULIP/12.7.22



16	Sharad Pawar		Winjit Technologies Pvt Ltd, Nashik	WinJit/ 29.3.23
17	Swaraj Chalke	71811668C	CBRE Pune	CBRE/26.4.23
18	Komal Gavhane		Cognizant, Pune	Emp Code: 2178869
19	Swaroop Godse		Goel Ganga India Pvt Ltd, Pune	GG/01.08.2022

**LYG (2016-17)**

1	Rahul Lonkar	71606616F	Pushpak Rail Construction Pvt Ltd, Ulhasnagar	PRCPL/15.03.21
2	Pratik More	71812026E	Pune Metro rail Project	AIPL/CONTRACT/PU/05
3	Neil Lapalikar	71812055J	Larsen & Tourbo, Chennai	LTC/BIS/XXIII/1004878/CivilEngineering/NITT
4	KalyaniTawate	71812293D	MK_DESIGN,Pune	MKD/15.03.21
5	MadhaviPandekar	71812079F	MK_DESIGN,Pune	MKD/15.03.21
6	Manjushree Bansode	71811600D	Alliance Engineering Services, Pune	AES/HR/AP/DECEMBER/2020
7	Pranav Bhandari	71705672E	City Corporation Ltd. Pune	HR/APPT/01/02,29-06-2021
8	Shubham Bhange	71811624M	Sai Samarth Properties, Hinjewadi, Pune	SSP/12.10.20
9	Dhiraj Idamkanti	71705742K	IVCON, Pune	IVCON/11.12.20
10	Monika Ghodake	71705779J	Tulip, Pune	TULIP/28.5.21
11	Revati Gokhale	71705784E	Ranawat Infra, Pune	RIRR/10.12.20
12	Kartika Kamble	71705849C	STUP Consultants, Pvt. Ltd. Pune	16/HR/SD:RGD/986,14.02.21
13	Omkar Sawant	71706105B	T and T InfraLtd,Pune	T&T/HR/TL/APR/2022/20.04.22
14	Sugat Sondawale	71706162M	S.S Construction, Pune	SSCP/14.02.21
15	Saurav Bhilare	71705677F	V Construct, Pvt. Ltd, Pune	VCPL/8.9.22
16	Supriya Dhekale	71811739F	Shapoorji Pallonji Engineering & Construction (SPE&C), Pune	SPACPL/10.12.20
17	Rupali More	71705950C	Indovance Pvt. Ltd, Pune	Emp.Code-1193
18	Sanyogeeta Dhakane	71705734J	Sarvaarth-Siddhi Infratech, Moshi, Pune	SSI/14.01.22
19	Nayan Nimje	71705982M	K Raheja Corp., Mumbai	10005191
20	Purva Patil	71706025L	ZETWERK Maximixe Manufacturing, Bangalore	Z1387
21	Kanchan Khaire	71811928C	All In Design Solutions, Pune	ACDS1011
22	Riddhi Rathi	71706079K	Kolte Patil Developers, Pune	HR/405.Revno.1/14.06.2017
23	Gaurav Thokal	71812298E	Yug Engineering Works, Pune	YEW/24.07.20
24	Hrushikesh Sargar	71812211K	Devkalp Buildcon Engineers and Architects, Pune	DBEA/23.9.22
25	Yashraj Tatiya	71706187G	Suraj, Tatiya Agencies, Pune	M/STAP/23.9.22
26	Shashank Kakde	71705837K	Omco Fabrications Aurangabad	OMCOFJW/07.07.20
27	Ruchi Andhare	71811568G	Shadowfax Technologies Pvt Ltd, Pune	SFTPL/08.04.22
28	Udayraje Jagtap	71705814L	Govt of Maharashtra Bhumi Abhilekh Department	GOM/28.4.23
29	Paresh Gavate	71705769M	Govt of Maharashtra Bhumi Abhilekh Department	GOM/28.4.23
30	Tushar Naiknavre	71705963E	Govt of Maharashtra Bhumi Abhilekh Department	GOM/28.4.23
31	Vyankatesh Ghatule	71705778L	Govt of Maharashtra Bhumi Abhilekh Department	GOM/28.4.23
32	Varun Khengre	71705883C	T and T Infra Ltd, Pune	2308
33	Akshay Pawar	71706040D	Navayuga Engineering Company Ltd, Pune	HR- Corp Office/LA/1703/10
34	Pranav Vaishampayan	71706211G	MIDAS R & D CENTRE, India Pvt.Ltd, Pune	MIDAS/16.03.2023
35	Mansi Thorat		Adani Parts and Logistics, Pune	AD/26.12.2022

**LYG (2015-16)**



S.No	StudentName	EnrollmentNo	EmployeeName	AppointmentNo
1	Saurabh Lugade	71606557G	Indian Army, Engineers Regiment, Pune	IA/TGSENTRY/21.09.21
2	Chinmay Borgaonkar	71606998K	V Construct Pvt Ltd, Pune	VCONSTRUCT/20.8.22
3	Pratik Parmar	71606864J	Shreeji Constructions Pune	SHREEJI/10.06.19
4	Sarangi Sathe	71607080E	Vibhad Jalgaon	VIBHAD/31.03.21
5	Shreyas Murtadak	71606920C	Indrayani Construction, Engineers and Contractors Pune	IC/20.8.22
6	Tanmay Kothawade	71606868M	Epiq Pune	EP02276
7	Rutuja Dhage	71730961E	Govt.of Maharashtra, Water Conservation Dept. Jalgaon	GOM/21.12.18
8	Sneha Bansode	71606511J	Manufuture Design Pvt Ltd, Pune	MDSPL/20.8.22
9	Namrata Borse	71606965C	B G Shirke Construction Technology Pvt. Ltd Pune	BGS/13.09.21
10	Rajesh Kadam	71606746D	Sakshi Nine Blossom Developers, Pune	SNBD/22.01.21
11	Viral Bafna	71606850J	Bafna Group of Companies, Pune	BGC/20.8.22
12	Aniket Kulkarni	71606551H	RelPro & Prop ManSer Space Ltd, Pune	RELPRO/EC:10076228
13	Ragini Date	71607039B	Pune Corporation TULIP	TULIP/05.05.21
14	Ankita Khandre	71606549F	PMC, Pune	PMC/23.12.19
15	Sushant Mane	71730971B	Urban Roof Pvt. Ltd, Pune	URPL/31.01.22
16	Pallavi Tapase	71736624D	Shilpi Architects & Planners	SAP/20.8.22
17	Veena Thorat	71607145C	Tricon Infra Buildtech Pvt Ltd Pune	TRICON/20.8.22
18	Shubham Tekade	71607099F	Goel Ganga Group Pune	GGG/20.8.22
19	Yash Raut	71533220B	MMR Constructors Pune	MMRC.INC/20.8.22
20	Digvijay Deshpande	71606784G	Anand Developers, Pune	AD/20.8.22
21	Dipen Karnavat	71607157G	VASCON, Pune	VASCON/23.07.19
22	Gaurav Kasar	71606818E	Salt Design & Infra Services, Pvt. Ltd Pune	SDISPL/28.02.20
23	Shubham Kashid	71606769C	Vilas Javdekar Developers, Pune	VLDP/20.08.22
24	Gajanan Natewad	71607029E	Techno Digi Soft Institute of Technology, Pune	TDSIT/20.08.22
25	Harshal Prabhukhanolkar	71606740E	Terracon Consultants	TERRACONCONS/08.02.22
26	Suraj Bahirat	71606566F	Life Republic, Pune	LR/KP/20.08.22
27	Ashish Kunjir	71606968H	Kunjir Enterprises Pune	KE/23.08.22
28	Kartikey Adhav	71606499F	Avior Group of Companies, Pune	AVIORENT/25.06.19
29	Rutuja Kusale	71606838K	GOVT OF MAHARSHTRA, Water Conservation Officer Osmanabad	GOM/13.06.22
30	Mahesh Chaudhari	71607071F	Genxsys Technologies, Buldhana	GENXSYSTECH/20.08.21
31	Vaibhav Jadhao	71730966F	Viraj Engineer's Rahatani, Pune	VER/20.08.22
32	Mrunali Kotkar	71606889D	ABL Infrastructure Pvt. Ltd, Nashik	ABL/21.04/22
33	Saurab Basak	71606886K	HDFC Nashik	Employee.no.8199
34	Saurabh Arun Kumar	71606547K	Reliance Group Support Services Pvt Ltd Mumbai	EmployeeCode:10077173
35	Narsingh Kharosekar	71606708M	Geodesic Technique Pvt Ltd Pune	MOB/AL/22-23/05/TR-006/10.05.22
36	Pragati Kshirsagar	71730970D	Shilpi Architects & Planners, Pune	SAP/20.8.22
37	Ajinkya Gaikwad	71730962C	Avior Enterprises LLP Pune	AVIORELLP/EMPCODE:000



				228
38	Priyanka Rothe	71735970M	Zelus, US	ZELUS/23.08.20
39	Ojaswi Patil	71607140B	Rheaa, Pune	RHEAA/20.8.22
40	Shinu T Ninan	71607066K	Mecon Construction Kerala	MECON/23.09.22
41	Nikita Agarwal	71606711M	CBRE Pune	CBRE/23.09.22
42	Pranav Gadekar	71607040F	CBRE Pune	CBRE/23.09.22
43	Yogesh Chavan	71607159C	Mphasis, Pune	Mphasis/15.2.23
44	Rohan Saste	71730981K	Infosys, Infosys Limited Bengaluru	1273522
45	Sankarshan Bhosale	71606524L	Sycamore Real Estate Pvt. Ltd. Mumbai	324638
46	Zakriya Tamboli	71606648D	Neilsoft, Pune	Neilsoft/02.09.2022
47	Mithila Mane	71607014G	Govt of Maharashtra Bhumi Abhilekh Department	GOM/28.4.23
48	Nirmal Patel		Tata Insights and Quants, Pune	Tata/12.09.2022
49	Tarang Kotkar		V Construct Pvt Ltd, Pune	VC/ 12.09.2022
50	Nachiket Mahajan		DPR Construction Dallas US	DPR/08.09.2022
51	Sangram Karale	71730967D	BURNS McDONNELL, Pune	Emp Code: 78826
52	Jay Harpale	71730965H	Intellect, Pune	ID No. 5YC
53	Bhushan Chavan	71730960G	Pharande Spaces, Baner Pune	Emp ID: 1013

<b>4.6</b>	<b>Professional Activities</b>	<b>20</b>
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<b>4.6.1</b>	<b>Professional societies/chapters and organizing engineering events</b>	<b>05</b>
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The Program successfully runs various Students' Chapter, which is in progress since January 2016.

The department has the following four professional student chapters, which provide a good platform for students to participate actively in the various competitions and lectures.

**List of Student Chapter: -**

**Table B.4.6.1 a**

Sr. No	Chapter Title	Student Membership
1	Institution of Engineers (India) [IEI]	118
2	Indian Institute for Technical Education [ISTE]	101
3	Indian Geotechnical Society [IGS]	141
4	Indian Water Works Association [IWWA]	90
5	Ferrocement Society	Institutional Life Membership
6	Builders' Association of India	Patron Membership

**Student Committee Members: -**

IEI Committee Members:

**Table B.4.6.1 b**

Sr. No	Designation	Name of student
1	President	Janhavi Tirmake
2	Vice President	Rutesh Shivsharan
3	Treasurer	Aditya Patil
4	Head of Event Management	Abhishek Waghmare
5	Technical Head	Soham Joshi
6	Head of Documentation	Hari Om
7	Head of Media	Tejas Rokade



IWWA Committee Members:

**Table B.4.6.1 c**

Sr. No	Designation	Name of student
1	President	Kalpesh Patil
2	Vice President	Hariom Birajdar
3	Treasurer	Snehal Kautkar
4	Head of Event Management	Chinmay Chitte
5	Technical Head	Saurabh Relekar

This chapter is for students & by the students which organizes various activities throughout the year. Following are the list of activities conducted.

**2022-23**

Sr No	Students chapter	Title of Activity / Event conducted in department	Guest/ Expert Name	Date	No. of students benefited	Level
1	IEI	Guest Lecture on "Celebration of Innovation week"	Dr. Vihangaraj Kulkarni	17.02.2023	56	Institute
2	IEI	Teachers Day Celebration	Dr. P B Nangare	05.09.2022	120	Institute
3	IEI	Guest lecture on "Solar Energy and Sustainable Goal"	Er. Rajendra Kumar Saraf	22.09.2022	112	Institute
4	IEI	Quiz on 'Structural Analysis'	Dr. P B Nangare Dr. S R Parekar	07.09.2022	50	Institute
5	IEI	Guest Lecture on "Life and times of Civil Engineers"	Er. Anil Attavar	30.01.2023	72	Institute
6	IWWA	IWWA Annual Convention (poster Presentation)	Er. C R Gajbhiye, Er M Madhiyalagan	22.01.2023	05	National
7	IWWA	Mr. S D Mande Memorial Lecture Series & The Expert Talk "Water and Urbanization"	Dr. Dinkar More	12.12.2022	58	Institute
8	IWWA	Engineer's Day Celebration 2022 and Expert Talk on "Structural Geology for Civil Engineers"	Dr. Durga Prasanna Mohanty	15.09.2022	65	Institute

**A.Y. 2021-22**

Sr No	Students chapter	Title of Activity /Event conducted in department	Guest/ Expert Name	Date	No. of students benefited	Level
1.	IEI	Expert Lecture on "Application of Artificial Neural Network in the field of Hydraulics and Environmental	Dr. Hazi Azamathulla, Professor University of west indies at St. Augustine,	19/11/2021	118	Institute



		Engineering”	Trinidad			
2.	IEI	Webinar on “GATE-Awareness”	Mr. Paresh Gugale founder, Director I2E- imperial institute	21/08/2021	54	Institute
3.	IEI	Webinar on “Importance of water proofing”	Mr. Jayant Khode, Concept consultants	14/08/2021	58	Institute
4.	ISTE	Webinar on “Financial literacy”	Prof. Bhushan V. Adhav, (Founder Lions Mind Dev. Center)	17/07/2021	123	Institute
5.	IWWA	World environment day celebration with Webinar on “Ecosystem Restoration”	Dr. Erach Bharucha, Director, BVIEER Pune	05/06/2021	420	Institute
6	IWWA	Inaugural function of IWWA students chapter and expert session on “Smart Village”	Dr. Priyanand Agale	28/08/2021	101	Institute
7.	IGS	Inaugural function of IGS students chapter and expert session on “Working of IGS students chapter”	Mrs. Annapoorni Iyer	03/02/2022	124	Institute
8.	IGS	Webinar on “Identifying Intellectual Property Right component at the early stage of Innovation”	Dr. Latika Dawra Assistant controller of patents and designs Patent Office, Mumbai	09/03/2022	75	Institute
9.	IGS	Quiz on Geotechnical engineering	Dr. R D Nalawade	30/04/2022	96	Institute



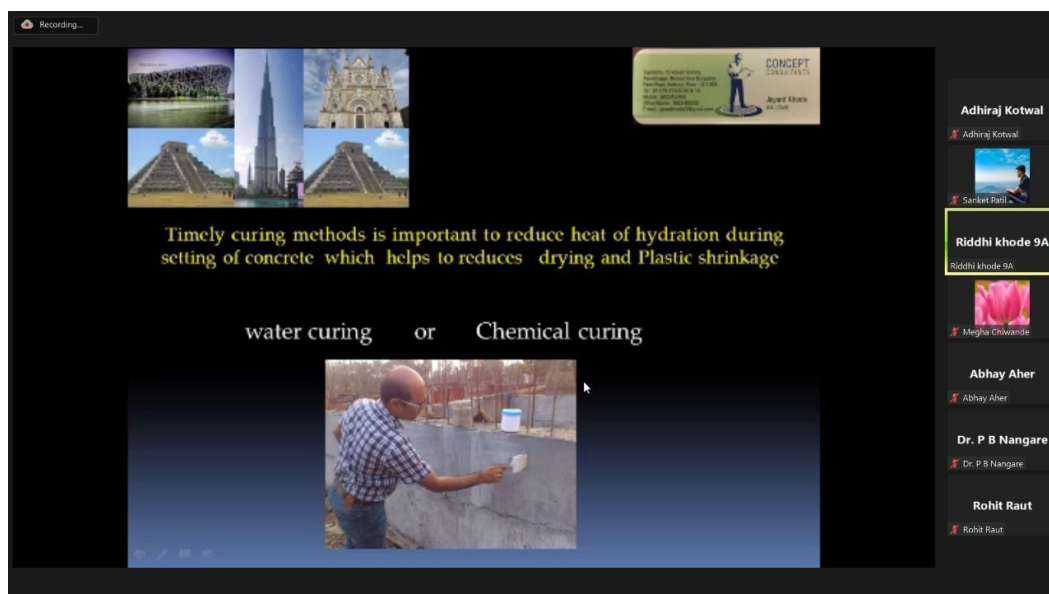


Fig. B.4.6.1 a. Webinar on “Importance of Water Proofing”

**AISSMS**  
COLLEGE OF ENGINEERING  
आय.सि.एस.एम.स.स.  
Accredited by NAAC with "A+" Grade

**Vision - Nurture the talent in Civil Engineers to work as global leaders for development of society**

**INSTITUTE OF ENGINEERS, STUDENT'S CHAPTER  
CIVIL DEPARTMENT  
PRESENTS WEBINAR ON**

**APPLICATION OF ARTIFICIAL NEURAL NETWORKS IN THE FIELD OF HYDRAULICS AND ENVIRONMENTAL ENGINEERING**

**GUEST SPEAKER**

**Prof. Hazi Azamathulla**  
BTech (Civil) , MTech (Water Resources)  
Phd (Hydraulic Engineering)

**DATE -**  
19th OCT' 2021

**TIME -**  
10 A.M

**Student Coordinators**

Rohit Vardam	9834522258
Sanket Patil	7720998308
Vaishnavi Chumbalkar	7774045746

**Prof. V S Chavhan**  
Faculty specialization in Hydraulics Engineering

**Lecturer of Civil & Environmental Engineering** at The University of The West Indies at St. Augustine, Trinidad.

**Courses Taught**  
CVNG2005 Mechanics of Fluids  
CCNG 3014 Special Investigative Project

**Professional Memberships**  
Life Member of Indian Society for Hydraulics  
Associate Member in Institution of Engineers, India  
Member of International Flood Network, Japan  
Member of International Association of Hydrological Science, UK  
Associate Editor of Journal of Hydrology

**Research Interests**  
Water Resources Engineering, Hydraulics, Physical Hydraulic Model Studies, Hydroinformatics, Climate Change.

**Scan The OR Code To Join The Meeting**

**Link To Join**  
[https://us02web.zoom.us/j/83460556785?](https://us02web.zoom.us/j/83460556785?pwd=dIQ5RnZjRS8wZ05pQjBLU1B2dy9WQT09)  
[pwd=dIQ5RnZjRS8wZ05pQjBLU1B2dy9WQT09](https://us02web.zoom.us/j/83460556785?pwd=dIQ5RnZjRS8wZ05pQjBLU1B2dy9WQT09)

**Mission**

M1: Provide quality education to develop competent Civil Engineers.  
M2: Create awareness among students for sustainable development.  
M3: Cultivate the leadership qualities for becoming successful entrepreneurs

**Faculty coordinators**

<b>Prof. P R Modak</b> Faculty specialization in Environmental Engineering	<b>Prof.M S Chivande</b> Faculty Advisor IEI Student Chapter
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**Regards**

<b>DR. U. R. AWARI</b> HOD, CIVIL ENGG. Dept.	<b>DR. D. S. BORMANE</b> Principal , AISSMSCOE
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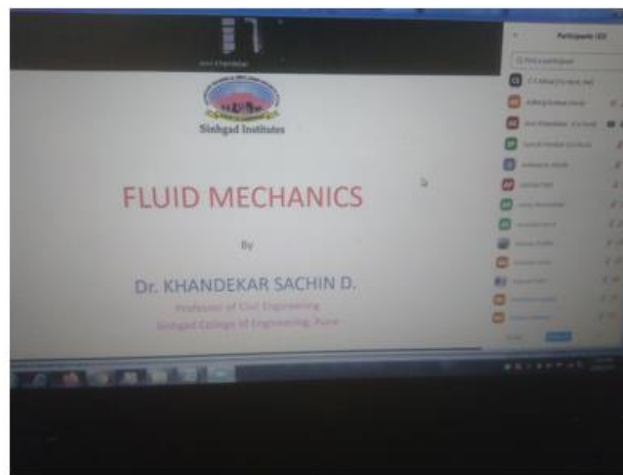
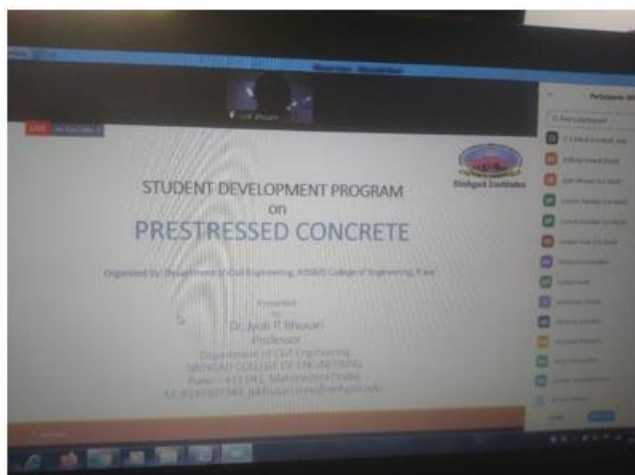
Fig. B.4.6.1 b. Webinar on “Application of Artificial Neural Networks in the field of Hydraulics and Environmental Engineering”

Fig. B.4.6.1 c. Webinar on “GATE-Awareness”

Table B.4.6.1 e

A.Y. 2020-21						
Sr No	Students chapter	Title of Activity /Event conducted in department	Guest/ Expert Name	Date	No. of students benefited	Level
1.	IEI	Expert Lecture on “Soft Skills: A Must-Have Asset for Engineers”.	Dr. Utpal K Ganatra, English Lecturer Government Polytechnic College, Dohod	20/03/2021	67	Institute
2.	IEI	Expert Lecture on “Career Opportunities after Engineering”	Mr. Anand Kumar, Assistant professor, ACE Engineering Academy	04/06/2021	75	Institute
3.	IEI	One Week Student Development Program on “GATE Coaching tips and tricks”	Faculty members of Civil Department	25/01/2021 to 31/01/2021	104	Institute
4.	IEI	Expert talk on “Career opportunities for Civil Engineers after COVID -19”	Ms. Kiran Somvanshi, Chief manager Economic Times Intelligence group	01/08/2020	151	Institute

5.	IEI	Expert talk on “Competitive Exam Preparation”	Mr. Shekhar Deshmukh, DYPS/ACP, SSC AIR-3	12/09/2020	132	Institute
6.	IEI	Two days’ workshop on on “Employability Skill Development”	Mrs. Pragya Bajpai Assistant Professor (English) NDA	05/11/2020 and 07/11/2020	85	Institute
7.	IWWA	Expert talk on “Engineering for healthy Planet”	Er. Rajendrakumar Saraf, Managing director Viraj Envirozing India Pvt. Ltd. Pune	15/09/2020	97	Institute
8.	IWWA	Two days Faculty development program on “Recent trends in water resources and Environmental Engineering”	1. Er. H T Dhumal 2. Mr. Ramdas Tambe 3. Dr. S T Mali 4. Dr. R S Karale 5. Prof. Praveen Kolhe 6. Mr. Madhusudan Gotipamul	30/10/2020 and 31/10/2020	258	Institute



**Fig. B.4.6.1 d. One Week Students Development Program on “GATE Coaching with Tips and Tricks”**



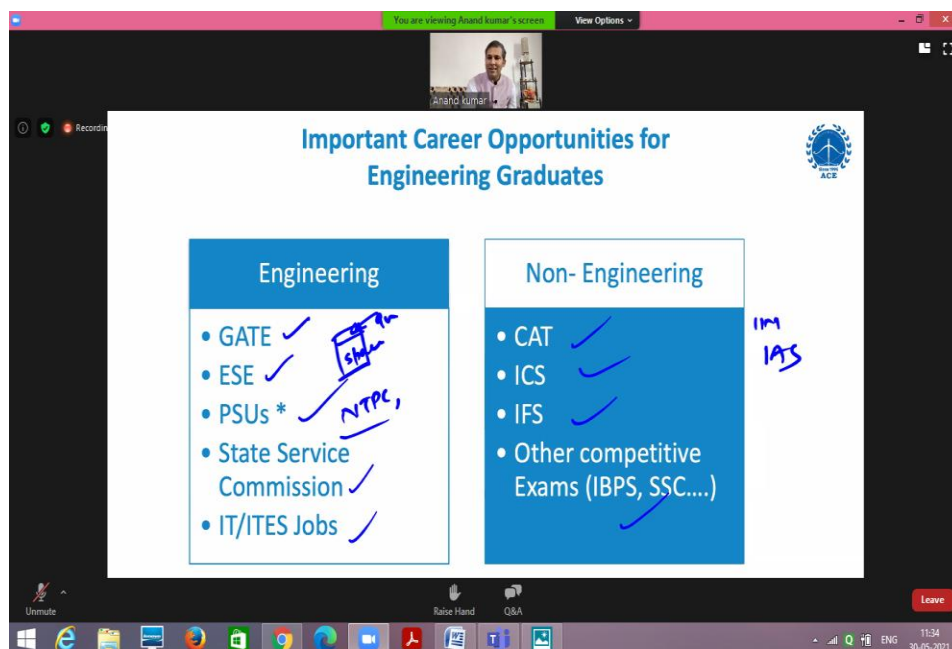


Fig. B.4.6.1 e. Expert Lecture on “ Career Opportunities after Engineering”

**AISSMS**  
COLLEGE OF ENGINEERING  
ज्ञानम् सफलजनहिताय

Approved by AICTE, New Delhi, Recognized by Govt. of Maharashtra,  
Affiliated to Savitribai Phule Pune University and recognized 2(f) and  
12(B) by UGC (Id No. PU / PN/ Engg. / 093 (1992))  
Accredited by NAAC with A+ Grade

**DEPARTMENT OF CIVIL ENGINEERING  
&  
INSTITUTE OF ENGINEERS ,STUDENTS CHAPTER**

**HAVE ORGANIZED A WEBINAR ON**

**SOFT SKILLS : A MUST HAVE ASSET FOR ENGINEERS**

SCAN THE QR CODE  
TO JOIN THE MEETING

**DATE**  
**20<sup>TH</sup> MARCH, 2021**

**TIME**  
**10.30 AM**

**GUEST SPEAKER**

LECTURER IN ENGLISH – G.E.S (CLASS- II)  
GOVERNMENT POLYTECHNIC , JHALOD ROAD ,  
DAHOD- GUJARAT

CERTIFIED TRAINER : MEPSC & BOSCH

LIFE MEMBER OF  
INDIAN SOCIETY FOR TRAINING &  
DEVELOPMENT

**DR.UTPAL GANATRA**  
M.A., M.Phil,  
Ph.D – English , TKT ,CTE

EX. ASST. PROF. OF  
COMMUNICATION SKILLS AT  
ST. STEPHEN INSTITUTE OF BUSINESS  
MANAGEMENT & TECHNOLOGY , ANAND

**VISION** - NURTURE THE TALENT IN CIVIL ENGINEERS TO WORK AS  
GLOBAL LEADERS FOR DEVELOPMENT OF SOCIETY .

**MISSION** - PROVIDE QUALITY EDUCATION TO DEVELOP  
COMPETENT CIVIL ENGINEERS .

- CREATE AWARENESS AMONG STUDENTS FOR  
SUSTAINABLE DEVELOPMENT .
- CULTIVATE THE LEADERSHIP QUALITIES FOR BECOMING  
SUCCESSFUL ENTREPRENEURS

**STUDENT COORDINATOR**  
**ASHLESH PATIL**  
7843023689

**DR. U. R. AWARI**  
Head , Civil Engg. Dept.

**FACULTY COORDINATOR**  
**MRS. M.S. CHIWANDE**  
9860136868

**DR. D. S. BORMANE**  
Principal, AISSMSCOE

Fig. B.4.6.1 f. Expert Lecture on “Soft Skills: A Must-Have Asset for Engineers”.

**AISSMS**  
 COLLEGE OF ENGINEERING  
Approved by AICTE, New Delhi, Recognized by Govt. of Maharashtra, Affiliated to Savitribai Phule Pune University and recognized 2(f) and 12(B) by UGC (Id.No. PU / PN/ Engg. / 093 (1992) Accredited by NAAC with 'A+' Grade

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**Department of Civil Engineering**  
 In association with  
**Institute of Engineers and ISTE, Students chapter**  
 Invites you to Webinar on  
**CAREER OPPORTUNITIES AFTER ENGINEERING**

**ANAND KUMAR**  
ASSISTANT PROFESSOR,  
ACE ENGINEERING  
ACADEMY

**Date : 04/06/2021**  
**Time : 4 PM**  
**Zoom link: [https://aceenggacademy.zoom.us/join/zoom/register/WN\\_TENh81ncR5OyOd0Xc38ENQ](https://aceenggacademy.zoom.us/join/zoom/register/WN_TENh81ncR5OyOd0Xc38ENQ)**

**Vision :**  
Nurture the talent in Civil Engineers to work as global leaders for development of society.

**Mission :**

- Provide quality education to develop competent Civil Engineers.
- Create awareness among students for sustainable development.
- Cultivate the leadership qualities for becoming successful entrepreneurs.

**Note : The program will be conducted on Zoom platform**

**Student Coordinators**

Ashlesh Patil      Sanket Patil

**Faculty Coordinator**

Prof. M. S. Chivande  
Assistant Professor  
AISSMS COE, Pune

**Regards**

Dr. U. R. Awari  
Head Civil Engg. Department  
AISSMS COE, Pune

Dr. D. S. Bormane  
Principal,  
AISSMS COE, Pune

**Fig. B.4.6.1 g. Expert Lecture on “Career Opportunities after Engineering”**

**Table B.4.6.1 f**

**A.Y. 2019-20**

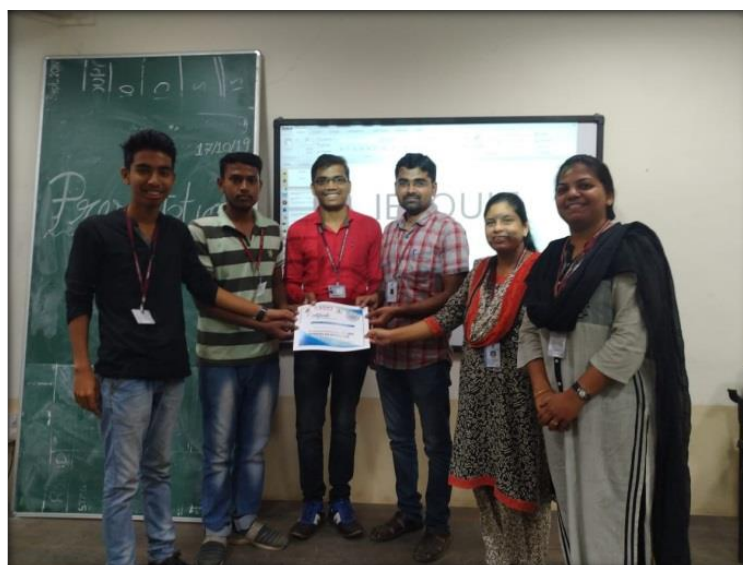
Sr No	Students chapter	Title of Activity /Event conducted in department	Guest/ Expert Name	Date	No. of students benefited	Level
1.	IEI	Celebration of Guru Pournima	Faculty members of Civil Department	16/07/2019	84	Institute
2.	IEI	Debate Competition	Principal, AISSMS, COE, Pune	9/09/2019 & 10/09/2019	196	Institute
3.	IEI	Felicitation of toppers for pass out batch	Faculty members of Civil Department	18/09/2019	52	Institute
4.	IEI	Expert lecture on “Feasibility Study of Pune Metro Project”	Mr. Pratap Singh Bhosale Principal Engineer ,Global Traffic Solutions, Pune	15/10/2019	92	Institute
5.	IEI	BTM & GT QUIZ	HOD. Civil	8/10/2019	62	Institute



**Fig. B.4.6.1 h. Expert lecture on “Feasibility Study of Pune Metro Project”**



**Fig. B.4.6.1 i. Geotechnical Quiz Winners**



**Fig. B.4.6.1 j. Building Technology & material Quiz Winners**





**Fig. B.4.6.1 k. Guru Pournima Celebration**



**Fig. B.4.6.1 l. Winners of Phase II Second Round for Debate Competition under IET**

#### **b. Engineering Today: - National Level Event- Student's Symposium and Exposition**

Engineering Today is a technical event organized by the AISSMS College of Engineering, commenced in the year 2006. The main objective of Engineering Today is to work for improvement of technical knowledge of students and also providing them an exposure to technical world by involving them in various technical events. The event, till date has been a major success all over Pune and Maharashtra and we plan to expand its reach substantially on a national level. This event is followed by Science Exhibition, aimed to increase the awareness about energy and environment among students. It includes Departmental Model, Model and Poster Prepared by SE, TE students. Event is coordinated by Student Coordinators along with Departmental Faculty Co-coordinator.


**Table B.4.6.1 g**
**A.Y. 2021-22**

Name of Contest	Activities Organized	Name of Coordinator/ Organizers	Period of Activities	Nature of Participants	No. of Participant	Name of Sponsors	Level
CIVISPARK 2021-2022	CV 01- Quiz Master	Faculty Coordinator: 1. Mr. P. R. Modak 2. Mr. K. U. Desai  Student Coordinator: 1. Kalyani Chavane 2. Sanket Bhame	29/09/2021	UG Students of Engineering	78	AISSMS COE Pune	National Level
	CV 02- Make that Pitch	Faculty Coordinator: 1. Mrs. M S Chiwande 2. Ms. S. P. Khedekar  Student Coordinator: 1. Sukanya Chava 2. Rohit Raut	29/09/2021		65		National Level
	CV 03- Down town Utopia	Faculty Coordinator: 1. Mr. G. C. Chikute 2. Mr. U J Jadhav  Student Coordinator: 1. Mansi Holkar 2. Akshay Gaware	30/09/2021		54		National Level

**A.Y. 2020-21**

Due to Covid-19 Engineering today was not conducted.

**Table B.4.6.1 h**
**A.Y. 2019-20**

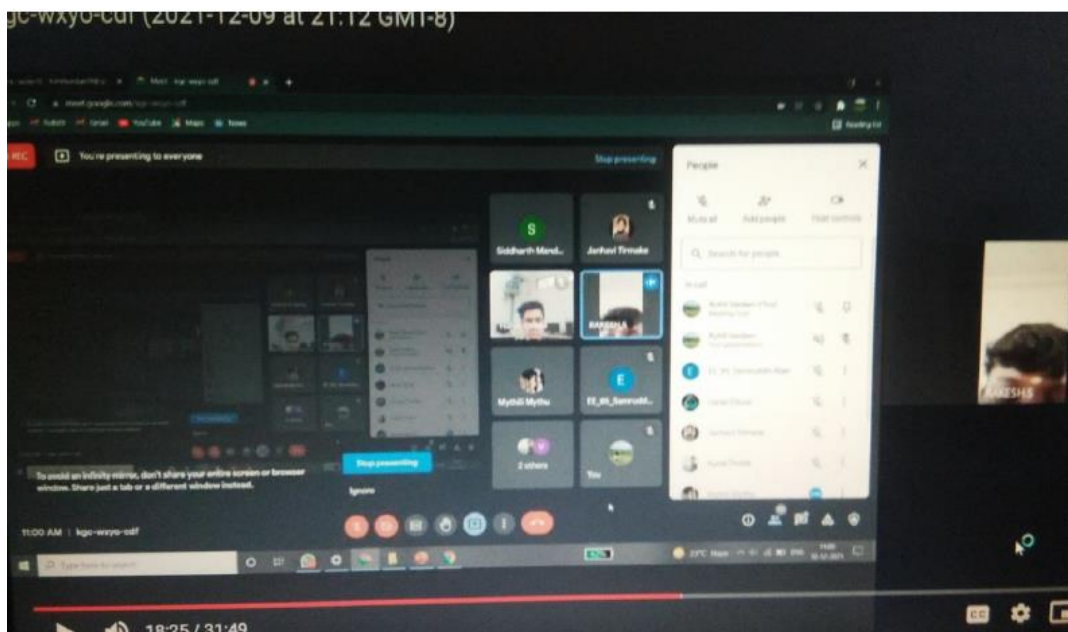
Name of Contest	Activities Organized	Name of Coordinator/ Organizers	Period of Activities	Nature of Participants	No. of Participant	Name of Sponsors	Level
CIVISPARK 2019-2020 Judges: -	CV 01- Tech Desk	Dr. V N Patil	18/09/2019	UG Students of Engineering	53	AISSMS COE Pune	National Level

Alumni Pratik Khardekar from Extreme Trekks	CV 02- Down Town Uthopia	Mrs. M V Waghmare	19/09/2019		62		National Level
	CV 03- Connaisance	Mr. S D Nagrale	18/09/2019		80		National Level
	CV 04- Gyan Ganga	Mr. D V Wadkar	19/09/2019		82		National Level
Science Exhibition Judge Name: Mr Dhoot (Alumni of AISSMS COE Pune)	-	Ms. A M Deulkar	20/09/2019		83		National Level



**Fig. B.4.6.1 m. Glimpses of Engineering Today 2019-20**





**Fig. B.4.6.1 n. Glimpses of Engineering Today 2021-22**

**4.6.2**
**Publication of technical magazines, newsletters, etc.**
**05**

The Department shall list the publications mentioned earlier along with the names of the editors, publishers, etc.

Departmental News Letter is Published every year, which involves student achievements in Academic activity, curricular activity and Extra-curricular Activity and Faculty Achievements.

A. Quality and Relevance of the contents and Print Material (3)

B. Participation of Students from the program (2)

**Table B.4.6.2 a**

Sr. No.	Name of Magazine/ Newsletter	Name of Editor(s)	Name and class of students involved	Name of Publisher(s)	Issues (Monthly/ Yearly)	Name of Subscribers	No. of Subscribers
1	Civilization	Mr. C S Misal	1. Swaraj Chalke (BE B) 2. Pragati Sannake (TE B) 3. Devang Tupe (SE A)	AISSMSCOE, Pune	Yearly	Faculty, Students, Parents, Alumni	Year 2021-22: 1168
							Year 2020-21: 1080
							Year 2019-20: 919
2	Concrete People	Mr. C S Misal	1. Kalpesh Patil (BE A) 2. Ajinkya Sonar (TE B)	AISSMSCOE, Pune	Semester	Faculty, Students, Parents, Alumni	Year 2021-22: 1168
							Year 2020-21: 1080
							Year 2019-20: 919
3	Shivdarpan	Mrs. Shikha Pachouly		AISSMSCOE, Pune	Yearly	Faculty, Students, Parents, Alumni	2500

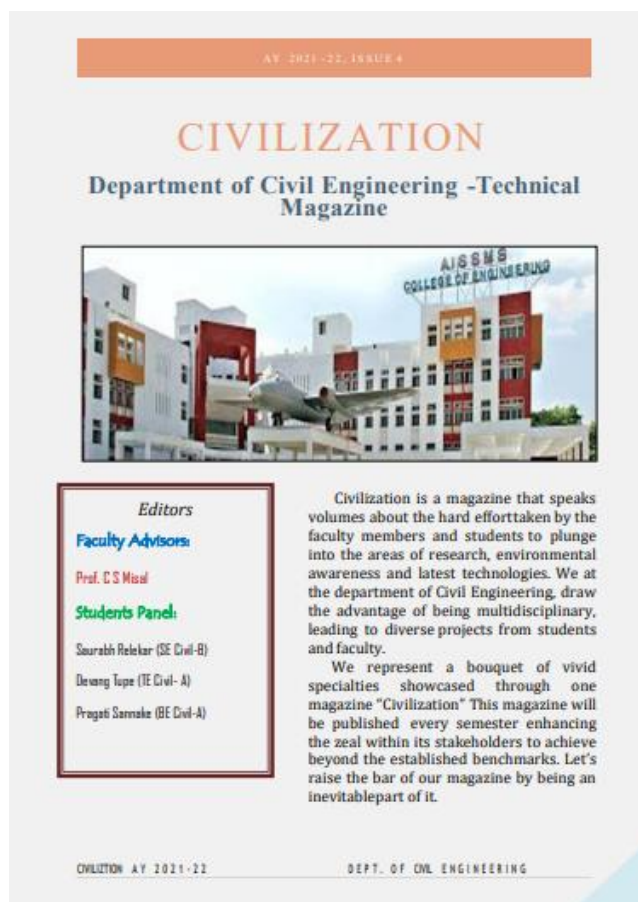


Fig. B.4.6.2 a. technical magazine (Civilization) – 2021-22



Fig. B.4.6.2 b. Technical magazine (Civilization) – 2020-21



Fig. B.4.6.2 c. Technical magazine (Civilization) – 2019-20

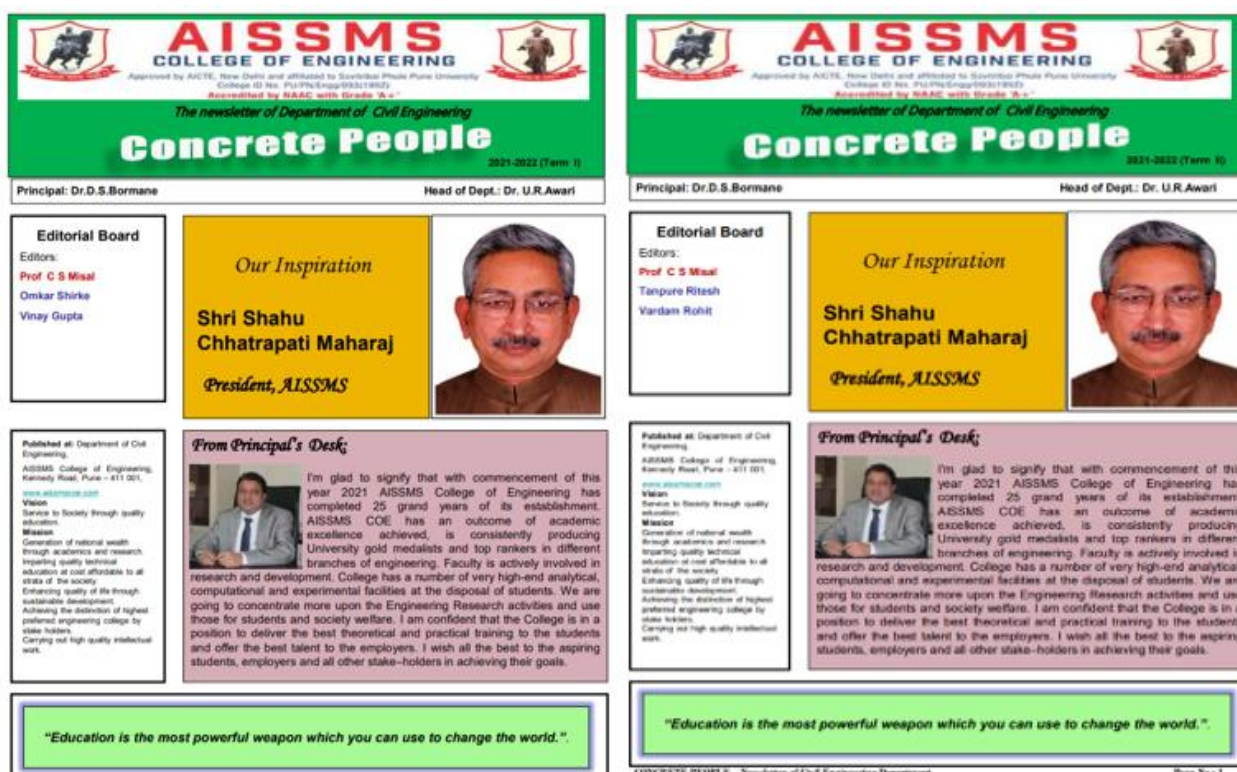


Fig. B.4.6.2 d. Newsletter (Concrete People) – 2021-22



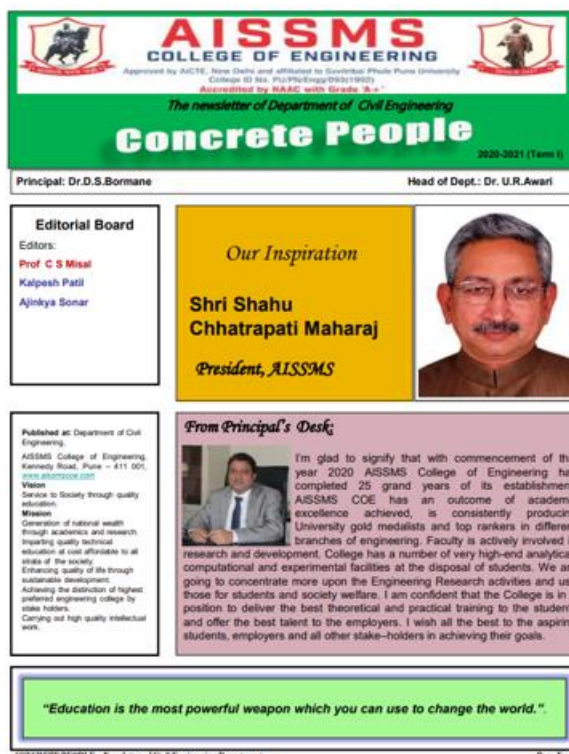


Fig. B.4.6.2 e. Newsletter (Concrete People) – 2020-21

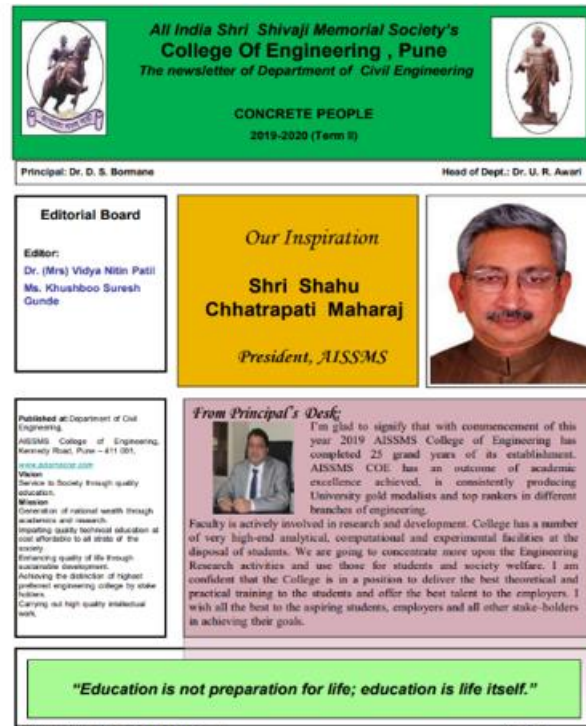
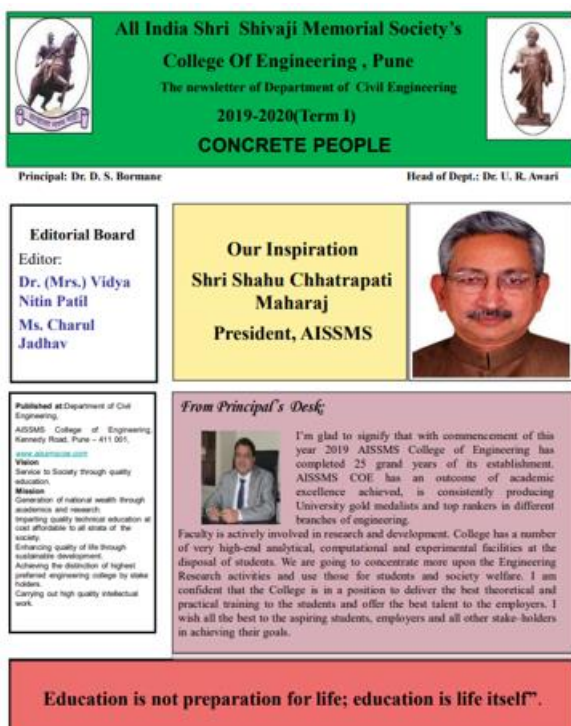
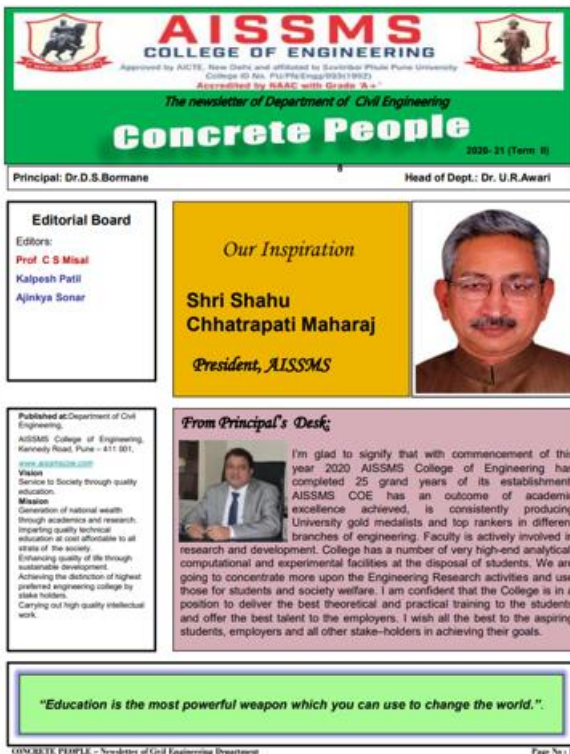


Fig. B.4.6.2 f. Newsletter (Concrete People) – 2019-20



4.6.3	Participation in inter-institute events by students of the program of study	10
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## i) Student's Publication

Table B.4.6.3 a

Sr. No	Document Details	Authors	Year	Source Details	ISBN/ISSN	Publisher
1.	Modelling and Analyzing Land-Use Pattern Using GIS	1. Sanket Bhame 2. Akshay Gaware 3. Adhiraj Kotwal 4. Kunal Ghule	August 2022	International Journal of Scientific Research & Engineering Trends Volume 8, Issue 4, July-Aug-2022	ISSN (Online): 2395-566X	IJSRET
2.	Canal Water Preservation with Solar Energy	Nipul Girase	June 2022	Dickensian Journal, Volume 22, Issue 6, June 2022	ISSN No. 0012-2440	
3.	Remedial measures on Landslide	Vishwajeet Deshmukh, Nandini Jagtap	June 2022	Dickensian Journal, Volume 22, Issue 6, June 2022	ISSN No. 0012-2440	
4.	Study On Organic and Self-Healing Bricks (Mycelium and Fly Ash)	1. Vijay Turekar 2. Yogita Meher 3. Pooja Takalkar	June 2022	International Journal Of Innovative Research In Technology, Volume 9 Issue 1, pp 596	ISSN 2349-6002	IJIRT
5.	Study On Properties Of Self Curing Concrete	1. Rushikesh Nikam 2. Suraj Sasane 3. Neha Wagh 4. Kiran Sagare	June 2022	Multidisciplinary Journal of Research in Engineering and Technology Volume 9 Issue 3 pp. 93-99	ISSN 2348-6943	MJRET
6.	Partial Replacement of Cement by Ground Granulated Blast Slag (GGBS) and Addition of Activated Charcoal Powder	1. Shubham Bonde 2. Prathamesh Bacchav 3. Ajay Ingle 4. Sachin Kanoje	June 2022	GRADIVA Review Journal, Volume 8 Issue 6, pp 117-124	ISSN 0363-8057	GRADIVA REVIEW JOURNAL
7.	Review Paper on Effective Methods for The Retrofitting of Reinforced Concrete Structures	1. Shloka Awari 2. Khushali Ekbote 3. Ashlesha Patange 4. Anushka Surve	June 2022	International Journal for Research in Applied Science & Engineering Technology (IJRASET), Volume 10, Issue 6, pp 1956-1959.	ISSN 2321-9653	IJRASET



8.	Study On Utilization of Natural Fibre as A Composite Material in Cement Mortar Tiles	1. Rajendra Bahiram 2. Akash Badoge 3. Pawan Amburle 4. Saurav Aher	May 2022	Journal of Emerging Technologies & Innovative Research, Volume 9 Issue 5.	ISSN 2349-5162	JETIR
9.	Microbial Fuel Cell: An Innovative Technology For Wastewater Treatment and Bio-Electricity Generation	1. Tanushree Khade 2. Shrutika Kawade 3. Pooja Jondhale 4. Tushar Kapadnis	June 2021	PENSEE International Journal, Vol 51, Issue 6 pp 897	ISSN 0031-4773	PENSEE
10.	Study of Structural Irregularities in different Seismic Zones using Response Spectrum Analysis	1. Vedant Kale 2. Swaroop Godse 3. Rahul Gosavi 4. Gitanjali Gavit	August 2021	International Journal for Research in Applied Science & Engineering Technology (IJRASET), Vol 9, Issue 8, pp 1410-1417	ISSN 2321-9653	IJRASET
11.	Strengthening of Concrete by Utilization of Hypo Sludge and Fly Ash as Partial Replacing Material of Cement.	1. Swaraj Chalke 2. Pranav Patil 3. Sundeep Punmiya 4. Sanket S. Rathi	June 2021	GRADIVA Review Journal, Volume 7 Issue 6, pp 304-309	ISSN 0363-8057	Gradiva Review Journal
12.	Analysing the strength of concrete blocks reinforced by half portion of coconut shell	1. Ashlesh P. Patil 2. Mahesh A. Patil 3. Sanskrut P. Patil 4. Anuradha R. Rout	June 2021	International Journal for Research in Applied Science & Engineering Technology (IJRASET), Volume 9 Issue VI, pp 1684-1687	ISSN 2321-9653	IJRASET
13.	Study and Improvement of Structure by using Self-Healing Concrete	1. Nikhil Katariya 2. Saurabh Deore 3. Nihal Dhore 4. Aditya Pratap Dixit	July 2021	International Research Journal of Engineering and Technology (IRJET), Volume 8 Issue 7, pp 2298-2303	ISSN 2395-0072	IRJET
14.	Spatial and Temporal Analysis of Drought Using GIS Techniques	1. Aniket Nanaware 2. Sumit Pawar 3. Shreyas Mane 4. Rahul Sukate	June 2020	International Journal of Research in Engineering, Science and Management (IJRESM), Volume-3, Issue – 6, pp: 219-222	ISSN 2581-5792 (Online)	IJRESM



15.	Effect of Varying Concentration of NaOH on Geopolymer Concrete	1. Pratik Jadhav 2. Pratik More	June 2020	International Research Journal of Engineering and Technology (IRJET), Volume 7, Issue 6, pp 2014-2016	ISSN 2395-0072	IRJET
16.	Heavy Metal Removal by using Different Agricultural Waste Adsorbants	1. Priyanka Shivankar	April 2020	TEST Engineering & Management, Volume 83, pp 13899- 13903	ISSN 0193-4120	The Mattingley Publishing Co., Inc
17.	To Extract Gfc's from Clash Free and Well Coordinated REVIT MODEL	1. Tejas Rathod 2. Yashraj Tatiya 3. Riddhi Rathi 4. Dhiraj Idamakanti	March 2020	International Research Journal of Engineering and Technology (IRJET), Volume 7, Issue 3, pp 4256-4261	ISSN 2395-0072	IRJET
18.	Automatic Equal Quantity and Quality Water Distribution	1. Kalyani Chavane 2. Samkit Chhajed 3. Gaurav Dudhe	March 2020	TEST Engineering & Management, Volume 83, pp 14000- 14005	ISSN 0193-4120	The Mattingley Publishing Co., Inc
19.	Review on Numerical Fishery Harbour on the west coast of India	1. Pranav M. Vaishampayan 2. Varun P. Khengare 3. Ketan S. Jadhav 4. Abhishek P. Deshmukh	March 2020	International Journal Of Creative Research Thoughts, pp 2663-2668	ISSN 2320-2882,	IJCRT
20.	Design of EPS Geofoam as a Pavement block	1. Ashutosh Vijay Jagtap 2. Shantanu Rajesh Dahatonde 3. Shubham Dinesh Baghele 4. Shubham Dattatray Bhange	November 2019	International Research Journal of Engineering and Technology (IRJET), pp 1722-1724	ISSN 2395-0056	IRJET
21.	An Experimental study on strength and properties of thirsty concrete	1. Rushikesh Tapkir 2. Mithila Mane 3. Smit Modi 4. Shreyance Luniya	June 2019	International Journal of innovative Research in Technology, Volume 6, pp 160-163.	ISSN 2349-6002	IJIRT





22.	Review - An Experimental study on strength and properties of thirsty concrete	1. Rushikesh Tapkir 2. Mithila Mane 3. Smit Modi 4. Shreyance Luniya	April 2019	International Journal of innovative Research in Technology, Volume 5, issue 11, pp: 490-492.	ISSN 2349-6002	IJIRT
23.	Risk Management in infrastructure Development	1. Saurabh 2. Shinu T Ninan 3. Yash Raut 4. Shubham Tekade	April 2019	International Journal of innovative Research in Technology, Volume 5, issue 11, pp 493-496.	ISSN 2349-6002	IJIRT
24.	Measuring Project Performance and success factors of construction sites.	1. Pranav Gadekar 2. Nikita Agarwal 3. Saurabh Basak 4. Yash Raut	April 2019	International Journal of innovative Research in Technology, Volume 5, issue 11, pp 680-685	ISSN 2349-6002	IJIRT

**Students Achievement: -**

<b>2022-23</b>			
<b>Sr. No.</b>	<b>Name of Students</b>	<b>Level</b>	<b>Details of Achievement (State/University/ National/International Level)</b>
<b>1</b>	Mr. Kalpesh Patil and Paritosh Mhaske	National	First Prize in Poster Competition in 55 <sup>th</sup> Annual National Convention organized by Indian Water Works Association
<b>2</b>	Mr. Tejas Bhate	National	Winner in Smart India Hackathon 2022 (Quantum GIS)
<b>3</b>	Shrawani Bhosale, Makarand Mali, Devashish Kale, Chinmay Chitte	National	Consolation prize in the event “Bob the Builder” at 23 <sup>rd</sup> National Level Civil Engineering Symposium, NIRMITEE 23 at MIT WPU
<b>4</b>	Soham Surve, Sarthak Nagmode, Aniruddha Deshmukh	National	Runner up in football (Men) National Level Sports meet Summit 23 organized by MIT WPU Pune
<b>5</b>	Mr. Pranav Gurav	National	India's Overall 5th Fastest runner in 100mtr with time 10.39 secs
<b>6</b>	Mr. Pranav Gurav	National	Gold Medalist in 200 m with performance of 21.5 secs
<b>7</b>	Mr. Pranav Gurav	State	Gold Medalist in Mini Olympics 2023 – Maharashtra State Olympic Games
<b>8</b>	Mr. Pranav Gurav	Zonal	Gold Medalist in South west zone Championship October 2022
<b>9</b>	Mr. Pranav Gurav		Gold medal in 2 <sup>nd</sup> National Open U-23 Athletics Championship organized by Chhatisgarh Athletics Association.
<b>10</b>	Gayatri Salunke	SPPU Zonal	Participated in inter collegiate kabbadi (women) competition organized by Pune City Zonal Committee in year 2022-23



11	Aditya Patil, Aditya Chavan, Aarya Dangat	SPPU Zonal	Participated in inter collegiate Cricket (men) competition organized by Pune City Zonal Committee in year 2022-23
12	Pranav Gurav	SPPU Zonal	Participated in inter collegiate Athletics (men) competition organized by Pune City Zonal Committee in year 2022-23
13	Shivam Deokate	SPPU Zonal	Participated in inter collegiate Shooting (men) competition organized by Pune City Zonal Committee in year 2022-23
14	Soham Surve, Sahil Sapkal, Sarthak Nagmode, Aniruddha Deshmukh, Tanishk Badegar	SPPU Zonal	Participated in inter collegiate Football (men) competition organized by Pune City Zonal Committee in year 2022-23
15	Atharva Machale	SPPU Zonal	Participated in inter collegiate Table Tennis (men) competition organized by Pune City Zonal Committee in year 2022-23
16	Ishan Suryavanshi	SPPU Zonal	Participated in inter collegiate lawn Tennis (men) competition organized by Pune City Zonal Committee in year 2022-23
17	Kaushal Shinde	SPPU Zonal	Participated in inter collegiate Basket Ball (men) competition organized by Pune City Zonal Committee in year 2022-23
18	Abhay Mane, Shambhuraj Keshkar	SPPU Zonal	Participated in inter collegiate Volleyball (men) competition organized by Pune City Zonal Committee in year 2022-23
19	Manthan Sonkamble, Chandan Chavan, Gaurav Borse, Abhay Singh	SPPU Zonal	Participated in inter collegiate Kabaddi (men) competition organized by Pune City Zonal Committee in year 2022-23
20	Sayali Tangature	SPPU Zonal	Participated in inter collegiate Kabaddi (women) competition organized by Pune City Zonal Committee in year 2022-23
21	Rutuja Sonawane	SPPU Zonal	Participated in inter collegiate Voolleyball(women) competition organized by Pune City Zonal Committee in year 2022-23
22	Pranav Gurav	Inter University	First Position in Men's 100m run at 82nd All India Inter University Athletics Meet 2022-23
23	Sarthak Nagmode, Aniruddha Deshmukh	Inter Collegiate	Runner up in football event in ZEST 23 COEP Technological University Pune
24	Soham Joshi, Makarand Mali, Devashish Kale, Chinmay Chitte	Institute	Participated in Bridge making Competition "Technovate 2K23" Organized by PCCOE Ravet
25	Chinmay Chitte	Institute	3 <sup>rd</sup> place in Monopoly Marathon Competition organized by COEP Tech's Pune Startup Fest 2023
26	Chinmay Chitte	Institute	3 <sup>rd</sup> position in "Bridgemanian" conducted by Zion' 23at DYPIET Pimpri Pune
<b>2021-22</b>			
<b>Sr. No.</b>	<b>Name of Students</b>	<b>Level</b>	<b>Details of Achievement (State/University/</b>





			<b>National/International Level)</b>
<b>1</b>	Khushali Ekbote	International	Elected as affiliate member of American Society of Civil Engineers (ASCE) by Action of The Board of Direction.
<b>2</b>	Khushali Ekbote	International	Was elected student of the “Institute of Highway Engineers” (IHE)
<b>3</b>	Khushali Ekbote	International	Elected as student member of American Society of Civil Engineers (ASCE) by Action of The Board of Direction.
<b>4</b>	Gaurav Dudhe	National	Won 1 <sup>st</sup> prize in PRAGATI 2021- The National Level Technical Innovation and Business Plan Competition.
<b>5</b>	Samkit Chhajed, Kalyani Chavne, Pradnya Khatpe	National	Filed and published Product Patent – REGULAR EQUAL WATER DISTRIBUTION SYSTEM on 21/01/2022.
<b>6</b>	Pranav Gurav	National	Silver Medal in 100m run performance time 10.61 sec in 1 <sup>st</sup> National U-23 Athletics Championship 2021, held at New Delhi.
<b>7</b>	Pranav Gurav	State	Participated in 70 <sup>th</sup> Maharashtra State Senior Athletics Championship 2022, held at Pune.
<b>8</b>	Khushali Ekbote	District	Awarded scholarship of Rs. 62994 by Opash Socio- Commercial Pvt. Ltd. Pune.
<b>9</b>	Samkit Chhajed, Kalyani Chavne, Pradnya Khatpe	University	Won cluster level in SPPU I-2-e (Innovation to Enterprize) competition 2021-22. Topic for startup is REGULAR EQUAL WATER DISTRIBUTION SYSTEM.
<b>10</b>	Gaurav Dudhe	University	Won Best Innovation Project – Certificate, Memento, Cash prize Rs. 20,000/- and also received Motivation prize on Foundation Day of SPPU. For project on “Automated railway crossing with auto train speed control and live tracking”.
<b>11</b>	Gaurav Dudhe	University	Won 1 <sup>st</sup> prize in SPPU Innofest Kloudq Hackathon.
<b>12</b>	Samkit Chhajed, Kalyani Chavane and Pradnya Khatpe	University	Won the competition I-2E, for innovation project titled Automatic equal quantity and quality water distribution.
<b>13</b>	Pranav Gurav	University	Bronze Medalist in 100m in 2 <sup>nd</sup> Khelo India University Games, held at Bengaluru
<b>14</b>	Khushali Ekbote	Institute	Won 1 <sup>st</sup> Prize in Poster making Competition organized by Datta Meghe College of Engineering, Airoli, Navi Mumbai on 30 <sup>th</sup> June, 2021.
<b>15</b>	Pranav Gurav	Zonal SPPU	Won second place in Athletics (men) 200 m run tournament. Performance 21.93 seconds. SPPU Board of Sports and Physical Education
<b>16</b>	Pranav Gurav	Zonal SPPU	Won first place in Athletics (men) 4 x 100



			m relay tournament. Performance 42.07 seconds. SPPU Board of Sports and Physical Education
17	Pranav Gurav	Zonal SPPU	Won first place in Athletics 100 m run tournament. Performance 10.04 seconds. SPPU Board of Sports and Physical Education
18	Sahil Sapkal, Soham Surve, Sarthak Nagmode	Institute	First Runner up of FLAME Football Cup 2022 held at FLAME University Pune
19	Pranav Gurav	Zonal SPPU	Won second place in U-23 Mens 100 m run tournament at Maharashtra State Senior and U23 Open Athletics Meet Performance 10.71 seconds. Held at Nashik Maharashtra
20	Pranav Gurav	Zonal SPPU	First Place in 200m tournament performance 21.7 sec
21	Pranav Gurav	Zonal SPPU	First Place in 100m tournament performance 10.7 sec
<b>2020-21</b>			
1	Mr. Kalpesh Patil	National	Won IGBC Students' chapter Debate competition 2020 organized by HOC Pillai College of Engineering & technology, Rasayani.
2	Rohit Vardam, Ajinkya Sonar, Devang Tupe, Yashvindar Real	National	Won 3 <sup>rd</sup> prize in National level competition on building planning "Build O' Innovate" as team "NEXUS" organized by IIT Patna and District Administration, Bhojpur.
3	Khushali Ekbote	National	Awarded membership of "National Society of Professional Engineers".
4	Kalyani Chavane	National	First position in Internal Hackathon for Smart India Hackathon 2020
5	Priyanka Shivankar	National	Selected as Student innovation ambassador by Ministry of Education's Innovation Cell, India.
6	Neil Lapalikar	National	Received 100% sponsorship from L & T for M Tech from NIT Trichy and PPO to join as Senior Engineer with L&T after M Tech Completion.
7	Khushali Ekbote	National	Won first prize in Poster Competition organized by Indian Water Works Association, Mumbai Central on 5 <sup>th</sup> June, 2021.
8	Mr. Gaurav Dudhe	State	Won overall Gold medal and 75K cash prize in Anveshan 2019-2020 representing SPPU across all categories.
9	Mr. Kalpesh Patil	State	Won first rank in Seminar presentation at TechTantra 2K21 organised by Padm. Dr. V K Kolte College of Engineering, Malkapur.
10	Mr. Gaurav Dudhe	State	Received an honorary job offer for the post of Graduate Engineer Trainee from Kloudq, Pune.



2019-20			
1	Samkit Chhajed, Kalyani Chavane, Gaurav Dudhe, Pradnya Khapte and Vaishnavi Jogdand	National	Cleared phase one of Indian Innovation Challenge Design Contest (IICDC)2019 organized by MHRD, DST, AICTE, Texas Instruments, IIM Bangalore. Business proposal is on Automatic Water Distribution’.
2	Shantanu Sanas and Priyanka Shivankar	National	Qualified quarter final phase in Indian Innovation Challenge Design Contest (IICDC) 2019 organized by MHRD, DST, AICTE, Texas Instruments, IIM Bangalore.
3	Paresh Gavate, Rushikesh Jagtap, Param Ashturkar	National	Participated in Kabaddi in national level Inter Engineering Sports Meet “SUMMIT 19” held at MIT WPU
4	Saurabh Phadnis	National	Participated in Table Tennis in national level Inter Engineering Sports Meet “SUMMIT 19” held at MIT WPU
5	Rohit Chaudhari	National	Participated in Chess in national level Inter Engineering Sports Meet “SUMMIT 19” held at MIT WPU
6	Mr. Gaurav Dudhe	State	Participated in SPPU University Level Anveshan 2019 , Won First Rank at west zone inter university.
7	Prutha Khorjuvekar , Sagarika Shewale, Pooja Guddimath, NehaPatil	State	First Rank in Pune District Level, SPPU Avishkar 2019.
8	Manish Chavan, Saurav Bhilare, Pranav Bhandari and Sahil Bremhecha	State	First prize in Project Competition of ‘Innovision 2K20’ organized by JSPM’s, Rajarshree Shahu College of Engineering, Tathawade, Pune.
9	Pratik Lahane	State	Won first prize for best radium art in Firodia Karandak 2019 at the hands of Mr. Mahesh Manjrekar.
10	Pranav Bhandari and Sahil Brahmecha	State	Won Runner UP in the Football tournament- State Level Chhatrapati Shahu Football Trophy organized by AISSMS College Of Engineering
11	Pranav Gurav	State	2 <sup>nd</sup> place in 100m run in 35 <sup>th</sup> Maharashtra State Junior Athletic Championship held at Pune Performance 11.20 sec
12	Pranav Gurav	University	Represented Pune City Athletic meet and secured Gold and Silver in 100 meter and 200-meter category and also selected in All India Inter University Athletic meet.
13	Rushikesh Sherkar	Institute	Winner in Cricket Event in ZEST 19 organised by COEP



Fig. B.4.6.3 a. Texas Instrument Tool Kit (2019-20)



Fig. B.4.6.3 b. Team Hydrophilic (2019-20)



Fig. B.4.6.3 c. Pratik Lahane won First Prize Radium Art, Firodiya Karandak February 2019





Fig. B.4.6.3 d Neil Lapalikar received 100 % scholarship from L & T.



Fig. B.4.6.3 e Priyanka Shivankar – Student Innovation Ambassador



Fig. B.4.6.3 f Newspaper reading



Fig. B.4.6.3 g Student receiving award from SPPU





**Fig. B.4.6.3 h Student participated at InnoFest 2022**



**Fig. B.4.6.3 i Student receiving first award at SIH 2022**



Fig. B.4.6.3 j Newspaper reading for SIH 2022



Fig. B.4.6.3 k. Saurav Bhilare and team first prize in Project Competition of 'Innovision 2K20



**Fig. B.4.6.3 l. Pranav Gurav secured Gold and Silver in 100 meter and 200 meter category in All India Inter University Athletic meet.**



**Fig. B.4.6.3 m. Mr. Gaurav Dudhe, won overall Gold medal and 75K cash prize in Anveshan 2019-2020 representing SPPU across all categories.**



**Fig. B.4.6.3 n. Ms. Khushali Ekbote won first prize in Poster Competition organized by Indian Water Works Association, Mumbai Central.**





## POSTER COMPETITION WINNERS World Environment Day - 5th June 2021



1st prize

Ms Khushali Ekbote



2nd prize

Ms Neha Shigvan

Fig. B.4.6.3 o. Poster of Khushali Ekbote published in “DROPLET” magazine of IWWA, Mumbai



Fig. B.4.6.3 p. Khushali Ekbote Elected as affiliate member of ASCE



**Fig. B.4.6.3 q. Khushali Ekbote elected student of IHE**



**Fig. B.4.6.3 q. Khushali Ekbote won 1<sup>st</sup> Prize in Poster making Competition**



**Fig. B.4.6.3 r. Khushali Ekbote elected as student member of ASCE**



**Fig. B.4.6.3 r. Khushali Ekbote Awarded membership of NSPE**





## DEPARTMENT OF CIVIL ENGINEERING

### CRITERION V

#### Faculty Information and Contributions



CRITERION V	Faculty Information and Contributions	100
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Name	PAN No.	University Degree	Date of Receiving Degree	Area of Specialization	Research Paper Publications	Ph.D Guidance	Faculty receiving Ph.D during the assessment year	Current Designation	Date (Designated as Prof/ Assoc. Prof.).	Initial Date of Joining	Association Type	At present working with the Institution (Yes/No)	In case of NO, Date of Leaving	IS HOD?
Dr. U R Awari	AAUPA9458L	ME/M. Tech and PhD	04/12/2017	Structure	10			Associate Professor	01/06/2017	01/01/1993	Regular	Yes		No
Dr. S R Parekar	AGQPP7452H	ME/M. Tech and PhD	03/11/2010	Structure	10			Professor	01/06/2016	07/05/2014	Regular	Yes		No
Dr. V N Patil	AFHPD3643N	ME/M. Tech and PhD	23/12/2016	Construction Management	5			Professor	18/07/2022	29/09/2000	Regular	Yes		No
Dr. P B Nangare	ACCPN3024F	ME/M. Tech and PhD	24/01/2020	Environmental Engineering	5			Associate Professor	24/01/2022	07/08/2006	Regular	Yes		Yes
Dr. R D Nalawade	ACMPN9907B	ME/M. Tech and PhD	22/12/2020	Geotechnical Engineering	1			Assistant Professor		02/08/1999	Regular	Yes		No
Dr. S D Nagrale	AALPN3227D	ME/M. Tech and PhD	01/12/2020	Construction Management	1			Assistant Professor		01/08/1997	Regular	Yes		No
Dr. D V Wadkar	AAPPW8667A	ME/M. Tech and PhD	12/02/2020	Environmental Engineering	8			Assistant Professor		03/10/2002	Regular	Yes		No
Dr. V S Chavhan	AGJPC8631N	ME/M. Tech and PhD	07/07/2022	Hydraulics	3			Assistant Professor		10/08/2005	Regular	Yes		No



Mr. P R Modak	AVTPM0458Q	M.E/M.Tech	10/05/2008	Environmental Engineering	4			Assistant Professor		03/11/2008	Regular	Yes		No
Mrs. K N Kulkarni	BWFPS7254C	M.E/M.Tech	10/10/2012	Construction Management	3			Assistant Professor		18/12/2009	Regular	Yes		No
Dr. G C Chikute	AHXPC2980P	ME/M. Tech and PhD	11/03/2012	Construction Management	3			Assistant Professor		01/10/2010	Regular	Yes		No
Mrs. M S Chiwande	AOGPC5619B	M.E/M.Tech	19/07/2008	Structure	1			Assistant Professor		01/03/2012	Regular	Yes		No
Ms. P R Satarkar	BSYPS4109K	M.E/M.Tech	02/02/2012	Structure	2			Assistant Professor		10/01/2012	Regular	Yes		No
Ms. S S Bhuinyan	ARTPB7842H	M.E/M.Tech	22/06/2012	Structure	5			Assistant Professor		10/01/2012	Regular	Yes		No
Mr. U J Jadhav	AICPJ9755F	M.E/M.Tech	19/06/2009	Structure	1			Assistant Professor		03/06/2013	Regular	Yes		No
Dr. M V Waghmare	AAWPW0475B	ME/M. Tech and PhD	24/09/2011	Structure	8			Assistant Professor		28/06/2013	Regular	Yes		No
Mrs. S A Chavan	AKGPD3580J	M.E/M.Tech	27/07/2011	Structure	0			Assistant Professor		03/06/2013	Regular	Yes		No
Mr. C S Misal	BESPM0924C	M.E/M.Tech	24/06/2014	Construction Management	2			Assistant Professor		24/06/2014	Regular	Yes		No
Ms. A M Deulkar	AQWPD6211A	M.E/M.Tech	26/11/2015	Water resources Engineering	0			Assistant Professor		06/06/2015	Regular	Yes		No
Dr. A A Manchalar	BWIPM4647L	ME/M. Tech and PhD	22/04/2019	Structure	15			Assistant Professor		20/07/2022	Regular	Yes		No
Ms. S P Khedekar	BPJPK7717K	M.E/M.Tech	10/08/2015	Construction Management	6			Assistant Professor		06/06/2016	Regular	Yes		No



Ms. K D Kashid	EGJPK2723M	M.E/M.Tech	20/03/2019	Structure	0			Assistant Professor		10/06/2019	Regular	Yes		No
Mrs. R S Meshram	BEUPM1759M	M.E/M.Tech	21/02/2015	Structure	0			Assistant Professor		10/06/2021	Regular	Yes		No
Ms. S G Jambhulkar	BTKPJ6149K	M.E/M.Tech	29/10/2020	Geotechnical Engineering	0			Assistant Professor		24/03/2022	Regular	Yes		No
Mr. S S Mulay	DJXPM8992Q	M.E/M.Tech	07/08/2021	Water Resources and Environmental Engineering	0			Assistant Professor		24/03/2022	Regular	Yes		No
Ms.S S Shah	DOOPS8618B	M.E/M.Tech	20/10/2016	Water resources Engineering	0			Assistant Professor		09/06/2017	Regular	No	30/05/2020	No
Mr .K U Desai	CPEPD6498C	M.E/M.Tech	04/09/2019	Structure	0			Assistant Professor		10/06/2021	Regular	No	31/12/2021	No
Dr. P R Mali	BAWPM4654H	ME/M. Tech, PhD	17/09/2019	Structure	0			Assistant Professor		10/06/2021	Regular	No	29/10/2021	No



5.1	Student-Faculty Ratio	20
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**UG**
**No. of UG Programs in the Department: 01**

Civil Engineering						
Year of Study	CAY		CAYm1		CAYm2	
	(2021-22)		(2020-21)		(2019-20)	
	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students
2nd Year	120	0	120	27	120	32
3rd Year	120	0	120	0	120	0
4th Year	120	0	120	0	120	0
<b>Sub Total</b>	<b>360</b>	<b>0</b>	<b>360</b>	<b>27</b>	<b>360</b>	<b>32</b>
<b>Total</b>	<b>360</b>		<b>387</b>		<b>392</b>	

**PG**
**No. of PG Programs in the Department: 01**

Civil Engineering			
Year of Study	CAY (2021-22)	CAYm1(2020-21)	CAYm2 (2019-20)
	Sanction Intake	Sanction Intake	Sanction Intake
1st Year	18	18	18
2nd Year	18	18	18
<b>Total</b>	<b>36</b>	<b>36</b>	<b>36</b>
<b>Grand Total</b>	<b>36</b>	<b>36</b>	<b>36</b>

**SFR**

No. of UG Programs in the Department: 01

No. of PG Programs in the Department: 01

Description	CAY (2021-22)	CAYm1 (2020-21)	CAYm2 (2019-20)
Total No. of Students in the Department (S)	396 Sum total of all (UG+PG) students	423 Sum total of all (UG+PG) students	428 Sum total of all (UG+PG) students
No. of Faculty in the Department (F)	22      F1	21      F2	22      F3
Student Faculty Ratio (SFR)	18.00    SFR1=S1/F1	20.14    SFR2=S2/F2	19.45    SFR3=S3/F3
Average SFR	19.20    SFR=(SFR1+SFR2+SFR3)/3		
F = Total Number of Faculty Members in the Department (excluding first year faculty)			

Note: All the faculty whether regular or contractual (except Part-Time), will be considered. The contractual faculty (doing away with the terminology of visiting/adjunct faculty, whatsoever) who have taught for 2



consecutive semesters in the corresponding academic year on full time basis shall be considered for the purpose of calculation in the Faculty Student Ratio. However, following will be ensured in case of contractual faculty:

1. Shall have the AICTE prescribed qualifications and experience.
2. Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration.
3. Should have gone through an appropriate process of selection and the records of the same shall be made available to the visiting team during NBA visit

**5.1.1**
**Provide the information about the regular and contractual faculty as per the format mentioned below**

	Total number of regular faculty in the department	Total number of contractual faculty in the department
CAY (2021-22)	22	0
CAYm1(2020-21)	21	0
CAYm2(2019-20)	22	0

**Average SFR for three assessment years: 19.20**

**Assessment SFR: 14**

**5.2**
**Faculty Cadre Proportion**
**25**

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY (2021-22)	2.00	1.00	4.00	2.00	13.00	19.00
CAYm1(2020-21)	2.00	1.00	4.00	2.00	14.00	18.00
CAYm2(2019-20)	2.00	1.00	4.00	2.00	14.00	19.00
Average Numbers	2.00	1.00	4.00	2.00	13.67	18.67

**Cadre Ratio Marks** [ (AF1 / RF1) + [(AF2 / RF2) \* 0.6] + [ (AF3 / RF3) \* 0.4] ] \* 12.5 : **17.00**





5.3	Faculty Qualification	25
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	X	Y	F	$FQ = 2.5 \times [(10X + 4Y) / F]$
2021-22(CAY)	8	14	19.00	17.89
2020-21(CAYm1)	7	14	21.00	15.00
2019-20(CAYm2)	3	19	21.00	12.62

Average Assessment: 15.17

5.4	Faculty Retention	25
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Description	2020-21	2021-22
No of Faculty Retained	21	21
Total No of Faculty	22	22
% of Faculty Retained	95	95

Average: 95.00

Assessment Marks: 25.00

5.5	Innovations by the Faculty in Teaching and Learning	20
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### Goals:

In order to improve students teaching experience aside from traditional classroom teaching, the department uses novel concepts and their subsequent execution by means of quantifiable programmes with following goals: The department will continuously strive to:

- Enrich student learning by innovative practices.
- Develop students comprehension and expertise of creative methods and strategies.
- Broaden students perspective of emerging technologies and tools in academics, contemporary and social issues by innovative strategies.
- Motivate students to innovatively think, formulate and perform through different club activities.

### List of initiatives in teaching and learning process followed by the department:

Every faculty member, knowingly or unknowingly, employs innovative practices to improve teaching. Every faculty member, whether consciously or unconsciously, employs new techniques to improve every students teaching-learning experience and help them understand the concepts throughout the year. The following are notable initiatives of the department faculties. However, it should not be regarded as a definitive list; rather, it should be regarded as a step in a continuous process of improvement.

**1. Student Chapter activities:** The department has the following four professional student chapters,

which provide a good platform for students to participate actively in the various competitions and lectures. Student chapter activities include guest lectures, quiz competitions, debate competition, soft skill lectures, and celebrations of Teachers Day, Engineers Day, Guru pournima etc. Each student chapter has one faculty advisor for mentoring, guidance, and overall governance.

**Outcome:** Enrich students learning the skills like communication, presentation, leadership etc.

Table B.5.5 a. List of student chapter

Sr. No	Student chapter	Faculty advisor
1	IEI Student Chapter	Mrs. M S Chiwande
2	ISTE student chapter	
3	IGS student chapter	Dr. R D Nalawade
4	IWWA students chapter	Mr. P R Modak



**Figure B.5.5.a. Photo of Guest Lecture by Dr. Utpal Ganatra**



**Figure B.5.5.b. Photo of Celebration of Guru Pournima**

2. **Virtual labs/Google Classrooms/MS teams:** Some relevant experiments are carried out online with the assistance of simulators. Such online resources are known as virtual labs, and they are part of an excellent innovative initiative, spear headed by Govt. of India's Ministry of Human Resource Development. During the pandemic, staff and students effectively used virtual labs to conduct practical classes. During the pandemic period, staff members and students have effectively utilized Google classrooms and Microsoft Teams for conduction of theory and practical classes, sharing of learning material and assignments submission.

**Outcome:** Improve students understanding and learning.

- 3. Working models/Knowledge wall:** Faculty members use models to increase students interest and level of learning. The main goal of this is to engage students in an active learning environment. Every professor has created a knowledge wall for their subjects. The knowledge wall was placed in various locations throughout the department to increase student learning interest.

**Outcome:** Subject knowledge enhancement



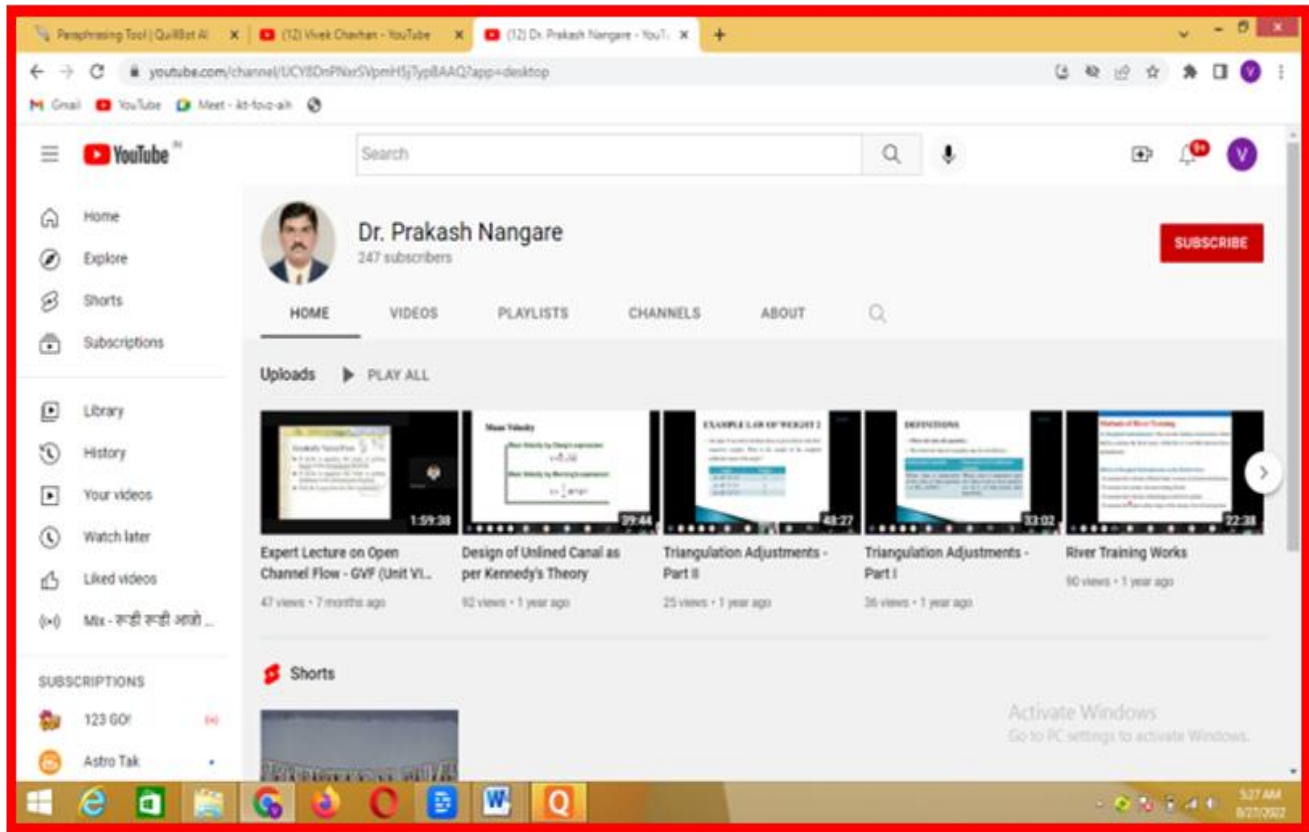
Figure B.5.5.c. Photograph depicting the model of roller bucket energy dissipator

- 4. Use of Animations/PPTs/CASE studies:** In order to boost students interest and level of learning, professors in certain subjects use animations, PPT and CASE studies. The major objective is to spark students attention and strengthen their knowledge.

**Outcome:** Students can gain a better understanding of the concepts.

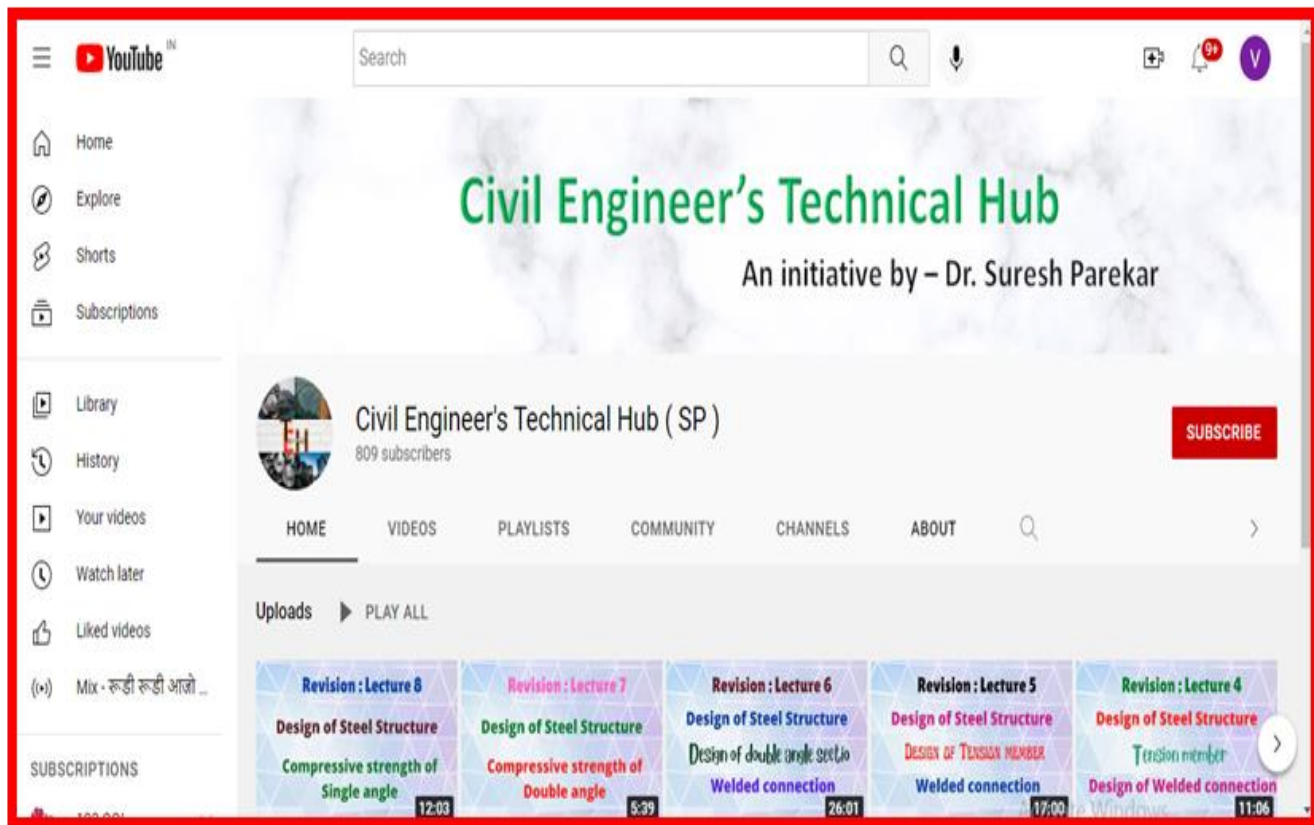
- 5. E content on YouTube:** Some Faculty members have also created their own YouTube channels where they post study materials for their specific subjects. The links are distributed to the students, and the content is available to all.

**Outcome:** It contributes to students knowledge and opportunity for self-study.



**Figure B.5.5.d. Snap of YouTube channel of Dr P B Nangare**

(<https://www.youtube.com/channel/UCY8DnPNxrSVpmH5jTypBAAQ>)



**Figure B.5.5.e. Snap of YouTube channel of Dr S R Parekar**

(<https://youtube.com/c/EngineersTechnicalHubSP>, <https://youtube.com/c/EngineersTechnicalHubSP>)



**6. Project Based Learning:** PBL has been introduced for SE students with the goal of motivating students to learn by working cooperatively in groups to solve a problem. PBL is a student-centered pedagogy that employs a dynamic classroom approach in which students are believed to gain a deeper understanding through active exploration of real-world challenges and problems. Students gain knowledge about a subject by investigating and responding to a complex question, challenge, or problem over time. It is an inquiry-based and active learning style. Problem-based learning will also alter the role of the teacher as a mentor in the learning process.

**Outcome:** Students can complete projects and develop expertise of creative methods.

**7. Students Symposium:** In September or October of each year, the department hosts Engineering Today (CIVISPARK), an annual national level students symposium, to encourage students to organise and participate in various events to improve their skills. This is a platform where events like paper presentations, poster presentations, quiz competitions etc. are organized. Engineering Today is a technical event hosted by the AISSMS College of Engineering that began in 2006. The primary goal of Engineering Today is to work to improve students technical knowledge while also providing them with exposure to the technical world through participation in various technical events. The Department of Civil Engineering hosts Engineering Today as CIVISPARK each year, with a different theme. All of the students of departments works hard to represent the same through meaningful captions and models. Students efforts draw the attention of guests and visitors. Furthermore, on the final day of Engineering, the institute hosts science exhibitions where SE and TE students prepare models, as well as students from neighbouring schools, are allowed to view models.

**Outcome:** Improving skills so that they can participate in more events



Figure B.5.5.f.Glimpses of Engineering Today (CIVISPARK)

**8. Cutting-edge initiative:** Today's education system is rapidly evolving in order to introduce new teaching techniques and strategies that promote a culture of diversity and inclusion. Similarly, each teacher has a distinct teaching style. However, all teachers have the same goal: to instill a love of learning in their students. Department have a few Cutting-edge initiatives as given below that use modern technology

- Avishkar
- Hackathon
- Ideathon
- National innovation context
- Startup & Innovation cell
- Unnat Bharat Abhiyan cell



**Outcome:** Using Cutting-edge initiative, students problem-solving and innovative thinking abilities are improved, and their perspectives on emerging technologies and tools in academics, contemporary and social issues are broadened.



**Figure B.5.5.g. Glimpses of Hackathon competition**

## 9. Industry institute interaction

Improving interaction between institute and industry is essential in today's world, and it provides a good platform for innovative teaching. The goal of industry-institute interaction is to improve the quality of technical education to meet the needs of the industry. Industry Institute Interaction improves teaching-learning processes, raises student awareness of the industry environment, provides practical knowledge to students, and develops students self-confidence to become entrepreneurs. The department has an Industry Institute Interaction Cell (I3) that organises activities throughout the year. The primary goal of the I3 cell is to prepare industry-ready engineers. Students are trained in a variety of skills through hands-on guest lectures, site visits, internships, and other activities. In addition, the department signed Memorandums of Understanding (MoUs) with a number of companies. Students can gain industrial knowledge through this collaboration.

**Outcome:** Provides a platform for students to learn about industry expectations

## 10. NPTEL- SWAYAM:

SWAYAM is a programme launched by the Indian government to achieve three cardinal principles of education policy: access, equity, and quality. This effort's goal is to provide the innovative teaching and learning resources to everyone. Students can enroll in a variety of NPTEL courses online. In department Students are encouraged to enroll NPTEL course. The faculty constantly guides and mentors the students in completing NPTEL course. Students complete the course by watching video lectures.

**Outcome:** It helps students knowledge and self-learning



5.6

Faculty as participants in Faculty development/training activities/STTPs

15

Name of the faculty	Max 5 Per Faculty		
	2020-21 (CAYm1)	2019-20 (CAYm2)	2018-19 (CAYm3)
Dr. U R Awari	5.00	5.00	5.00
Dr. S R Parekar	5.00	5.00	5.00
Dr. V N Patil	5.00	5.00	5.00
Dr. P B Nangare	5.00	5.00	5.00
Dr. R D Nalawade	5.00	5.00	5.00
Dr. S D Nagrale	5.00	5.00	5.00
Dr. D V Wadkar	5.00	5.00	5.00
Dr. V S Chavhan	5.00	5.00	5.00
Mr. P R Modak	5.00	5.00	5.00
Mrs. K N Kulkarni	5.00	5.00	5.00
Dr. G C Chikute	5.00	5.00	5.00
Mrs. M S Chiwande	5.00	5.00	5.00
Ms. P R Satarkar	5.00	5.00	5.00
Ms. S S Bhuinyan	5.00	5.00	5.00
Mr. U J Jadhav	5.00	5.00	5.00
Dr. M V Waghmare	5.00	5.00	5.00
Mrs. S A Chavan	5.00	5.00	5.00
Mr. C S Misal	5.00	5.00	5.00
Ms. A M Deulkar	3.00	5.00	5.00
Dr. A A Manchalwar	5.00	5.00	5.00
Ms. S P Khedekar	5.00	5.00	5.00
Ms. K D Kashid	5.00	5.00	5.00
Mrs. R S Meshram	5.00	5.00	5.00
Ms. S G Jambhulkar	3.00	3.00	3.00
Mr. S S Mulay	3.00	3.00	3.00
Ms. S S Shah	3.00	3.00	3.00
Mr. K U Desai	3.00	3.00	3.00
Dr. P R Mali	3.00	3.00	3.00
<b>Sum</b>	128.00	130.00	130.00
<b>RF = Number of Faculty required to comply with 20:1 Student Faculty Ratio as per 5.1</b>	<b>19.80</b>	<b>21.15</b>	<b>21.40</b>
<b>Assessment [3*(Sum / 0.5RF)]</b>	<b>38.79</b>	<b>36.88</b>	<b>36.45</b>

Average assessment over 3 years: 37.37



5.7	Research and Development	30
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5.7.1	Academic Research	10
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Table B.5.7.1.a. List of Publications

AY 2021-22				
Sr No	Title	Name of Faculty	Name of Journal	ISSN/ISBN No.
1	Application of cascade feed forward neural network to predict coagulant dose.	Dr D V Wadkar	Journal of Applied Water Engineering and Research	ISSN: 23249676
2	Evaluation of water treatment plant using Artificial Neural Network (ANN) case study of Pimpri Chinchwad Municipal Corporation (PCMC)	Dr D V Wadkar	Sustainable Water Resource Management.	ISSN: 23635045
3	Microbial fuel cell: an innovative technology for wastewater treatment and bio-electricity generation	Dr D V Wadkar	PENSEE	ISSN: 314773
4	Application of soft computing in water treatment plant and water distribution network	Dr D V Wadkar	Journal of Applied Water Engineering and Research	ISSN: 23249676,
5	Application of cascade feed forward neural network to predict coagulant dose.	Dr D V Wadkar	Journal of Applied Water Engineering and Research	ISSN: 23249676
6	Evaluation of water treatment plant using Artificial Neural Network (ANN) case study of Pimpri Chinchwad Municipal Corporation (PCMC)	Dr D V Wadkar	Sustainable Water Resource Management.	ISSN: 23635045,
7	Evaluation of water treatment plant using Artificial Neural Network (ANN) case study of Pimpri Chinchwad Municipal Corporation (PCMC)	Dr. P B Nangare	Sustainable Water Resource Management.	ISSN: 23635045,
8	Suitability of lead rubber bearing of high rise building	Dr. U R Awari	International Research Journal of Engineering and Technology	e-ISSN: 2395-0056
9	Effect of Partially Replacement of River Sand, by GBS Sand and Crushed Sand	Dr. U R Awari	International Journal of Innovative Research in Science, Engineering and Technology	e-ISSN: 2319-8753, p-ISSN: 2347-6710



10	Strengthening of RC Column using GFRP under Seawater Condition	Dr. U R Awari	International Journal of Innovative Research in Science, Engineering and Technology	ISSN:2319-8753, pISSN:2347-6710,
11	Influence of Nano-Silica and Rice Husk Ash on properties of Concrete	Dr. U R Awari	International Journal of Research Publication and Reviews	ISSN 2582-7421
12	Bearing Capacity of Reinforced Embankment Slope Models of Fly Ash and Furnace Slag	Dr V N Patil	Transportation Infrastructure Geotechnology	ISSN:2196-7202, ISSN:2196-7210
13	Regular Equal Water Distribution System	Dr V N Patil	Indian Patent Publication Journal	ISSN No.: 2279-543
14	Energy Dissipation In Buildings Using Light Weight Buckling Restrained Bracings	Dr. S R Parekar & C S Misal	Dickensian Journal	ISSN:0012-2440
15	Performance of RC elevated liquid storage tanks installed with semi- active pseudo-negative stiffness dampers	Dr. M. V Waghmare	Structural control and health monitoring	ISSN:1545-
16	Developmental Studies for a Fuzzy Rule based System for Various Engineering Applications	K N Kulkarni	Design Engineering	ISSN: 0011-9342
17	Investigation of Gabion wall failures and recommendations	Dr. Ganesh C Chikute	Recent Advancements in Civil Engineering	ISSN 2366-2557,
18	Deep Learning Methodologies and Applications in Artificial Intelligence: A Review	Sneha P Khedekar	Design Engineering	ISSN: 0011-9342
19	Water quality assesment of rivers in india - a review	P. R. Satarkar, P. R. Modak	Dickensian Journal	ISSN NO: 0012-2440
20	An Investigation of the Quality of Urban Sources of Water and the Advantages	P. R. Modak	AIRO Journals	ISSN: 2320-3714
21	Assessment & Improvement of Urban Water Quality with Web-based MIS	P. R. Modak	AIRO Journals	ISSN: 2320-3714
22	The Effect of Waste Granite Powder on the Physical and Mechanical Properties of Cement Mortar	U J Jadhav	AIRO Journals	ISSN: 2320-3714
23	Study and Improvement of Structure by using Self-Healing Concrete	S S Bhuinyan	International Research Journal of Engineering and Technology (IRJET),	e-ISSN: 2395-0056,



24	Study of Structural Irregularities in different Seismic Zones using response Spectrum Analysis	S S Bhuinyan	International Journal for Research in Applied Science & Engineering Technology	ISSN: 2321-9653
25	Performance of RC elevated Liquid Storage Tanks Installed with Semi-Active Pseudo Negative Stiffness Dampers"		Structural Control and Health Monitoring	ISSN:1545-2263,
26	Strengthening of RC Column using GFRP"	Dr. M V Waghmare	International Journal for Research in Applied Science & Engineering Technology	ISSN:2321-9653
27	"Experimental Study of Crack Patterns of Composite Slabs"	Dr. M V Waghmare	Dickensian Journal	ISSN:0012-2440
28	Analysis of Offshore	Dr. M V Waghmare	Dickensian Journal	ISSN:0012-2440
29	Damage capacity on RC structures using performance-based analysis	A. A. Manchalwar	E3S Web of Conferences	ISSN: 2267-1242
30	Effect of joint rigidity on structural behavior of RC buildings	A. A. Manchalwar	E3S Web of Conferences	ISSN: 2267-1242
31	Blast Response of Elevated Water Tank Staging with Metallic Damper	A. A. Manchalwar	E3S Web of Conferences	ISSN: 2267-1242
32	Performance of elevated water tank staging with base isolation under blast loading	A. A. Manchalwar	E3S Web of Conferences	ISSN: 2267-1242
33	Response control of structures under Seismic and Blast induced ground motions	A. A. Manchalwar	E3S Web of Conferences	ISSN: 2267-1242
34	Isolating system using U Shaped steel damper	A. A. Manchalwar	E3S Web of Conferences	ISSN: 2267-1242
35	Nonlinear seismic performance of a regular building using base isolation method	A. A. Manchalwar	E3S Web of Conferences	ISSN: 2267-1242
36	Nonlinear Seismic Performance of a Building Using Base Isolation Method	A. A. Manchalwar	E3S Web of Conferences	ISSN: 2267-1242
37	Response reduction factor based on geometric variation with	A. A. Manchalwar	AIP Conference Proceedings	ISSN: 2267-1242

**AY 2020-21**

Sr No	Title	Name of Faculty	Journal details	ISSN/ISBN No.
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1.	Strengthening of RC Column using GFRP under Seawater Conditions,	Dr. U R Awari	Journal of Innovative Research in Science, Engineering and Technology	e-ISSN:9-8753, p-ISSN:2347-6710,
2	Influence of Nano-Silica and Rice Husk Ash on Properties of Concrete, pp 1710-1714.	Dr. U R Awari	Journal of Research Publication and Reviews	ISSN 2582-7421
3.	Effect of Partially Replacement of River Sand, by GBS Sand and Crushed Sand, pp 15381-15387.	Dr. U R Awari	Journal of Innovative Research in Science, Engineering and Technology	e-ISSN: 2319-8753, p-ISSN: 2347-6710,
4.	Suitability of lead rubber bearing of high rise building,	Dr. U R Awari	Journal of Advanced Scientific Research and Engineering Trends	ISSN 2456-0774,
5.	Effect of Earthquake Resistant System on Vertically Irregular RC Tall Building, pp 13352-13258.	Dr. U R Awari	Journal of Innovative Research in Science, Engineering & Technology	e-ISSN: 2319-8753, p-ISSN: 2347-6710
6.	Strengthening of Concrete by Utilization of Hypo Sludge and Fly Ash as Partial Replacing Material of Cement	S. P. Khedekar	Gradiva Review Journal,	ISSN-0363-8057
7.	Analyzing the Strength of Concrete Blocks Reinforced by Half Portion of Coconut Shell	S. P. Khedekar,	International Journal for Research in Applied Science & Engineering Technology	ISSN-2321-9653
8.	Deep Learning Methodologies and Applications in Artificial Intelligence: A Review	Sneha P Khedekar,	Design Engineering,	ISSN-0011-9342
9.	Efficiency of Ecosphere as cement replacement material for strength performance of siporex and Conventional Red Brick	S S Bhuinyan, K N Kulkarni, S P Khedekar	International Journal of Creative Research Thoughts	ISSN:2320-2882
10	Air Quality Assessment Using Artificial Intelligence Approaches: A Review	Sneha P Khedekar,	Journal of critical reviews,	ISSN-2394-5125
11	“Experimental Investigation on Bacteria Based Self Healing Concrete”.	Dr. S.R. Parekar and C S Misal	International Journal of Advance Civil Engineering and Technology	ISSN: 2249-8958
12	“Comparison in Design of Technical Steel Structure by Indian & European Code	Dr. S.R. Parekar	International Journal for Scientific Research & Development.	ISSN:2456-6470,
13.	Numerical analysis of reinforced embankment slopes made up of pozzolanic waste materials”	Dr V N Patil	International Journal of Geo-Engineering.	ISSN:1938-6362,





14.	“Trajectory Features and Energy Dissipation of Conventional and Modified (Deflector) Ski-Jump Bucket.”	Vivek Chavhan	Materials Today: Proceeding,	ISSN:2214-7853
15	Effect of Varying Concentration of NaOH on Geopolymer Concrete	S S Bhuinyan	International Research Journal of Engineering and Technology	eISSN:2395-0056, pISSN:2395-0072
16	Influence of Nonlinear Fluid Viscous Dampers on Seismic Response of RC Elevated Storage Tank	Dr. M V Waghmare	Civil Engineering Journal	ISSN: 2476-3055,
17	Analyzing Efficiency of Aerodynamic Shapes of Buildings using ETABS Software	Dr. M V Waghmare	International Research Journal of Engineering And Technology	ISSN:2395-0056
18	Vibration control of structure by top base isolated storey as tuned mass damper	A. A. Manchalwar	International Journal of Dynamics and Control	2195-2698
19	Comparison of Seismic isolation with isolator and Soil structure Interaction U-shaped metallic isolator and Soil structure Interaction	A. A. Manchalwar	E3S Web of Conferences	2267-1242
20	Performance of 2-D Frame Equipped with Base isolation System under Dynamic Loadings	A. A. Manchalwar	E3S Web of Conferences	2267-1242
21	Behaviour of the water tank staging with aluminum and steel X-plate damper	A. A. Manchalwar	E3S Web of Conferences	2267-1242

**AY 2019-20**

Sr. No	Title of paper	Author	Name of Journal	ISBN /ISSN
1.	Flexural behavior of reinforced concrete beams retrofitted with GFRP, An Experimental Approach	Dr. U R. Awari	The Indian Concrete Journal	ISSN:0019-4565
2.	Spatial and Temporal Analysis of Drought Using GIS Techniques	Dr. P B Nangare	International Journal of Research in Engineering, Science and Management	ISSN:2581-5792
3.	Comparison in Design of Technical Steel Structure by Indian & European Code	Dr. S R Parekar	International Journal for Scientific Research & Development	ISSN:2321-0613
4.	Effect of soil interaction on RC building frame	Dr. S R Parekar	International Research Journal of Engineering and Technology	ISSN:2395-0056



5.	Heavy Metal Removal by using Different Agricultural Waste Adsorbents	Dr. (Mrs) V N Patil	Test Engineering & Management Journal	ISSN:0193-4120
6.	Automatic Equal Quantity and Quality Water Distribution	Dr. (Mrs) V N Patil	Test Engineering & Management journal	ISSN:0193-4120
8.	Study of aerodynamic drag of sports utility vehicle by experimental and numerical method	Dr. P B Nangare	International Journal of Recent Technology and Engineering	ISSN.2277-3878
9.	Hydraulic Model Investigations of Plain and Slotted Roller Buckets for Stepped Spillway	Dr. P B Nangare	International Journal of Engineering, Technology & Applied Science Research	eISSN,1792 -8036,
10.	Modeling of Flow Over Stepped Spillway – A Review	Dr. P B Nangare	International Journal of Innovative Research in Technology	ISSN: Issue - 1, June 2019
11	Seismic Retrofitting by Adding a Shear Wall	Dr. S R Parekar	International Journal for Research in Applied Science & Engineering Technology	ISSN:2321 -9653,
12.	Stress Distribution of Different Shapes of Opening in Shear Wall	Dr. S R Parekar	International Journal for Modern Trends in Science and Technology	ISSN: 2455 - 3778
13.	Seismic analysis of step back building resting on sloping ground considering different types of bracing systems	Dr. S R Parekar	International Journal for Modern Trends in Science and Technology	ISSN: 24553778
14.	Seismic Analysis of RCC, Steel and Steel Concrete Composite Frame	Dr. S R Parekar	International Journal for Research in Applied Science & Engineering Technology	ISSN: 2321– 9653
15.	Analytical and Numerical Analysis of Wind Pressure on Tall Building with Varying height Using CFD	Dr. S R Parekar	International Journal of Research and Analytical Reviews	ISSN:2348-1269
16	Optimizing MSW Transportation Routes for Pune City using MATLAB, IJRTE	Mr S D Nagrale	International Journal of Recent Technology and Engineering	ISSN:2277-3878
17	Failures of Gabion Walls	Mr. G C Chikute	International journal of innovative technology and exploring Engineering	E-ISSN: 2278-3075
18	Techno-Economical Analysis of Gabion Retaining Wall against Conventional Retaining Walls	Mr. G C Chikute	International Research Journal of Engineering and Technology	ISSN: E – 23950056 P - 23590072
19	Application of Feed Forward Neural Network for Prediction of Optimum Coagulant Dose in Water Treatment Plant	Mr D V Wadkar	international Journal of Hydraulic Engineering	ISSN: 2278 - 3075 (Online)



20	Modeling of Chlorine and Coagulant Dose in a Water Treatment Plant by Artificial Neural Networks, Engineering	Mr D V Wadkar	Technology & Applied Science Research	ISSN: 1792-8036
21	Effects of Hydrated Lime in Stabilization of Black Cotton Soil	Mr. R D Nalwade	International Journal of Engineering and Advanced Technology	ISSN:2249-8958,
22	Controlled Ski-jump Spillway Model Design According to IS code.	V S Chavhan	International Journal of Engineering and Advanced Technology	ISSN:2249-8958,
23	CFD in Hydraulic Modeling	V S Chavhan	International Journal of Future Generation Communication and Networking	ISSN:2233-7857
24	Heavy Metal Removal by using Different Agricultural Waste Adsorbants	P R Modak	TEST Engineering and management	ISSN:0193-4120
25	“Semi-Active Fluid Viscous Dampers for Seismic Mitigation of RC Elevated Liquid Storage Tanks”	Dr. M V Waghmare	International Journal of Structural Stability and Dynamics	ISSN:0219-4554, ISSN:1793-6764
26	Nonlinear Analysis of RC structure under Multiple Earthquakes	Dr. M V Waghmare	Science and Technology,	ISSN:2455-3778,
27	Optimization of metallic damper location for seismic response control	A. A. Manchalwar	Journal of Vibration Engineering & Technologies	ISSN:2523-3939
28	Seismic response control of building with optimal location of metallic dampers	A. A. Manchalwar	Structures and Buildings	ISSN:1751-7702
29	Seismic performance of structure with isolated foundation using u- shape steel damper as an isolator	A. A. Manchalwar	Soil mechanics and foundation Engineering	ISSN: 1573-9279


**Table B.5.7.1.c. Patents Published/Applied:**

Sr. No.	Status	Title	Year	Name of Faculty
1.	Granted and Published	Bearing capacity model instrument with sliding load frame.	2018	Dr V N Patil
2.	Published	Automatic gate operating device	2018	Dr V N Patil
3.	Published	Vapourised gasoline fuel.	2018	Dr V N Patil
4.	Published	Tyre grid reinforced embankment of pozzolanic materials	2018	Dr V N Patil
5.	Applied	Crowd puller motor	2018	Dr V N Patil
6.	Granted and Published	Tyregrid embankment reinforcement	2018	Dr V N Patil
7.	Published	Advanced electromagnetic field detector	2020	Dr V N Patil
8.	Published	Portable inexpensive potentiostat	2020	Dr V N Patil
9.	Granted and Published	Writing board with arrangement of projector and camera	2021	Dr V N Patil
10.	Granted and Published	Rubbergrid for reinforcement in highway construction	2021	Dr V N Patil
11.	Granted and Published	Apparatus for testing and measuring strength of embankment material	2022	Dr V N Patil
12.	Applied	Adjustable stand for mobile display	2022	Dr V N Patil
13.	Published	Regular equal water distribution system	2022	Dr V N Patil

**Table. B. 5.7.1.d. Number of PhDs in the department**

Sr. No	Name of the Faculty	Year in which PhD completed
01	Dr. U R Awari	2017
02	Dr. S R Parekar	2010
03	Dr. V N Patil	2016
04	Dr. P B Nangare	2020
05	Dr. R D Nalawade	2020
06	Dr. S D Nagrale	2020
07	Dr. D V Wadkar	2020
08	Mr. V S Chavhan	2022
09	Dr G C Chikute	2022
10	Dr. M V Waghmare	2021
11	Dr. A A Manchalwar	2019

**Table. 5.7.1. e. Number of PhD awarded in assessment years : 1**

Sr. No	Name of the Faculty	Year in which PhD awarded
01	Dr G C Chikute	2022


**Table 5.7.1.f. Number of PhD pursuing: 09**

Sr. No.	Name of the Faculty	Name of the institute and University
01	Mrs. K N Kulkarni	RSCOE Pune, SPPU
02	Mr. P R Modak	University of Technology, Jaipur
03	Mrs. M S Chiwande	CME Pune
04	Mrs. P R Satarkar	VIIT Pune
05	Ms. Shilpi Sippi Bhuinyan	BIT Ranchi
06	Mr. U J Jadhav	University of Technology, Jaipur
07	Mrs. S A Chavan	AVCOE Sangamner
08	Mrs. S P Khedekar	D Y Patil Pimpri
09	Mrs. K D Kashid	VIIT Pune

**Table B. 5.7.3.g. Citation details**

Sr. No.	Faculty Name	Citation	'H' Index	'I' Index
1.	Dr. P B Nangare	117	4	3
2.	Dr. S R Parekar	27	3	1
3.	Dr. V N Patil	26	3	1
4.	Dr. U R Awari	4	1	0
5.	Dr. R D Nalawade	54	3	1
6.	Dr. S D Nagrale	188	3	2
7.	Dr. D V Wadkar	90	4	2
8.	Dr. V S Chavhan	67	3	2
9.	P R Modak	227	5	4
10.	Dr. G C Chikute	9	2	0
11.	Dr. M V Waghmare	47	4	3
12.	S A Chavan	5	1	0
13.	S P Khedekar	13	2	0
14.	R S Meshram	7	1	0
15.	Dr A A Manchalwar	62	5	2
16.	C R Yeole	5	2	0

5.7.2

**Sponsored Research**

05

**2020-21 (CAYm1)**

Project Title	Duration	Funding Agency	Amount
Retrofitting of Kalyan Dam (Village Kalyan, Dist. Pune) for percolation loss	1 year	Government of Maharashtra	2100000.62
			Total Amount(X): 2100000.62

**2019-20 (CAYm2)**



Project Title	Duration	Funding Agency	Amount
Wind analysis of canopy, Pitch roof and Square tall building with different shape in wind tunnel and CFD	1 year	Institute of Engineers India	20000.00
			Total Amount (Y): 20000.00

**2018-19 (CAYm3)**

Project Title	Duration	Funding Agency	Amount

5.7.3	Development Activities	10
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- Research laboratories: The department has the facility to conduct UG research in various labs such as Transportation Engineering lab, Fluid Mechanics lab, Testing of material lab, Environmental Engineering lab etc.
- Instructional materials: Faculty members have created Lab Manuals for each subject which help students to perform practical during Laboratory hours.


**AISSMS**  
 COLLEGE OF ENGINEERING  
Approved by AICTE, New Delhi, Recognized by Govt. of Maharashtra, Affiliated to Savitribai Phule Pune University and recognized 2(f) and 12(B) by UGC (Id.No. PU / PN/ Engg. / 093 / 1992) Accredited by NAAC with 'A+' Grade


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**Department of Civil Engineering**

---

**Laboratory Manual  
for  
Mechanics of Structures**

**Name of student:**

**Class:**

**Roll No:**

**Batch:**

**Examination Seat No:**

**Academic year:**

**Name of Faculty:**

***Vision***  
Nurture the talent in civil engineers to work as global leaders for development of society

***Mission***

1. Provide quality education to develop competent civil engineers
2. Create the awareness among students for sustainable development
3. Cultivate the leadership qualities for becoming successful entrepreneurs

***Short Term Goals***

1. To augment infrastructure and processes for enhancement in teaching learning.
2. To extend assistance to students for competitive examinations, higher studies and entrepreneurship.
3. To establish Research Centre.

***Long Term Goals***

1. To develop testing and consultancy facilities.
2. To have cent percent Doctorate faculties.
3. To strengthen collaboration with the reputed institutes and industries.

***Course Objectives***

1. To study various types of stresses for determinate structural members.
2. To learn concept of Shear Force and Bending Moment Diagram for determinate beams.
3. To learn the concept of slope and deflection for determinate structural members.

***Course Outcomes***

On completion of the course, learner will be able to:

- 01 Understand concept of stress-strain and determine different types of stress, strain in determinate, indeterminate homogeneous and composite structures.
- 02 Calculate shear force and bending moment in determinate beams for different loading conditions and illustrate shear force and bending moment diagram.
- 03 Explain the concept of shear and bending stresses in beams and demonstrate shear and bending stress distribution diagram.
- 04 Use theory of torsion to determine the stresses in circular shaft and understand concept of Principal stresses and strains.
- 05 Analyze axially loaded and eccentrically loaded column.
- 06 Determine the slopes and deflection of determinate beams and trusses.

***Programme Outcomes***

- 01 **Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- 02 **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.
- 03 **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.



04	<b>Conduct Investigations of Complex Problems:</b> 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.
05	<b>Modern Tool Usage:</b> 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.
06	<b>The Engineer and Society:</b> 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.
07	<b>Environment and Sustainability:</b> Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
08	<b>Ethics:</b> Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
09	<b>Individual and Team Work:</b> Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10	<b>Communication:</b> 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	<b>Project Management and Finance:</b> 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	<b>Life-Long Learning:</b> 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>AISSMS</b> COLLEGE OF ENGINEERING <small>Approved by AICTE, New Delhi, Recognized by Govt. of Maharashtra, Affiliated to Savitribai Phule Pune University and recognized 2(f) and 12(B) by UGC (Id.No. PU / PN/ Engg. / 093 (1992))</small> Accredited by NAAC with 'A+' Grade				
Index				
S N	Name of Experiment	Date of Exp.	Page No.	Remark
01	Tension test on mild and TMT steel.			
02	Shear (Single & Double) test on mild steel.			
03	Impact test (Charpy and Izod) on mild steel, aluminum, brass			
04	Torsion test on mild steel.			
05	Compression test on timber (Parallel & Perpendicular)			
06	Bending test on timber and plywood.			
07	Field tests on bricks			
08	Water absorption test on bricks.			
09	Efflorescence test on bricks.			
10	Compressive strength test on bricks			
11	Flexural strength of flooring tiles.			
12	Abrasion test of flooring tiles.			
13	Assignment on unit I			
14	Assignment on unit II			
15	Assignment on unit III			
16	Assignment on unit IV			
17	Assignment on unit V			
18	Assignment on unit VI			
19	Assignment on Influence Line Diagram			
20	Report on market survey of structural materials including its costing.			

This is to certify that Mr/Ms ----- of S E (Civil), division: A and Roll No. ----- has completed the practical and assignment as per the syllabus satisfactorily in the course of Mechanics of Structures as prescribed by the Savitribai Phule Pune University, Pune for the academic year 20-- - --.

Date: \_\_\_\_\_ Faculty Incharge \_\_\_\_\_ Head of Department \_\_\_\_\_

Figure B.7.3.a. Sample lab manual for Mechanics of structure

- Working models/ Charts: In some subjects faculty members use models to increase students interest and level of learning. The main goal of this is to engage students in an active learning environment.



Figure B. 5.7.3.b. Photograph depicting the model of roller bucket energy dissipator in fluid mechanics lab



**Figure B. 5.7.3.c. Photograph depicting the model of ski-jump bucket energy dissipator in fluid mechanics lab**



**Figure B. 5.7.3.d. Photograph depicting the model of Industrial building**

- Every professor has created a knowledge wall for their subject. The knowledge wall was put in various locations throughout the department to increase student learning interest. Also, relevant projects done by final year students are kept in the respective labs.
- Charts prepared by faculty members are displayed in the respective laboratory

**Table B. 5.7.3. a. Details of Knowledge wall**

Name of the Faculty	Subject
Dr. U R Awari	Structural Design I
Dr. S R Parekar	Structural Analysis II
Dr. V N Patil	Foundation Engineering
Dr. P B Nangare	Fluid Mechanics –II, Dams and Hydraulic structure
R D Nalawade	Geotechnical Engineering
Dr. S D Nagrale	Construction Management
Dr. D V Wadkar	Environmental Engineering
V S Chavhan	Hydrology and water resources Engineering
P R Modak	Surveying. Advanced surveying
K N Kulkarni	System approach
G C Chikute	Quantity surveying
M S Chiwande	Concrete Technology, Advanced concrete technology
C S Misal	Building Technology and Materials
A M Deulkar	Fluid Mechanics I
S P Khedekar	Building Planning
U J Jadhav	Structural Analysis

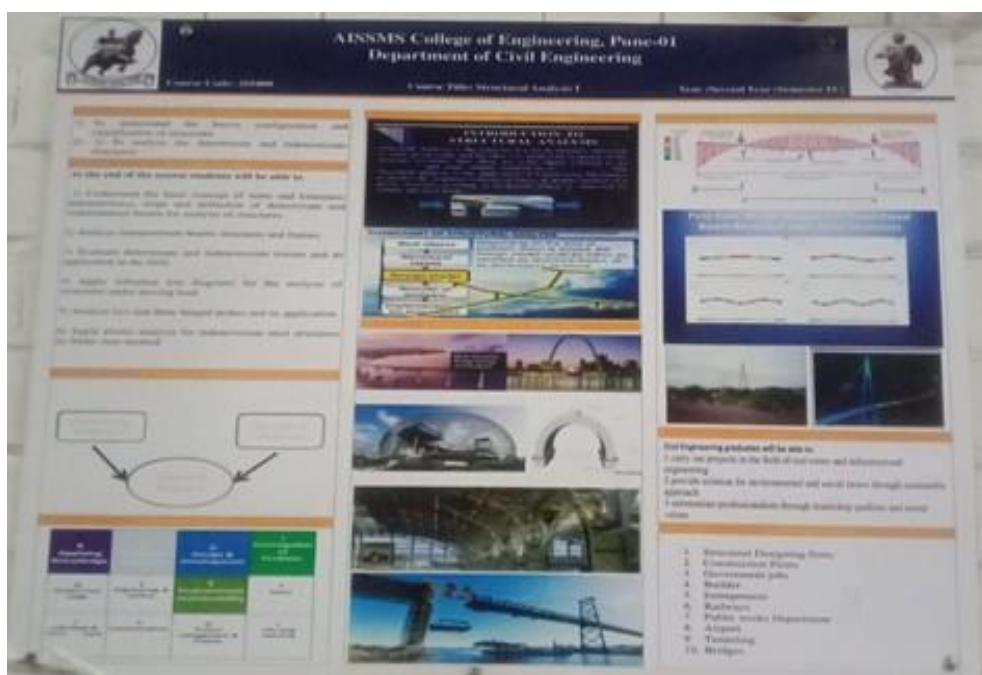

**Figure B. 5.7.3.e. Photograph depicting the Knowledge wall.**





Figure B. 5.7.3. f. Photograph depicting the Charts prepared by faculty

5.7.4

Consultancy (from Industry)

05

2020-21 (CAYm1)

Project Title	Duration	Funding Agency	Amount

2019-20 (CAYm2)

Project Title	Duration	Funding Agency	Amount

2018-19 (CAYm3)

Project Title	Duration	Funding Agency	Amount



5.8

**Faculty Performance Appraisal and Development System (FPADS)**

30

The college has following appraisal and development schemes for faculty:

- 1) **Performance based appraisal scheme (PBAS):** The college has well defined faculty appraisal system. The PBAS details are submitted by each faculty at the end of each semester. The performance is assessed by Head of department as well as Head of the institution. The faculty feedback is also collected from the students at mid and end of the semester. The feedback is assessed by Head of the department and appropriate feedback/suggestions are given to the faculty for the improvement.
- 2) **Best Teacher award:** The applications are invited from the faculty members are invited at the institute every year. The applications are scrutinized and assessed by the panel of experts/committee on the basis of academic performance, research activities and contribution at institute level. The top scoring faculty is awarded as best teacher with a Cash prize of Rs.50000/- and certificate.
- 3) **Recognition of Excellence award:** The faculty members completing PhD and significant contribution in academics are awarded by the AISSMS Society every year conferring Recognition of excellence award with memento and certificate on the day of Shahu Jayanti.
- 4) **Research Promotion Scheme:** The institute has research promotion scheme which encourage the faculty to undertake research projects, consultancy work and training programs. The faculty involved is awarded with appropriate amount as per the policy decided at the institution level.
- 5) **Support for Higher Studies:** The faculty members perusing higher studies are awarded with financial assistance of Rs.1 lakh or One month study leave as per the choice of the faculty. The faculty member is permitted to carry out research studies by adjusting the teaching load in the morning slot and rest of the time can be utilized for study.
- 6) **Financial assistance for attending FDP/QIP/STTP/International Conferences:** The faculty member is permitted on duty leave to attend the respective quality improvement program. The financial assistance is provided for payment of registration fees, travel fare and accommodation.



5.9

Visiting/Adjunct/Emeritus Faculty etc.

10

The department has provision for visiting faculty for the subject Engineering Geology at UG level. Table B. 5.9. a. shows the details.

**Table B. 5.9.a. Details of visiting faculty**

Year	Name of the visiting Faculty	Class	Subject	No. of Contact hours for theory and lab
2021-22	Prof. R M Jogdand	SE	Engineering Geology	216
2020-21	Prof. Komal S Shinde	SE	Engineering Geology	216
2019-20	Prof. Komal S Shinde	SE	Engineering Geology	216

The department also has provision of the soft skill training every year from the outside agencies. The department conducted soft skill training for TE Civil students in the academic year 2021-22 from 11 April to 16 April 2022. The following table B. 5.9.b. shows the specifics of soft skill training. In academic year 2019-20 and 2020-21, it was not possible to conduct soft skill training due to pandemic situation.

**Table B. 5.9.b. Details of visiting faculty**

Year	Name of the visiting Faculty	Class	Subject	No of Contact hours
2021-22	Pratiksha Tilekar Chetan Manurkar	TE Civil	Soft skill	36





## DEPARTMENT OF CIVIL ENGINEERING

### CRITERION VI

#### Facilities and Technical Support



<b>CRITERION VI</b>	<b>Facilities and Technical Support</b>	<b>80</b>
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<b>6.1</b>	<b>Adequate and well equipped laboratories, and technical manpower</b>	<b>30</b>
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Sr. No.	Name of the Laboratory	No. of students per setup (Batch Size)	Name of the Important equipment	Weekly utilization status	Technical Manpower support			Signature of laboratory assistant	Signature of laboratory in-charge
					Name of the technical staff	Designation Qualification	Qualification		
1	Surveying store	15	<ul style="list-style-type: none"> <li>• Electronic Total station</li> <li>• 1" theodolite</li> <li>• Vertical Laser Level</li> <li>• GPS receiver</li> </ul>	For A.Y. 2021-22 75%	A.U. Karne	Lab Assistant	Diploma in Instrumentation		P R Modak
2	Testing of material	15	<ul style="list-style-type: none"> <li>• Universal Testing Machine</li> <li>• CharpyIzod Machine</li> <li>• Torsion Testing Machine</li> <li>• Tile abrasion Testing Machine</li> </ul>	For A.Y. 2021-22 95%	B H Lavhe	Lab Assistant	ITI		M S Chiwande
3	Geotechnical Engineering	15	<ul style="list-style-type: none"> <li>• Consolidation Test Machine</li> <li>• Triaxial Test Machine</li> <li>• Permeability Test Machine</li> <li>• Direct Shear Test Machine</li> </ul>	For A.Y. 2021-22 90%	S M Divate	Lab Assistant	Diploma in IT, BA (Psychology) MBA(Pursuing)		Dr R D Nalawade
4	Environmenta	15	<ul style="list-style-type: none"> <li>• Incubator</li> </ul>	For A.Y.	S M Divate	Lab Assistant	Diploma in IT,		Dr D V



	1 engineering lab		<ul style="list-style-type: none"> <li>• Spectrophotometer</li> <li>• Nephelometer</li> <li>• Jar Test apparatus</li> <li>• High Volume Sample</li> <li>• Flame photometer</li> </ul>	2021-22 90%			BA(Psychology)		Wadkar
5	Transportation lab	15	<ul style="list-style-type: none"> <li>• Marshal Stability apparatus</li> <li>• Ductility Testing apparatus</li> <li>• Penetration Testing apparatus</li> </ul>	For A.Y. 2021-22 90%	B H Lavhe	Lab Assistant	ITI		K N Kulkarni
6	Computer centre	15	<ul style="list-style-type: none"> <li>• Auto-CAD</li> <li>• WTP soft</li> <li>• ETP soft</li> </ul>	For A.Y. 2021-22 100%	A.U.Karne S M Divate	Lab Assistant Lab Assistant	Diploma in Instrumentation Diploma in IT, BA(Psychology) MBA (Pursuing)		S A Chavan
7	Fluid mechanics lab	15	<ul style="list-style-type: none"> <li>• Wind Tunnel</li> <li>• Tilting Flume</li> <li>• Notch Apparatus</li> <li>• Pressure measuring apparatus</li> <li>• Venturimeter and orifice meter</li> </ul>	For A.Y. 2021-22 90%	A.U.Karne S M Divate	Lab Assistant Lab Assistant	Diploma in Instrumentation  Diploma in IT, BA(Psychology) MBA (Pursuing)		V S Chavan
8	Engineering Mechanics	20	<ul style="list-style-type: none"> <li>• Simple beam Apparatus</li> <li>• Belt friction apparatus</li> <li>• Polygon Apparatus</li> </ul>	For A.Y. 2021-22 75%	A.U.Karne	Lab Assistant	Diploma in Instrumentation		P R Satarkar
9	Structural Dynamic lab	18	<ul style="list-style-type: none"> <li>• Horizontal shake table</li> <li>• Vertical Shake table</li> </ul>	02 batches/ week	A.U.Karne	Lab Assistant	Diploma in Instrumentation		Dr M V Waghmare



6.2

Additional facilities created for improving the quality of learning experience in laboratories

30

Sr. No	Facility name	Details	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
1.	Smart Class Room	Fully equipped shared Smart Classroom with LCD projector with the seating capacity of 80. Comfortable desks, chairs and teaching aids. Fan, Tube light, chalk board.	For better understanding of the subject, teachers can show NPTEL lectures, Videos, on LCD projector. etc. also many other activities can be conducted using LCD projector.	Per Semester 15 hrs	Technical topics which require sound knowledge of the subject.	PO9, PO10 PSO2
2.	Seminar Hall	Fully equipped exclusive seminar hall with Smart Board, Computer Projector, Student Desk, White Board, Fan, Cushion chair, Mic, Speaker, LED lights, Podium.	For better understanding of theoretical concepts and practical in various laboratories. The students can verify theoretical concepts in a practical environment by providing e- learning through online Web courses and Video lectures. Various activities such as guest lecture, Expert lecture, quiz, etc. can be conducted using smart board	Per Semester 50 hrs	1. Recent technologies used in industry 2. Overall development of students 3. Soft skills 4. Leadership 5. Ethics	PO9, PO10 PSO2
3.	Concrete Laboratory	Having the facilities of L-Box, U Box, Concrete permeability apparatus, digital Rebound hammer, ultrasonic pulse velocity apparatus in addition to all the experimental setups in curriculum.	To conduct research activities in concrete. In addition to the SPPU curriculum, the listed arrangements are available so that students can make use of them in projects.	Per Semester 06 hrs	Research in the field of concrete	PO1, PO2, PO9



4	Total Station (Survey Laboratory)	Total Station device is available for students to enhance the process of survey digitally in a more accurate way.	In addition to the SPPU curriculum, students can verify theoretical concepts in a practical environment. The students are required to stay in touch with the recent trends and equipment used in Civil Engineering. The field of survey is most important aspect of Civil Engineering and Total Student is the smart way of survey used now a days.	Per Semester 06 hrs	Latest Trends in Survey. Digital Survey	PO4, PO9, PO12 PSO1
5.	E-journal Facility	IEEE, Springerlink, Elsevier, ASCE.	Easy access. For research and project activities. To know about recent trends in science and technology.	All time availability	Research activity Recent trends in engineering Project activity	PO9, PO10 PSO2
6.	Common Internet Facility	High bandwidth is available for academic purposes.	Facility to staff, students' Easy access of internet	All time availability	Gain knowledge apart from curriculum. Also, for better understanding of practical.	PO9, PO10 PSO2
7.	Central Library and departmental library	Library comprises of 49377 books, 703 journals with 300 seating capacity and 712 sq.m area.		All time availability		PO9, PO10 PSO2
8	Gas analyzer (Environmental eng. laboratory)	Gas analyzer instrument is available for measurement of CO <sub>2</sub> , CO, HC and O <sub>2</sub>	This instrument is purchase with help university for BCUD research project.	All time availability	For air pollution monitoring	PO4, PO9, PO12 PSO1
9	Wind Tunnel (Fluid mechanics)	Major applications to civil engineering are through wind-tunnel tests for wind	To conduct research activities in civil engineering. In addition to the SPPU curriculum, the listed arrangements are	All time availability	Research in the field of wind effects of various civil	PO4, PO9, PO12 PSO1



		effects on structures. Information on requirements for boundary-layer wind simulation, model construction, and procedures for various types of tests	available so that students can make use of them in projects.		engineering prototype.	
10	Tilting plume	It can be used to carry out advanced level experimental research in several areas of Hydraulics and Fluid mechanics, Modeling of Hydraulic Structures, Sediment-transport/River Mechanics, Ocean Engineering and Offshore Structures as well as in Environmental Hydraulics and Flow Measurements etc.	To conduct research activities in civil engineering. In addition to the SPPU curriculum, the listed arrangements are available so that students can make use of them in projects	All time availability	Research in the field of wind effects of various civil engineering prototype	PO4, PO9, PO12, PSO1
11	Environmental Discovery System (EDS) created in collaboration with VESBE Germany	The EDS was created in collaboration with VESBE Germany in the Central Research Lab.	For research study of water treatment systems	B.E. Civil Engg. Research projects on water treatment systems	Water treatment	PO1, PO2, PO3,



6.3

**Laboratories: Maintenance and overall ambiance**

10

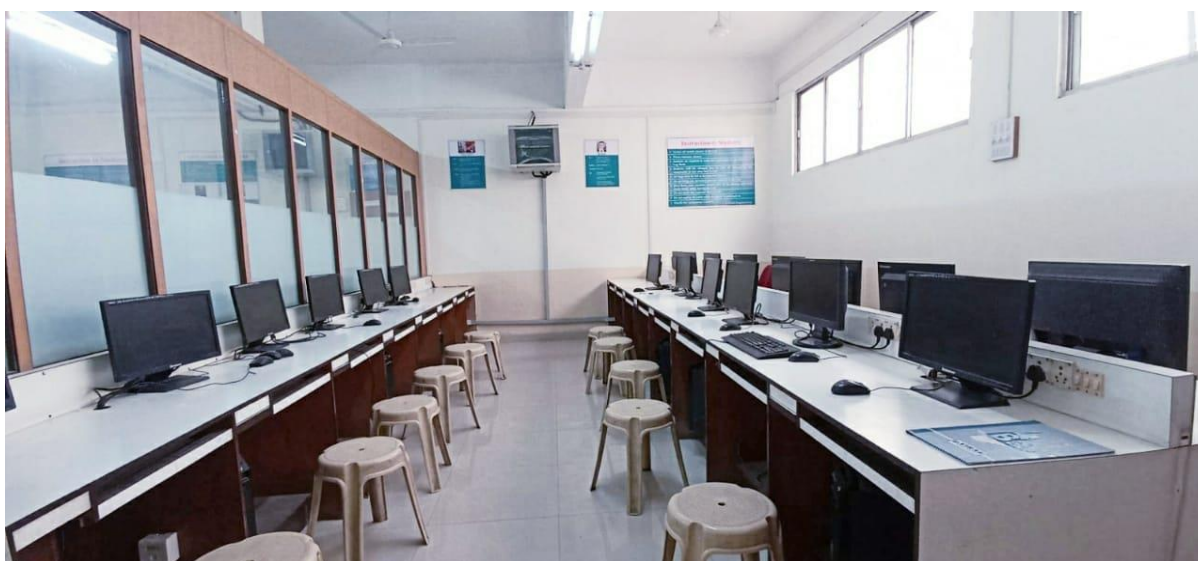
### Maintenance of Laboratory Equipment

1. Service and maintenance of equipment is carried out regularly.
2. Breakdown register is maintained in the laboratories.
3. Minor repairs are carried out by the technical staff of the department based on available resources and expertise.
4. Major repairs are outsourced by following the procedure of the Institute.
5. Dead stock register is maintained in laboratories.

### Overall Ambiance

1. Department has sufficient number of laboratories which is used throughout the year on a periodic time line basis to meet the curriculum requirements and based on requirements of the students.
2. Necessary furniture for students is provided in each laboratory. Based on the requirement, the students utilize them in the laboratories.
3. Laboratories are equipped with sufficient equipment to conduct the experiments.
4. Laboratory manuals contains information on vision, mission, PEO, PO, PSO, safety precautions, equipment handling instructions along with the details of the experiments are distributed to students well in advance.
5. UPS facility is available in Computer laboratories.
6. Lighting system is very effective, along with the natural light in every laboratory.
7. All the laboratories are equipped with white/chalk board, computer, Internet, and other such teaching-learning aids.

### UG COMPUTER LAB



## Environmental Engineering Lab



## PG COMPUTER LAB



## Engineering Mechanics Lab





## ME Lab



## Surveying Lab



## Transportation Engineering Lab



## Material Testing Lab







Fluid Mechanics Lab



## Geotechnical Lab



6.4

**Project laboratory**

05

- ❖ Sufficient computer systems are available in computer laboratory for project work such as computation, documentation, and internet-based research-related tasks.
- ❖ Availability of in campus and off campus e-resources of the library such as Science Direct, IEEE, ASCE, ASME, Springer, Mc graw Hill, Jgate, ASTM Digital Library, and Knimbus E Boooks
- ❖ To complete project-related tasks during and after working hours, all the laboratories are available as needed. Some few of such project work associate with laboratories are shown in Table B. 6.4.a
- ❖ Various I.S. Codes / Catalogue and Manual available for project work is shown in Table B. 6.4.b
- ❖ Software are available in department for soft computing of project work is shown in Table B. 6.4.c
- ❖ Major projects are performed in testing of material laboratory so as we designed as Project Laboratory in department





**Project Laboratory**

**Table B.6.4.a Brief list of projects completed in Civil Engineering department laboratories**

Sr No	Name of Lab Utilized	Title of Project
1.	Fluid Mechanics and Computer Laboratory	Application of soil conservation service curved no to estimate runoff
2.	Fluid Mechanics and Computer Laboratory	Rainfall analysis to study dry and wet region in Maharashtra using stochastic hydrology
3.	Environmental Engineering	Microbial fuel cell and innovative technology for waste water treatment and power generation
4.	Environmental Engineering	Manufacturing of bricks using WTP sludge
5.	Computer Laboratory	Minimizing traffic congestion at road intersection
6.	Testing of Material Laboratory	Use of biomedical waste in concrete
7.	Computer Laboratory	Traffic monitoring system using sensor for a junction in Pune city
8.	Computer Laboratory	Planning and scheduling of a road project by MSP software
9.	Testing of Material and Computer Laboratory	Experimental investigation of concrete blocks using SAP and subjected to VIVID curing conditions
10.	Testing of Material Laboratory	Experimental Analysis of Pavement Blocks with the use of plastic
11.	Environmental Engineering	Utilization of solid waste for manufacturing ecofriendly bricks
12.	Geotechnical Engineering laboratory	Use of bio-enzymes for soil stabilization
13.	PG laboratory	Earthquake vibration control using new innovation material



14.	Testing of Material and Environmental Engineering Laboratory	Rapid decomposition of solid waste material by using composition cutter technique
15.	Geotechnical Engineering laboratory	Slope stability analysis of rainfall induced landslide
16.	Geotechnical Engineering laboratory	Analysis of CRCCP using FRP and steel rebars
17.	Testing of Material Laboratory	Use of fly ash and copper slag as construction material in ferrocement to make it more sustainable and ecological
18.	PG laboratory and Computer Laboratory	Seismic design of multi-storey steel building equipped with braced frames and friction dampers
19.	Geotechnical Engineering laboratory	Designing and analysis of geo polymer modified concrete using fly ash
20.	Testing of Material Laboratory	Behavioral Analysis of concrete using hypaludge and fly ash as partial replacement to cement
21.	Testing of Material Laboratory	Analysing the strength of hollow concrete flyash blocks with holes reinforced by half portion of concrete
22.	Testing of Material Laboratory	Flexural behaviour of RC beams retrofitted with natural Banana fibres
23.	Testing of Material Laboratory	Study and improvement of structure by using self-healing concrete
24.	Computer Laboratory	Comparative Study of Structural Irregularities in different Seismic Zones using Response Spectrum Analysis
25.	Testing of Material Laboratory	Comparative study of normal concrete and rice husk ash mixed concrete
26.	Fluid Mechanics and Computer Laboratory	Solar energy with canal water preservation in Maharashtra
27.	Fluid Mechanics Laboratory	Hydraulic testing of ski jump bucket
28.	Fluid Mechanics and Computer Laboratory	CFD analysis of ski jump bucket


**Table B.6.4 b: I.S. Codes / Catalogue and Manual available for project work**

Sr No	Manual/ I.S. Codes / Catalogue available in Department
1.	IS: 5182: 1974, Indian Standard methods for measurement of air pollution
2.	IS: 1200: 2013, Indian Standard method of measurement of building and civil engineering works.
3.	IS: 8605 :1977, Indian Standard code of practice for construction of masonry in dams.
4.	IS: 11223 - Indian Standard 1985 guidelines for fixing spillway capacity.
5.	IS: 15442: 2004, Indian Standard parameters for environmental impact assessment of water resources.
6.	IS: 122 (Part 13): 1994, Indian Standard methods of measurement of building and civil engineering works part 13 white washing, colour washing, distempering and painting of building surfaces.
7.	IS: 6512 :1984, Indian Standard criteria for design of solid gravity dams.
8.	IS: 7365: 2010, Indian Standard criteria for hydraulic design of bucket type energy dissipators
9.	IS: 5182: 1974, Indian Standard methods for measurement of air pollution part xviii
10.	IS: 456: 2000, Code of practices for plain and reinforced concrete etc.
11.	IS: 875 – Code of practice for design loads (other than earthquake) for buildings and structures.
12.	IS: 800: 2007, Code of practice for general construction in steel.
13.	IS: 1983: 2016, Code of practice for criteria for earthquake resistant design of structures.
14.	IS: 13920: 2016, Code of practice for ductile detailing of reinforced concrete structures subjected to seismic forces.
15.	IS: 3025 – Tests on Water Samples.

**Table B.6.4 c Available computing resources in the department**

Sr No	Name of Software	Subject Domain
1.	ETAB software	Structural design and analysis
2.	STADD PRO. software	Structural design and analysis
3.	Pythagoras Version 11 (Software)	Surveying
4.	Effluent Treatment Plan Design software	Environmental Engineering
5.	Water Treatment Plant Design Software (WTP Soft)	Environmental Engineering



6.5

**Safety measures in laboratories**

10

**Safety measures in laboratories**

1. Specific safety rules for students displayed.
2. First aid boxes and fire extinguishers are kept in the laboratory.
3. Avoid the use of condemned equipment and provide needful equipment and components.
4. Periodical servicing of the lab equipment.
5. Maintain a clean and organized laboratory.
6. Avoid the use of cell phones.
7. Appropriate storage areas.

Sr. No.	Name of the Laboratory	Safety measures
1	Surveying lab	1. Safety Instruction boards are displayed 2. Fire extinguisher are installed 3. Concealed electrical wiring 4. Umbrella for field use
2	Concrete Technology lab	1. Safety Instruction boards are displayed 2. Fire extinguisher are installed 3. Gloves are used for handling concrete 4. Instruction to operate heavy machine are installed 5. Concealed electric wiring of the machines 6. MCB are provided for electrical fittings
3	Strength of material	1. Safety Instruction boards are displayed 2. Fire extinguisher are installed 3. Instruction to operate heavy machine are installed 4. Concealed electric wiring of the machines 5. MCB are provided for electrical fittings
4	Geotechnical lab	1. Safety Instruction boards are displayed 2. Fire extinguisher are installed 3. Safety Gloves are used during lab work 4. Instruction to operate heavy machine are installed 5. Concealed electric wiring of the machines 6. MCB are provided for electrical fittings
5	Environmental engineering lab	1. Safety Instruction boards are displayed 2. Fire extinguisher are installed 3. Safety Gloves are used during lab work 4. Safety mask are used during lab work 5. Instruction to operate heavy machine are installed 6. Concealed electric wiring of the machines 7. MCB are provided for electrical fittings



6	Engineering Geology lab	1. Safety Instruction boards are displayed 2. Fire extinguisher are installed 3. Heavy rock samples are kept safely
7	Transportation lab	1. Safety Instruction boards are displayed 2. Fire extinguisher are installed 3. Safety Gloves are used during lab work 4. Safety mask are used during lab work 5. Instruction to operate heavy machine are installed 6. Concealed electric wiring of the machines 7. MCB are provided for electrical fittings
8	Computer centre	1. Safety Instruction boards are displayed 2. Fire extinguisher are installed 3. Anti viruses are installed on machines 4. UPS is provided for safety of machines 5. Concealed electric wiring is provided 6. MCB are provided for electrical fittings
9	Fluid mechanics lab	1. Safety Instruction boards are displayed 2. Fire extinguisher are installed 3. Instruction to operate heavy machine are installed 4. Concealed electric wiring of the machines 5. MCB are provided for electrical fittings 6. Water channels are covered with grills
10	Engineering Mechanics Laboratory	1. Safety Instruction boards are displayed 2. Fire extinguisher are installed 3. Instruction to operate heavy machine are installed 4. Concealed electric wiring of the machines 5. MCB are provided for electrical fittings
11	PG laboratory	1. Safety Instruction boards are displayed 2. Fire extinguisher are installed 3. Instruction to operate heavy machine are installed 4. Concealed electric wiring of the machines 5. MCB are provided for electrical fittings



## DEPARTMENT OF CIVIL ENGINEERING

### CRITERION VII

#### Continuous Improvement





CRITERION VII	Continuous Improvement	50
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7.1	Actions taken based on the results of evaluation of each of the POs & PSOs	20
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**POs & PSOs attainment levels and actions for improvement CAY 2021-22**

POs	Target level	Attainment level	Observations
<b>PO1: Engineering knowledge:</b> Apply the knowledge of applied mathematics, science & technology, engineering fundamentals and an engineering specialization to the solution of complex practical engineering problems.			
PO1	1.66	1.88	Attainment level has been reached.
<p>Actions</p> <ol style="list-style-type: none"> <li>1. Illustrations for various practical concepts will be given in classroom.</li> <li>2. Additional practice problems to be solved for numerical subjects.</li> <li>3. Conduction of activities like quiz and use of NPTEL video lectures during teaching.</li> <li>4. Tutorials conducted focusing the knowledge of engineering fundamentals.</li> </ol>			
<b>PO2: Problem analysis:</b> Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO2	1.60	1.56	<p>Attainment level is 97.5% of target value.</p> <ol style="list-style-type: none"> <li>1. Students find it difficult to apply theoretical concepts to practical problems.</li> <li>2. Students having difficulty in mathematics find hard to use mathematical concepts for analysis problems.</li> <li>3. Students find it difficult to apply the basic knowledge of engineering science to practical problems.</li> </ol>
<p>Actions</p> <ol style="list-style-type: none"> <li>1. Application oriented problems will be solved in class to improve logical thinking.</li> <li>2. E-content of the courses will be developed which can help students to learn them at their own pace.</li> <li>3. Use of NPTEL video lectures during teaching, animations, etc.</li> </ol>			
<b>PO3: Design/development of solutions:</b> 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	1.40	1.53	Attainment level has been reached.
<b>Actions</b> 1. Students will be provided with question bank and made to practice unsolved problems from books as well. 2. Using Video lectures for illustrating the complex engineering problems more clearly. 3. Solving Assignments which will include real life design problems.			
<b>PO4: Conduct investigations of complex problems:</b> 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	1.48	1.66	Attainment level has been reached.
<b>Actions</b> 1. Hands on learning to understand the standard methods for investigation through the project and practical. 2. The quality of seminars and projects undertaken by students to be maintained. 3. Emphasis on the use of simulation through virtual lab.			
<b>PO5: Modern tool usage:</b> 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	1.40	1.52	Attainment level has been reached.
<b>Actions</b> 1. Hands on training programme for demonstration of various civil engineering software packages will be conducted. 2. Students will be encouraged to get involved in co-curricular activities related to modern tool usage.			
<b>PO6: The Engineer and Society:</b> 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	1.65	1.76	Attainment level has reached.  Most of the courses of Civil Engineering like, Environmental Engineering, Geotechnical Engineering etc. are addressing the needs of, health, safety and social concerns regarding engineering practices in real life.
<b>Actions</b> 1. To understand the safety concerns and social aspects, students will visit the field to expand their			



practical knowledge with the effect of improved practices in engineering.

2. Students will be encouraged to participate in NSS activities, social welfare activities.

3. Case studies representing impact of certain engineering solutions during challenging projects will be discussed.

**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	1.49	1.68	Attainment level has reached.
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Actions

1. Students will be guided on how to make optimum use of a material during their project work.

2. Case studies related to the sustainable use of materials/sustainable techniques will be discussed.

3. Impact of sustainability should be emphasized through seminars and expert talks.

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

PO8	1.54	1.53	Attainment level is 99% of target value.
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Actions

1. Dissemination of professional ethics/education through seminars, project.

2. Lectures for awareness on technical standards, code of ethics, technical paper presentation will be arranged.

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

PO9	1.56	1.68	Attainment level has reached.
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Actions

1. Students will be motivated to participate in various club activities where they will learn to function effectively both as individuals and as team members in a group.

2. Several students' chapter activities will be organized to demonstrate their abilities as team members in a group.

3. Project reviews are conducted and the students are graded at the end of the final review focusing on team work

**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	1.49	1.63	Attainment level has reached.
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**Actions**

1. Students are trained for soft skills.
2. Students will be motivated to organize technical and non-technical events at department as well as institute level.

**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	1.67	1.67	Attainment level has been reached.
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**Actions**

1. Project work is monitored rigorously by the department review committee.
2. The work related to financial aspect of project is asked to be incorporated.

**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	1.20	1.61	Attainment level has reached.
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**Actions**

1. Basics of Civil Engineering will be introduced from time to time to the students.
2. Students will be motivated to pursue higher studies.
3. Students will be motivated for learning advancements through massive open online courses MOOCS platform like Swayam, Coursera, EdX, Udemy, etc.

**PSO1:** Exhibit technical knowledge in planning, analysis, design and management for infrastructural development.

PSO1	1.50	1.40	Attainment level is 93.33% of target value. 1. The application level of the civil engineering concepts is moderate.
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**Actions**

1. Expert lecture, industrial visits will be planned to overcome the difficulties of students in different courses.

**PSO2:** Apply the innovative technologies to address Civil Engineering problems of the society.

PSO2	1.50	1.62	Attainment level has been reached.
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**Actions**

1. Students will be encouraged to get acquainted with the civil engineering problems faced by the society and the ways to deal with them.

**PSO3:** Enhance professional abilities to meet industry need.



PSO3	1.50	1.49	Attainment level is 99.33% of target value. 1. Students' awareness to environmental and social issues is moderate.
<p><b>Actions</b></p> <p>1. Students will be motivated to participate in various professional forums and utilize this knowledge to clear the competitive examinations.</p>			

**POs & PSOs attainment levels and actions for improvement CAYm1 2020-21**

POs	Target Level	Attainment Level	Observations
<b>PO1:</b> Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
<b>PO1</b>	1.60	1.59	Attainment level is 99.33% of target value.
<p>Action 1: Additional classes to be conducted to improve mathematical fundamentals.</p> <p>Action 2: More complex engineering problems to be given for practice.</p> <p>Action 3: Tutorial classes</p>			
<b>PO2:</b> 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.			
<b>PO2</b>	1.60	1.40	Attainment level is 87.5% of target value. 1. Lateral entry students are not exposed to mathematical basic fundamentals. 2. Basic knowledge of design is not well understood.
<p>Action 1: Practical approach of teaching to be adopted.</p> <p>Action 2: More problems to be given for practice.</p> <p>Action 3: Conduct bridge courses for analytical subjects.</p>			
<b>PO3:</b> 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.			
<b>PO3</b>	1.40	1.35	Attainment level is 96.44% of target value.
<p>Action 1: More design problems to be taught in tutorial classes</p> <p>Action 2: Knowledge of software is given.</p> <p>Action 3: Mini Projects are given.</p>			





Action 4: Workshops involving design / development of solutions are conducted.			
<b>PO4:</b> 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.			
<b>PO4</b>	1.40	1.48	Attainment level has been reached.. 1. Lack of practical knowledge 2. Students find it difficult to solve engineering problems.
Action 1: More site visits to be conducted			
Action 2: Additional experiments			
Action 3: Demonstration of theoretical concepts through lab scale models			
<b>PO5:</b> 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.			
<b>PO5</b>	1.40	1.40	Attainment level has been reached. Lack of knowledge of latest software used in industry.
Action 1: To conduct workshops based on latest software tools for hands on experience.			
Action 2: Students are taken to the industrial visits like RMC Plant etc to understand the modern equipment usage in the laboratory.			
<b>PO6:</b> 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.			
<b>PO6</b>	1.53	1.65	Attainment level reached.
Action 1: Promoting internships			
Action 2: Arranging industrial visits			
<b>PO7:</b> 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.			
<b>PO7</b>	1.39	1.49	Attainment level has been reached.
Action 1: Encourage students to participate in co-curricular and extra-curricular activities and competition organized by government and non-government organizations.			



<b>PO8:</b> Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
<b>PO8</b>	1.41	1.54	Attainment level reached.
Action 1: Guest Lectures on Professional Ethics in Engineering practice. Action 2: Arranging HRD training programs. Action 3: Technical talk on cement and its applications for economical usage of materials.			
<b>PO9:</b> Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
<b>PO9</b>	1.43	1.56	Attainment level reached.
Action 1: Students to participate in group activities.			
<b>PO10:</b> 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.			
<b>PO10</b>	1.44	1.49	Attainment level has been reached.
Action 1: Soft skill training conducted Action 2: Exposure to language lab.			
<b>PO11:</b> 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.			
<b>PO11</b>	1.58	1.67	Attainment level reached.
Action 1: Arranging training and workshops Action 2: Encouraging students to carry out mini projects.			
<b>PO12:</b> 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>PO12</b>	1.44	1.25	Attainment level is 86.80% of target value.
Action 1: Learning of the subjects through real life problems. Action 2: Participating in Workshops on latest technologies.			
PSO 1: Exhibit technical knowledge in planning, analysis, design and management for infrastructural development.			



PSO 1	1.50	1.27	Attainment level is 84.67% of target value. Project titles of final year students are not addressing the real-life problems.
Action 1: Students are motivated to take up real life problems during project work, so they can design, analyze and find solutions which gives exposure to latest technologies.			
PSO 2: Apply the innovative technologies to address Civil Engineering problems of the society.			
PSO 2	1.50	1.45	Attainment level is 96.67% of target value.. Lack of ability to solve complex civil engineering problems using latest software.
Action 1: Carry out academic workshops and conferences. Action 2: Apply for industry sponsored research projects.			
PSO 3: Enhance professional abilities to meet industrial need.			
PSO 3	1.50	1.35	Attainment level is 98% of target value. Lack of leadership skills and ability to communicate.
Actions 1. Motivated students to participate in co-curricular and extra-curricular activities.			

**POs & PSOs attainment levels and actions for improvement CAYm2 2019-20**

POs	Target Level	Attainment Level	Observations
<b>PO1:</b> Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO1	1.60	1.53	Attainment level is 95.62% of target value. 1. Lateral entry students are not exposed to mathematical basic fundamentals. 2. Students find it difficult to solve complex engineering problems.
Action 1: Additional classes to be conducted to improve mathematical fundamentals. Action 2: More complex engineering problems to be given for practice.			



Action 3: Good number of expert lectures is arranged.			
<b>PO2:</b> 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.			
<b>PO2</b>	1.60	1.33	Attainment level is 83% of target value. 1. Lateral entry students are not exposed to mathematical basic fundamentals. 2. Basic knowledge of design is not well understood.
Action 1: Practical approach of teaching to be adopted. Action 2: More problems to be given for practice. Action 3: Conduct the extra lectures for analytical subjects.			
<b>PO3:</b> 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.			
<b>PO3</b>	1.40	1.29	Attainment level is 92.14% of target value. Lack of practice and applicability
Action 1: More design problems to be taught in tutorial classes Action 2: Knowledge of software is given. Action 3: Mini Projects are given. Action 4: Students are motivated to participate in the Competitions involving problem-based learning.			
<b>PO4:</b> 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.			
<b>PO4</b>	1.40	1.36	Attainment level is 97.14% of target value. 1. Lack of practical knowledge 2. Students find it difficult to solve engineering problems.
Action 1: More site visits to be conducted Action 2: Experiment based projects at final year are encouraged. Action 3: Demonstration of theoretical concepts through lab scale models			
<b>PO5:</b> 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.			
<b>PO5</b>	1.40	1.29	Attainment level is 92.14% of target value. Lack of knowledge of latest software used in industry.
Action 1: To conduct workshops based on latest software tools for hands on experience. Action 2: Students are taken to the industrial visits like RMC Plant etc. to understand the modern equipment usage in the laboratory.			
<b>PO6:</b> 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.			
<b>PO6</b>	1.20	1.53	Attainment level has reached.
Action 1: Promoting internships Action 2: Arranging industrial visits			
<b>PO7:</b> 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.			
<b>PO7</b>	1.20	1.39	Attainment level has reached.
Action 1: Encourage students to participate in co-curricular and extra-curricular activities and competition organized by government and non-government organizations.			
<b>PO8:</b> Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
<b>PO8</b>	1.20	1.41	Attainment level has reached.
Action 1: Guest Lectures on Professional Ethics in Engineering practice. Action 2: Arranging HRD training programs. Action 3: Technical talk on cement and its applications for economical usage of materials.			
<b>PO9:</b> Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
<b>PO9</b>	1.20	1.43	Attainment level has reached.
Action 1: Students to participate in group activities.			
<b>PO10:</b> 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.			
<b>PO10</b>	1.20	1.44	Attainment level has reached.
Action 1: Soft skill training conducted			
Action 2: Exposure to language lab.			
<b>PO11:</b> 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.			
<b>PO11</b>	1.20	1.58	Attainment level has reached.
Action 1: Arranging training and workshops to know the financial aspects of any engineering project			
Action 2: Encouraging students to carry out mini projects.			
<b>PO12:</b> 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>PO12</b>	1.20	1.44	Attainment level has reached.
Action 1: Learning of the subjects through real life problems.			
Action 2: Participating in Workshops on latest technologies.			
Action 3: Revising the civil engineering fundamentals through technical quiz or group discussion.			
<b>PSO 1:</b> Exhibit technical knowledge in planning, analysis, design and management for infrastructural development.			
<b>PSO 1</b>	1.50	1.22	Attainment level is 81.33% of target value.  Project titles of final year students are addressing the real life problems.
Action 1: Students are motivated to take up real life problems during project work, so they can design, analyze and find solutions which gives exposure to latest technologies.			
<b>PSO 2:</b> Apply the innovative technologies to address Civil Engineering problems of the society.			
<b>PSO 2</b>	1.50	1.36	Attainment level is 90.67% of target value.  Lack of ability to solve complex civil engineering problems using latest software.
Action 1: Conduct academic workshops and conferences.			
Action 2: Apply for industry sponsored research projects.			



PSO 3: Enhance professional abilities to meet industrial need.			
PSO 3	1.50	1.25	Attainment level is 83.33% of target value. Lack of leadership skills and ability to communicate.
Actions 1. Motivated students to participate in co-curricular and extra-curricular activities.			

7.2	Academic Audit and actions taken thereof during the period of Assessment	10
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The following are the steps implemented in relation to continuous improvement:

- An incremental academic growth of all students is monitored through the student mentoring. A faculty is assigned as a counselor for every 15 students. Student and parent information of individual student is collected by the faculty mentor. Students are encouraged to take-up hobby projects, interdisciplinary projects.
- The periodic feedback mechanism is used for continuous improvement.
- Strengthening institute industry interaction by organizing industry institute conclaves  
These interactions enhance the quality of students projects, provides industry exposure to the faculty and students
- Use of ICT enabled classrooms for teaching and knowledge transfer.
- Internal audit for academics:

The auditor will visit the department as per the schedule given by IQAC to audit the correctness and completeness of academic documents:

- Planning of course delivery
- Quality of course outcomes
- Quality of learning materials
- Quality of internal and assignment questions
- Quality of scheme of valuation
- Adherence to academic calendar
- Teaching methods incorporated
- Impartial evaluation of internal assessment and assignments
- Support to the students through Mentoring & Counseling
- Identifying the slow Learners and taking appropriate methods for their Improvement.



The Head of the department discusses audit assessment with the faculty and prepares plan of action in the Programme Assessment & Quality Improvement Committee (PAQIC) meeting for addressing any concerns raised by the auditor.



**Institute Vision**

“Service to Society through Quality Education”

**ACADEMIC AUDIT (PAQIC meeting 1)**

- **Name of the Department: Civil Engineering**
- **Academic Year: 2020-2021**                      **Assessment Report: 2021-2022**
- **Date of Meeting: 15/07/2021**
- **Agenda:**
  1. **Program wise** POs / PSOs attainment analysis on the basis of Sem I courses attainment.
  2. **Course (Subject)** wise CO-POs / PSOs attainment analysis of all courses (SE, TE & BE) for the Sem-I.
  3. Program- Course wise POs / PSOs attainment **GAP** evaluation.
  4. Identification of **Courses having low/poor** attainment.
  5. PO/PSOs wise actions / planning in the form of activities for the next year Sem-I 2021-2022.
  6. **Linking** of Actions at course level.
- Discussion on CO-POs/PSO mapping through module coordinator report.
- Checking of other academic aids: Course file/ personal files/Question paper/Assignments /Exam report/ and other academic initiatives at department level. etc
- Planning for next meeting:
  1. Different Activities required for attaining the curriculum gaps were discussed.
  2. The activities like expert talk, workshop on technical topics, faculty development program, industrial visits were planned which will help for fulfillment of curriculum gaps as well as attainment gaps.



**Institute Vision**

"Service to Society through Quality Education"

**ACADEMIC AUDIT (PAQIC meeting 2)**

- **Name of the Department: Civil Engineering**
- **Academic Year: 2020-2021**                      **Assessment Report: 2021-2022**
- **Date of Meeting: 06/09/2021**
- **Agenda:**

1. Discussion and checking of **Course wise action suggested by PAQIC meeting 1.**
2. Checking of other academic aids: Course file/ personal files/Question paper/Assignments /Exam report/ and other academic initiatives at department level. etc
3. Suggestions for the improvement: The activities which were proposed for attainment of gaps should be carried out rigorously.
4. Planning for next meeting: A Student development program for GATE preparation is proposed.

**PAQIC members:**

Sr. No.	Designation	Portfolio	Name of Member
1	Chairman	Head of Department	Dr. U R Awari
2	Coordinator	Department Academic Coordinator	P R Modak
3	Member	Department Project Coordinator	Dr. D V Wadkar
4	Member	Department Exam Coordinator	K D Kashid
5	Member	Department I <sup>3</sup> Coordinator	Dr. P B Nangare
6	Members	Module Coordinators	Dr. P B Nangare
			Dr. S D Nagrale
			Dr. R D Nalawade
			Dr. D V Wadkar
			Dr. S R Parekar



- Course file evaluation: Each course coordinator prepares a course file which is evaluated by HOD and Module coordinator. Course file is maintained with the following parameters.



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(Accredited by NAAC with grade A+)

## COURSE FILE (PART A)

Name of Faculty:

Subject:

Class :

### CONTENTS

Sr. No.	Details
1	Vision, Mission of Institute and Department
2	Short term and long term goals of the Department
3	Program Specific Outcomes [PSOs] and Program Outcome [POs]
4	Syllabus Structure
5	Course syllabus
6	List of curriculum gaps
7	List of content beyond syllabus
8	List of Activities planned for Advance/slow learners
9	Unit wise Teaching – Learning Material :
	<ul style="list-style-type: none"> <li>Lecture notes, PPTs</li> </ul>
	<ul style="list-style-type: none"> <li>NPTEL/ MOOC , PDF, Video clips, Models, Simulation (List or Links)</li> </ul>
	<ul style="list-style-type: none"> <li>Workbook, Survey sheet, Virtual laboratories, Knowledge wall etc.</li> </ul>
10	List of Student centric methods used to teach the course
	<input type="checkbox"/> University question Papers along with Solution and Marking Scheme (Insem / End semester)
	<input type="checkbox"/> List of recommended books
	<input type="checkbox"/> List of mini projects allocated to students and corresponding record (if any)
	<input type="checkbox"/> Details of Competitions organized for the subject (if any)
	<input type="checkbox"/> List of topics for group discussion, debate, quiz, etc. planned and organized for the subject (if any)
	<input type="checkbox"/> List of case studies made available for self-study
	<input type="checkbox"/> List of recommended research papers (provide web link / doi)
	<input type="checkbox"/> List of Industries related with subject
	<input type="checkbox"/> Lab Manual ( If applicable)



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## COURSE FILE (PART B)

Academic Year : Semester :  
Name of Faculty : Subject :  
Class : Div :

## CONTENTS

Sr. No.	Details
1	College Academic Calendar, Department Academic Calendar
2	Class Time Table, Individual Time Table
3	Teaching Plan
4	List of Course Outcomes (CO)
5	CO-PO mapping, CO-PSO mapping
6	CO Assessment Tools and weight age
7	CO-PO-PSO attainment record
8	Assignments, Assignment analysis and record of sample assignments (Best and average)
9	Unit test papers (with CO) along with marking scheme and solution, sample answer papers (Best and average)
10	Attendance Record
11	Continuous Assessment sheet
11	Make up/ Remedial Lectures record
12	Defaulter Lists
13	Last three year Subject Results
14	Report of Guest Lecture
15	Report of Industry Visit
16	Reports of Student centric methods used to teach the course
17	Students feedback
18	Report of activities conducted for enhancement of course teaching
19	Course end Survey
20	Feedback for syllabus revision from stakeholders ( Feedback/Analysis/ Action taken report)





**DEPARTMENT OF CIVIL ENGINEERING**

**Academic Audit (2020 – 2021)**

**COURSE FILE (PART A)**

Sr. No.	Details	Name of Faculty	Name of Faculty	Name of Faculty	Name of Faculty	Name of Faculty
		<b>Class and Subject</b>	<b>Class and Subject</b>	<b>Class and Subject</b>	<b>Class and Subject</b>	<b>Class and Subject</b>
		(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)
1	Vision, Mission of Institute and Department					
2	Short term and long term goals of the Department					
3	Program Specific Outcomes [PSOs] and Program Outcome [POs]					
4	Syllabus Structure					
5	Course syllabus					
6	List of curriculum gaps					
7	List of content beyond syllabus					
8	List of Activities planned for Advance/slow learners					
9	Unit wise Teaching Learning Material :					
	• Lecture notes, PPTs					
	• NPTEL/ MOOC , PDF, Video clips, Models, Simulation (List or Links)					



	<ul style="list-style-type: none"> <li>• Workbook, Survey sheet, Virtual laboratories, Knowledge wall etc</li> </ul>					
10	List of Student centric methods used to teach the course					
	University question Papers along with Solution and Marking Scheme (Insem / End semester)					
	List of recommended books					
	List of mini projects allocated to students and corresponding record (if any)					
	Details of Competitions organized for the subject (if any)					
	List of topics for group discussion, debate, quiz, etc. planned and					
	List of case studies made available for self-study					
	List of recommended research papers (provide web link /					
	List of Industries related with subject					
	Lab Manual ( If applicable)					

(Name and Signature)  
Academic Coordinator

(Name and Signature)  
Head of Department



**AISSMS**  
COLLEGE OF ENGINEERING



ज्ञानम् सफलजनहिताय

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## DEPARTMENT OF CIVIL ENGINEERING

Academic Audit (2020 – 2021)

### COURSE FILE (PART B)

Sr. No.	Details	Name of Faculty	Name of Faculty	Name of Faculty	Name of Faculty	Name of Faculty	Name of Faculty
		Name of Faculty	Name of Faculty	Name of Faculty	Name of Faculty	Name of Faculty	Name of Faculty
		Class and Subject	Class and Subject	Class and Subject	Class and Subject	Class and Subject	Class and Subject
		(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)
1	College Academic Calendar, Department Academic Calendar						
2	Class Time Table, Individual Time Table						
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4	List of Course Outcomes (CO)						
5	CO-PO mapping, CO-PSO mapping						
6	CO Assessment Tools and weight age						
7	CO-PO-PSO attainment record						
8	Assignments, Assignment analysis and record of sample assignments (Best and average)						
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11	Continuous Assessment sheet						
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12	Defaulter Lists						
13	Last three year Subject Results						
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15	Report of Industry Visits						
16	Reports of Student centric methods used to teach the course						
17	Students feedback						
18	Report of activities conducted for enhancement of course teaching						
19	Course end Survey						
20	Feedback for syllabus revision from stakeholders ( Feedback/Analysis/ Action taken report)						

Name and Signature  
Academic Coordinator

Name and Signature  
Head of Department

7.3	<b>Improvement in placement, Higher Studies and Entrepreneurship</b>	10
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Item	CAY (2021-22)	CAY m1 (2020-21)	CAY m2 (2019-20)	CAY m2 (2018-19)
Total No. of Final Year Students(N)	112	107	104	122
No. of Students Placed in Companies or Government Sector (X)	23	19	35	53
No. of Students admitted to higher studies with valid qualifying scores (GATE or Equivalent State or National Level Tests, GRE, GMAT, etc.)(Y)	14	25	34	27
No. of students turned entrepreneur in engineering / technology(Z)	4	03	12	11
<b>Placement Index: (X+Y+Z)/N</b>	<b>0.366</b>	<b>0.44</b>	<b>0.77</b>	<b>0.74</b>


**Table B 7.3.a Improvement in placement**

Particulars	CAY 2021-22	CAY 2020-21	2019-20	2018-19
No. of Students placed in core companies	23	14	29	53
Average Salary (per month)	25,000	35,000	25,000	20,000

**Table B 7.3.b Improvement in higher studies**

Particulars	CAY 2021-22	CAY 2020-21	2019-20	2018-19
No. of Students admitted for Ph.D	-	--	--	--
No. of Students admitted in premier institutes for ME/M.Tech	1	09	13	12
No. of Students admitted in any other institutes for ME/M.Tech	2	11	09	08
No. of Students admitted for MS	11	05	07	07

**Table B 7.3.c Improvement in Entrepreneurship**

Particulars	CAY 2021-22	CAY 2020-21	2019-20	2018-19
No. of Students turned entrepreneurs	4	03	12	11

<b>7.4</b>	<b>Improvement in the quality of students admitted to the programme</b>	<b>10</b>
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Item		CAY 2022-23	CAY 2021-22	CAYm1 2020-21	CAYm2 2019-20
National Level Entrance Examination (JEE)	No. of Students admitted	13	14	14	19
	Opening Score/Rank	66.77	89.00	87.52	86.68
	Closing Score/Rank	18.61	48.83	8.32	47.70
State/University/Level Entrance Examination/Others (CET)	No. of Students admitted	105	87	107	91
	Opening Score/Rank	90.52	81.45	88.77	93.54
	Closing Score/Rank	12.75	1.154	5.45	3.06



Direct second year	No. of Students admitted	50	31	46	26
	Opening Score/Rank	95.00	97.11	95.26	91.94
	Closing Score/Rank	87.37	82.67	87.44	67.58
Average CBSE/Any other Board Result of admitted students (Physics, Chemistry & Maths)	No. of Students admitted	00	00	00	02
	Opening Score/Rank	00	00	00	73.33
	Closing Score/Rank	00	00	00	78.67





## DEPARTMENT OF CIVIL ENGINEERING

### CRITERION VIII

#### First Year Academics



<b>CRITERION VIII</b>	<b>First Year Academics</b>	<b>50</b>
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<b>8.1</b>	<b>First Year Student-Faculty Ratio (FYSFR)</b>	<b>05</b>
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Data for first year courses to calculate the FYSFR:

*Table 8.1*

Year	Number of Students (Approved Intake Strength)	Number of Faculty Members (Considering Fractional Load)	FYSFR	*Assessment = $(5 \times 20)/$ FYSFR (Limited to Max. 5)
2021-22	660	29	23	4.35
2020-21	660	31	21	5
2019-20	660	33	20	5
Average	660	31	21	4.78

**\*Note:** If FYSFR is greater than 25, then assessment equal to zero.

<b>8.2</b>	<b>Qualification of Faculty Teaching First Year Common Courses</b>	<b>05</b>
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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, Faculty definition as defined in 5.1

*Table 8.2*

Year	$x$	$Y$	$RF$	Assessment of faculty qualification $(5x + 3y)/RF$
2021-22	8	19	33	2.93
2020-21	7	17	33	2.60
2019-20	6	22	33	2.90
			<b>Average Assessment</b>	<b>2.81</b>

<b>8.3</b>	<b>First Year Academic Performance</b>	<b>10</b>
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Academic Performance = ((Mean of 1<sup>st</sup> 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.

**Table 8.3: Average SGPA of all students clear passed and passed with ATKT student**

Sr. No	A.Y.	Total No. of Appeared Students	Total No. of Clear Pass Students	Total No. of students in ATKT	Total No. of Fail Students	Total No. of successful Students	Mean SGPA	API
1	2020-21	127	122	5	0	127	8.45	8.45
2	2019-20	107	91	13	3	104	6.97	6.77
3	2018-19	117	49	43	25	92	6.51	5.12
Average API:								6.78

8.4	Attainment of Course Outcomes of first year courses	10
-----	---	----

#### 8.4.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcomes of first year is done (5)

(Examples of data collection processes may include, but are not limited to, specific exam questions, laboratory tests, internally developed assessment exams, oral exams assignments, presentations, tutorial sheets etc.)

##### Process Details: Assessment of Course Outcome

Assessing course outcomes is an important part of evaluating the effectiveness of a course and determining whether it has achieved its intended goals. This process is carried out using following steps:

1. Define the Course outcomes: The first step is to clearly define the course outcomes of the course using Bloom's Taxonomy. This includes identifying the specific knowledge, skills, and abilities that students are expected to gain by the end of the course. For each course six Course Outcome statements are defined.
2. Develop assessment tools: Once the course outcomes have been defined, the next step is to develop assessment tools that measure whether students have achieved those outcomes.
3. Collect data: Collect data from students' performance on the assessment tools. This is done by grading exams, quizzes etc.
4. Analyse data: Once data has been collected, it is analysed to determine how well students have achieved the course outcomes.

5. Use data to improve the course: Finally, the data collected is used to identify areas where the course could be improved.

Assessing course outcomes is an iterative process that involves continuous refinement and improvement. By carefully defining course outcomes, developing appropriate assessment tools, and analysing data, course teacher ensure that their courses are effective in achieving their intended goals.

### Assessment Tools

Assessment tools are designed to evaluate the attainment of the course outcomes (COs). It is important to select assessment tools that align with the specific COs of the course and to use multiple assessment tools to provide a comprehensive evaluation of student learning. The assessment tools are chosen based on the specific course outcomes being assessed and the teaching methods being used in the course.

The evaluation of the Course Outcome (CO) involves the use of both direct and indirect assessment tools, with greater weightage assigned to the former. Specifically, 80% weightage is given to direct assessment tools, which include both internal assessments (20%) and external assessments (80%). Meanwhile, indirect assessment tools are assigned a weightage of 20%.

The CO is assessed through a combination of direct and indirect methods, with greater emphasis placed on the former. The performance of students in both internal and external assessments is taken into account, with appropriate weightage assigned to each.

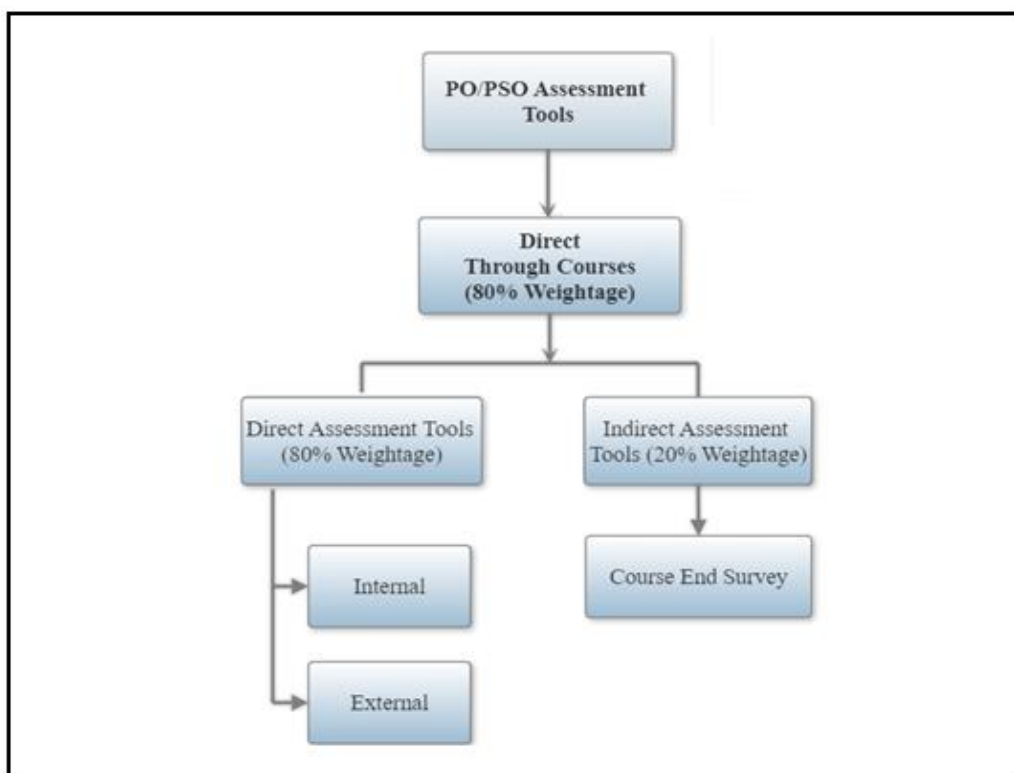


Figure B 8.4.1 a: Assessment tools and its weightage



### **Direct Assessment Tools:**

The assessment of Course Outcomes (COs) is evaluated using direct assessment tools, which include internal and external assessments. Internal assessments contribute 20% and external assessment contributes 80% to the overall assessment of COs.

### **Theory:**

Internal Tests and Assignments: In order to ensure that students are keeping up with the course content, internal tests and assignments are used as effective measures of their progress. The course is divided into six units, each of which is evaluated through a corresponding test. Additionally, three assignments are given, each based on two units of the course. The questions in these assessments are designed in accordance with Bloom's Taxonomy and are mapped to the specific Course Outcomes (COs) of the course. The department sets target level for COs, against which the students' performance is evaluated.

### **External Assessment:**

University Examination: The university conducts both in-semester and end-semester examinations to evaluate students' understanding of the course contents. The in-semester examination covers two units of the course and assesses two specific Course Outcomes (COs), while the end-semester examination covers the next four units and evaluates the remaining four COs. These examinations are designed to test students' knowledge and comprehension of the course contents, as well as their ability to apply that knowledge to real-world situations.

### **Practical**

Internal Assessment: Lab courses offer students a valuable opportunity to gain hands-on experience in applying the concepts they learn in class and to develop the skills necessary for success in their field of study. To assess students' performance in these practical aspects of the course, a Continuous Assessment Sheet (CAS) is used. This sheet evaluates several parameters, including regularity, quality of experiment write-ups, and overall performance during each experiment. By using the CAS, teachers are able to track students' progress and provide constructive feedback to help them improve their skills and understanding of the lab work.

### **External Assessment:**

Practical courses conclude in an end-semester examination, which are analysed in the form of a term work. Through this examination, students are tested on their ability to apply the knowledge and skills they have acquired throughout the course to practical scenarios. By employing a variety of assessment formats, instructors are able to evaluate students' abilities from multiple perspectives.

To assess the achievement of Course Outcomes (COs), Program Outcomes (POs), and Program



Specific Outcomes (PSOs), a range of assessment tools are used at different intervals throughout the course. **Table B 8.4.1 a** presents a comprehensive overview of these assessment tools, including the frequency at which they are administered. By utilizing a variety of methods to evaluate learning outcomes, course teachers are able to gain a more complete understanding of students' knowledge and skills, and ensure that the curriculum is meeting the desired standards.

**Table – B 8.4.1 a: Mapping of assessment tools to COs, POs/PSOs with frequency**

Sr. No.	Assessment Tool	Description	Evaluation of Course Outcomes	Related POs/PSOs	Frequency of assessment per term
<b>Internal Assessment Tools</b>					
1.	Test	Written examination	Questions in the test are mapped against CO of respective course.	Corresponding mapped POs/PSOs with the CO	Six (One for each CO)
2.	Assignment	Set of question to solve to home. (Open Book)	Questions in the assignment are mapped against two CO of respective course.	Corresponding mapped POs/PSOs with the COs	Three (one for Two COs)
3	Continues Assessment Sheet (CAS)	Assessment of students during practical	Based on the COs mapped with the experiments / assignments	Corresponding mapped POs/PSOs with the COs	For each experiment/ assignment during practical.
<b>External Assessment Tools</b>					
4	In-Sem Exam	Written examination	Questions in the exam are mapped against COs corresponds to first two units of respective course.	Corresponding mapped POs/PSOs with the COs	One (Mid of the Term)
5	End-Sem Exam	Written examination	Questions in the exam are mapped against Cos corresponds to the next four units of the respective course.	Corresponding mapped POs/PSOs with the remaining four COs	One (End of the Term)
6	Term Work	Based on the continues assessment during practical sessions – CAS is used	Based on the COs mapped with the experiments / Assignments	Corresponding mapped POs/PSOs with the COs	One (End of the Term)





### Indirect assessment tool – Course End Survey

A course end survey is a feedback tool used to gather information from students at the conclusion of a course. Its purpose is to assess the effectiveness of the course. Typically administered in the final week of the course, the survey covers course content in the form of CO statements.

To be effective, course end surveys are well-designed and focused on relevant and meaningful questions. Course teacher carefully analyse the results of the survey and make necessary changes to their course design and teaching methods based on the feedback received.

The weightage assigned to the indirect assessment tool in CO attainment highlights its importance in evaluating the effectiveness of the course design and teaching methods. By using this feedback to make informed decisions about course improvements, Course teacher ensure that future iterations of the course are even more effective in helping students achieve their learning goals.

#### 8.4.2 Record the attainment of Course Outcomes of all first year courses (5)

*Program shall have set attainment levels for all first year courses.*

*(The attainment levels shall be set considering average performance levels in the university examination or any higher value set as target for the assessment years. Attainment level is to be measured in terms of student performance in internal assessments with respect the COs of a subject plus the performance in the University examination)*

#### Evaluation of CO Attainment by Direct Assessment Tool

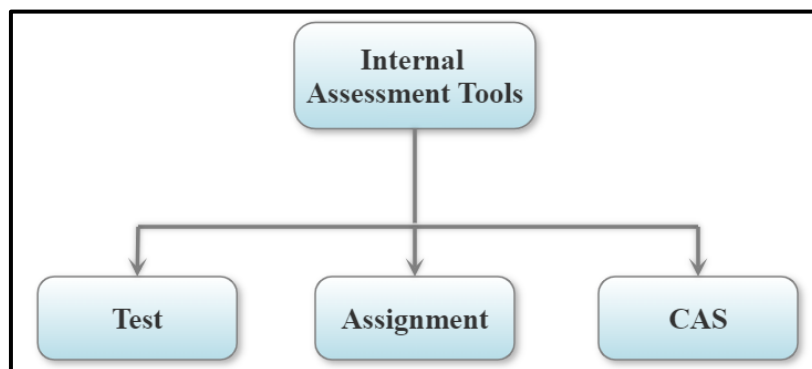
The evaluation of course outcome (CO) attainment by assessment tool involves a systematic process of collecting and analysing data to determine the extent to which the course objectives have been met.

The following steps are taken for this evaluation:

- Choose an appropriate assessment tool: There are various internal and external assessment tools that are used. The choice of tool is aligning with the objectives and course outcomes of the course.
- Determine assessment criteria: The assessment criteria are clearly defined and communicated to students. This will help to ensure that students understand what is expected of them and how their performance will be evaluated.
- Administer assessment: The assessment tools are administered in a fair and consistent manner.
- Analyse results: The results of the assessment should be analysed to determine the extent to which the course objectives have been met. This analysis should take into account the strengths and weaknesses of the students and the course. This analysis can be used to inform future instructional strategies and to improve the course content.
- Evaluate the effectiveness of the assessment: It is important to evaluate the effectiveness of the assessment to determine if it has been successful in achieving its intended purpose. This

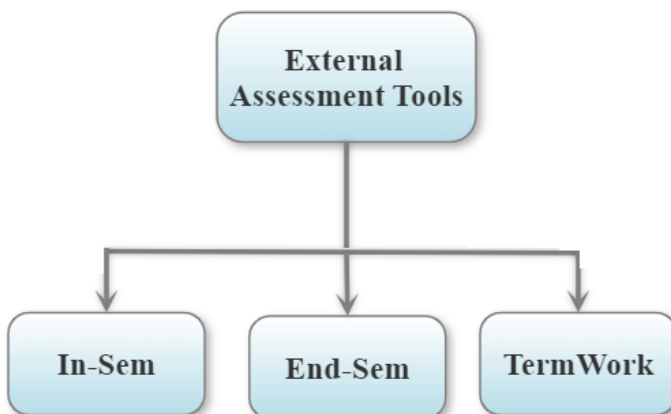
evaluation may involve soliciting feedback from students or conducting a review of the assessment process.

Internal assessment tools consist of Test, Assignment, Continuous Assessment Sheet for Practical (CAS) to evaluate CO attainment level.



**Figure B 8.4.2 a: Internal assessment tools**

External assessment tools consist of university examination such as In-Sem Exam, End Semester Exam, Term work.



**Figure B 8.4.2 b: External assessment tools**

### Attainment Levels

Attainment levels for Course Outcomes (COs) are a measure of students' achievement in meeting the course objectives. These levels are assessed using a variety of tools, and the attainment level may be stated as a percentage of students expected to achieve a certain threshold of marks. The attainment level is then measured as the actual percentage of students who meet or exceed the set threshold.

The defined attainment levels are;

Attainment Level 1: **20% to less than 60%** students scoring more than **60%** marks out of the relevant maximum marks.

Attainment Level 2: **60% to less than 70%** students scoring more than **60%** marks out of the relevant maximum marks.



Attainment Level 3: More than **70%** students scoring more than **60%** marks out of the relevant maximum marks.

### **Mapping of Assessment Tools and Cos**

Mapping assessment tools and COs is an important part of the assessment process and can help to ensure that student performance is evaluated consistently and effectively.

Mapping of assessment tools and course outcomes (COs) involves identifying which assessment tools are appropriate for evaluating specific COs. This process ensures that the assessment tools align with the intended learning outcomes and measure the desired knowledge, skills, and abilities. This process also helps to ensure that the assessment methods are valid and reliable, and that they provide accurate and meaningful information about student learning.

### **Weighted average method**

The weighted average method is a technique used to calculate the CO attainment from attainment values by tools. To use the weighted average method, weights are assigned to each tool based on maximum marks assigned to it, its relative importance, contribution to the overall attainment.

The steps involved in using the weighted average method to calculate CO attainment are as follows:

- i. Decide on the assessment tools to be employed in calculating CO attainment.
- ii. Establish the level of attainment for each tool used in the process, which will be measured on a scale of 1 to 3.
- iii. Assign weights to each tool based on its Maximum Marks. The weight for each tool will be calculated as the ratio of its Maximum Marks to the total marks assigned to all selected tools for calculating CO attainment.
- iv. Multiply each tool's level of attainment by its corresponding weight
- v. Sum up the weighted attainment values for all the tools to get CO attainment.

For example, if three tools are used with maximum marks assigned as 20, 30, 40 (Total Maximum Marks = 90), and the CO attainment values for the tools are 2, 1, and 3, weights assigned as (20/90), (30/90) and (40/90), respectively, based on the maximum marks for each tool in measuring the CO attainment.

To calculate the weighted average CO attainment, following formula is used:

Weighted average CO attainment = (Tool 1 attainment \* Weight 1) + (Tool 2 attainment \* Weight 2) + (Tool 3 attainment \* Weight 3) + ...

In the example above, the weighted average CO attainment would be:

Weighted average CO attainment =  $(2 * 20/90) + (1 * 30/90) + (3 * 40/90) = 2.11$

Therefore, the weighted average CO attainment for the three tools is 2.11.



Let's take another example of a course that has six Course Outcomes (CO.1 to CO.6), and for each CO, specific assessment tools are used along with their corresponding maximum marks ( $M_i$ ), as shown in the table below. Based on the performance of students and target values, CO attainment levels can be determined for each assessment tool as AI.

**Table B 8.4.2 a: Mapping of Cos with Assessment Tools**

Assessment Tool	Internal				External		
	Test-1	Test-2	Assignment	CAS	In-Sem	End Sem	Term Work
COs Mapped	<i>CO.1</i>	<i>CO.2</i>	<i>CO.1 &amp; 2</i>	<i>All COs</i>	<i>CO.1 &amp; 2</i>	<i>All COs</i>	<i>All COs</i>
Maximum Marks	<i>M1</i>	<i>M2</i>	<i>M3</i>	<i>M4</i>	<i>M5</i>	<i>M6</i>	<i>M7</i>
CO Attainment Level	<i>A1</i>	<i>A2</i>	<i>A3</i>	<i>A4</i>	<i>A5</i>	<i>A6</i>	<i>A7</i>

Since different assessment tools are used to evaluate each Course Outcome, the average attainment of each CO will depend on the attainment level obtained from each tool. For instance, the average attainment level of CO.1 will depend on the attainment levels obtained through various internal assessment tools, such as Test 1, Assignment 1, and CAS, as well as external assessment tools, such as In-Sem, End Sem, and Term work. If an assessment tool is used for multiple COs, the maximum marks can be distributed equally among those COs.

For example, if Assignment 1 is used as an assessment tool for CO.1 and CO.2, the maximum mark can be distributed equally between both COs, i.e.,  $M3/2$  for each CO. When calculating the attainment levels for external tools, such as End Sem Exam, CO-wise mark distribution should be considered. Additionally, the average CO attainment for internal tools and external tools should be calculated separately.

Average CO Attainment for particular CO using multiple assessment tools can be calculated as  $\Sigma \text{weightage} * \text{CO attainment}$

**Table B 8.4.2 b: CO Attainment calculations for Internal Assessment Tools**

Average CO Attainment by Internal Assessment Tools				
CO	Assessment Tool, Weightage and Attainment Level			Total
CO.1	Test-1	Assig.-1	CAS	
Marks for CO.1	M1/1	M1/2	M4/6	<b>Mint1</b>
Weightage	WT1 = M1 / (1*Mint1)	WA1 = M1 / (2*Mint1)	WCS = M4 / (6*Mint1)	<b>1</b>
CO Attainment	A1	A3	A4	
<b>Average CO Attainment (Aint)</b>		<b>= WT1*A1 + WA1*A3 + WCS*A4</b>		

**Table B 8.4.2 c: CO Attainment calculations for External Assessment Tools**

Average CO Attainment by External Assessment Tools				
CO	Assessment Tool, Weightage and Attainment Level			Total
CO.1	In-Sem	End Sem	Term Work	
Marks for CO.1	M5/2	M6/6	M7/6	<b>Mext1</b>
Weightage	WI1 = M5 / (2*Mext1)	WE1 = M6 / (6*Mext1)	WTW = M7 / (6*Mext1)	<b>1</b>
CO Attainment	A5	A6	A7	
<b>Average CO Attainment (Aext)</b>		<b>= WI1*A5 + WE1*A6 + WTW*A7</b>		

The CO attainment level by direct tools is calculated by giving 20% weightage to the average CO attainment level obtained from internal assessment tools and 80% weightage to the average CO attainment level obtained from external assessment tools.

CO attainment for CO1 = 0.2 X Aint + 0.8 X Aext

### CO Attainment Level by Indirect Assessment Tool

Mapping the survey questions to the COs enables course teacher to better understand the degree to which students have achieved the desired course outcomes. Standardizing the survey form ensures consistency across different courses, while a rating scale allows for a more nuanced and detailed assessment of student performance.

At the end of each course, a customized survey form is created with questions directly linked to the Course Outcomes (COs). Responses to these questions are collected through forms that typically use a 1-3 scale (with low to high ratings). Average of all the responses to respective CO is consider as

CO attainment. The data is then used to compute the indirect CO attainment, which is given a weightage of 20% in the overall CO attainment assessment.

### Overall CO Attainment Level for Course

To evaluate and assess COs, multiple tools are used, including direct assessment tools such as internal assessment and external assessment tools (university exams). When calculating CO attainment using direct assessment tools, 20% weightage is given to internal assessment tools, and 80% weightage is given to external assessment tools.

The weightage for CO attainment by direct assessment tools is 80%, while the weightage for the indirect assessment tool (Course End Survey) is 20%.

Thus, CO attainment using all the tools is



Figure B 8.4.2 c: External assessment tools

### Target for CO attainment

Target for CO attainment refers to the desired level of achievement or proficiency that a student is expected to reach for a particular course outcome (CO). It should be set by the department offering the course, and it serves as a benchmark for evaluating the effectiveness of the course in achieving its intended learning outcomes.

By setting clear targets for CO attainment, course teacher and institutions can monitor student progress and make adjustments to the course as needed to ensure that students are meeting the desired learning outcomes.

### Action upon CO attainment values

- **All of CO targets are not attained**

Corrective actions are taken based on the CO attainment values in order to improve the quality of education provided. If the attainment value for all COs is consistently low, it indicates that students are not achieving the expected learning outcomes for COs. In this case, the following corrective actions can be taken:

a) Teaching methodology: Teaching methodology can be evaluated and revised to ensure that it is effective and aligns with the COs. This could involve adopting new instructional methods or revising existing ones to better support student learning.





- b) Assessment tools: Assessment tools can be reviewed and revised to ensure they accurately measure student learning and achievement of the COs. This could involve creating new assessment tools or revising existing ones to better align with the COs.
- c) Faculty development: Faculty can be provided with professional development opportunities to enhance their teaching skills and keep up with the latest pedagogical techniques and strategies.
- d) Learning resources: The availability and accessibility of learning resources can be improved to better support student learning and achievement of the COs.
- e) Student support services: Student support services can be improved to provide additional assistance to students who may be struggling to achieve the COs.

By taking these corrective actions, the attainment of COs is improved, and the overall quality of education provided can be enhanced. In this case maintain the same CO targets.

- **Some of CO targets are not attained**

When deciding whether to change CO targets for the next academic year based on the attainment values, it is important to consider multiple factors. Here are some suggestions for improving this approach:

- a) Analyze the distribution of CO attainment values: It's important to analyze the distribution of CO attainment values to identify any gaps or areas of improvement. For example, if some COs are consistently below the target value while others are above it, it may be more effective to focus on improving the performance in the weaker areas before changing the target value for COs.
- b) Consider the difficulty level of COs: The difficulty level of COs can vary, and some COs may be more challenging than others. Therefore, it's important to consider the difficulty level of COs when deciding whether to increase the target value. COs that are already at a high level of attainment may not require an increase in the target level, whereas those that are below the target level and have higher difficulty levels may require more attention.
- c) Align CO targets with program and industry standards: CO targets should be aligned with the program and industry standards to ensure that students are adequately prepared for their future careers.

By taking these factors into consideration, course teacher can make informed decisions about whether to increase the CO target values based on attainment values, and if so, how much to increase them. This approach can help ensure that CO targets are tailored to the needs of the learners and the demands of the industry, while also providing students with the necessary skills and competencies.

- **All of CO targets are attained**



When all CO targets are attained, it is important to reassess the CO targets and set new targets for the next academic year. Here are some suggestions to improve this process:

- a) Analyze the CO attainment values: Before setting new CO targets, it is important to analyze the CO attainment values to identify areas of strength and areas for improvement. This analysis can help inform the setting of new targets that are challenging and realistic.
- b) Consider industry and program standards: CO targets should be aligned with industry and program standards to ensure that students are well-prepared for their future careers. Therefore, it is important to consider these standards when setting new CO targets.
- d) Use a data-driven approach: Setting new CO targets based on the average of all CO attainment values may be the one of the approaches. Instead, a data-driven approach that takes into account the distribution of CO attainment values and the difficulty level of each CO can help ensure that new targets are appropriately challenging and achievable.

By following these suggestions, educators can set new CO targets that are tailored to the needs of the learners and the demands of the industry. This can help ensure that students are well-prepared for their future careers and have the necessary skills and competencies to succeed.

- **CO attainment values at Maximum Level (nearly equal to 3.00)**

When CO attainment values are already at the maximum level, further improvements can still be made to the course outcomes by adopting the following strategies:

- a) Increase the level of challenge: When the attainment level is already at the maximum, one way to improve the COs is to increase the level of challenge for the students. This can be achieved by adding more complex and advanced course content, assessments, and/or projects. By doing this, students can continue to learn and grow even if they have already reached the maximum attainment level.
- b) Update the criteria for attainment level: When the attainment level is already at the maximum, it may be necessary to update the criteria for the attainment level to ensure that it remains challenging and relevant.

For example, new target value and criteria can be,

Attainment Level 1: 20% to 60% students scoring more than **65% marks** out of the relevant maximum marks.

Attainment Level 1: **40% to 70%** students scoring more than 60% marks out of the relevant maximum marks.

By adopting these strategies, course teacher continues to improve the course outcomes even when the attainment level is already at the maximum. It is important to remember that course outcomes should be designed to provide students with the knowledge, skills, and competencies.



Course Outcome of all FE courses are listed in table below:

Attainment of Course Outcomes of all first year courses

**ACADEMIC YEAR 2020-21**

Course Code	Subjects	CO 1	CO 2	CO 3	CO 4	CO 5	CO 6
107001	Engineering Mathematics - I	2.33	2.315	1.905	1.74	2.935	2.895
107002	Engineering Physics	2.24	2.18	2.93	2.81	2.93	2.93
102003	SME	2.81	2.755	2.835	2.835	2.65	2.86
103004	Basic Electrical Engineering	2.91	2.79	2.93	2.93	2.89	2.59
110005	PPS	2.92	2.8	2.92	2.92	2.92	2.8
111006	Workshop Practices	2.85	2.85	2.85	2.85		
107008	Engineering Mathematics II	2.875	2.955	2.955	2.955	2.955	2.955
107009	Engineering Chemistry	2.775	2.92	2.92	2.75	2.92	2.92
104010	Basic Electronics Engineering	2.93	2.93	2.93	2.93	2.93	2.93
101011	Engineering Mechanics	2.925	2.925	2.925	2.925	2.925	2.925
102012	Engineering Graphics	2	2	1.98	1.98	1.98	1.98
110013	PBL	2.95	2.95	2.95	2.95	2.95	2.95

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.

(Describe the assessment processes that demonstrate the degree to which the Program Outcomes are attained through first year courses and document the attainment levels. Also include information on assessment processes used to gather the data upon which the evaluation of each Program Outcome is based indicating the frequency with which these processes are carried out)

Assessment of program outcomes (POs) and program-specific outcomes (PSOs) is an essential part of the evaluation and improvement of academic programs.



In outcome-based education, program outcomes (POs) serve as a guide for curriculum design, delivery, and assessment of student learning. To ensure alignment, a "design down" process is employed, where outcomes are cascaded from POs to Course Outcomes (COs) and outcomes for individual learning experiences.

To connect high-level learning outcomes (POs) with course content, course outcomes, and assessment, there is a need to bring further clarity and specificity to the program outcomes. This can be achieved through a two-step process of identifying competencies and defining performance indicators (PIs). Competencies are different abilities implied by program outcome statements, while PIs are explicit statements of expectations of student learning.

Once the competencies and PIs are identified, the assessment of COs for all courses is designed by connecting assessment questions to the PIs. By following this process, where examination questions map with PIs, there is better resolution for the assessment of COs and POs. Ultimately, the achievement of POs is crucial for the effectiveness of the program and needs to be proven through accurate and reliable assessments.

Assessing POs and PSOs typically involves gathering evidence of student learning, analysing that evidence, and using it to improve teaching and learning. The key steps involved in the assessment process:

1. **Develop assessment criteria:** Develop criteria for assessing program outcomes and PSOs. The criteria are measurable, observable, and achievable. This includes developing rubrics or other assessment tools that allow for objective and consistent evaluation.
2. **Collect data:** Collect data on student performance related to program outcomes and PSOs. This includes assessments of student work, surveys of student.
3. **Analyse data:** Analyse the data to assess how well the program is meeting its outcomes and PSOs. This includes comparing student performance to the established criteria and identifying areas of strength and weakness.
4. **Use results for improvement:** Use the results of the assessment to identify areas where improvement is needed and develop strategies to address these areas. This involves changes teaching methods, or assessment methods or providing additional resources to students to help them meet the Program Outcomes and PSOs.

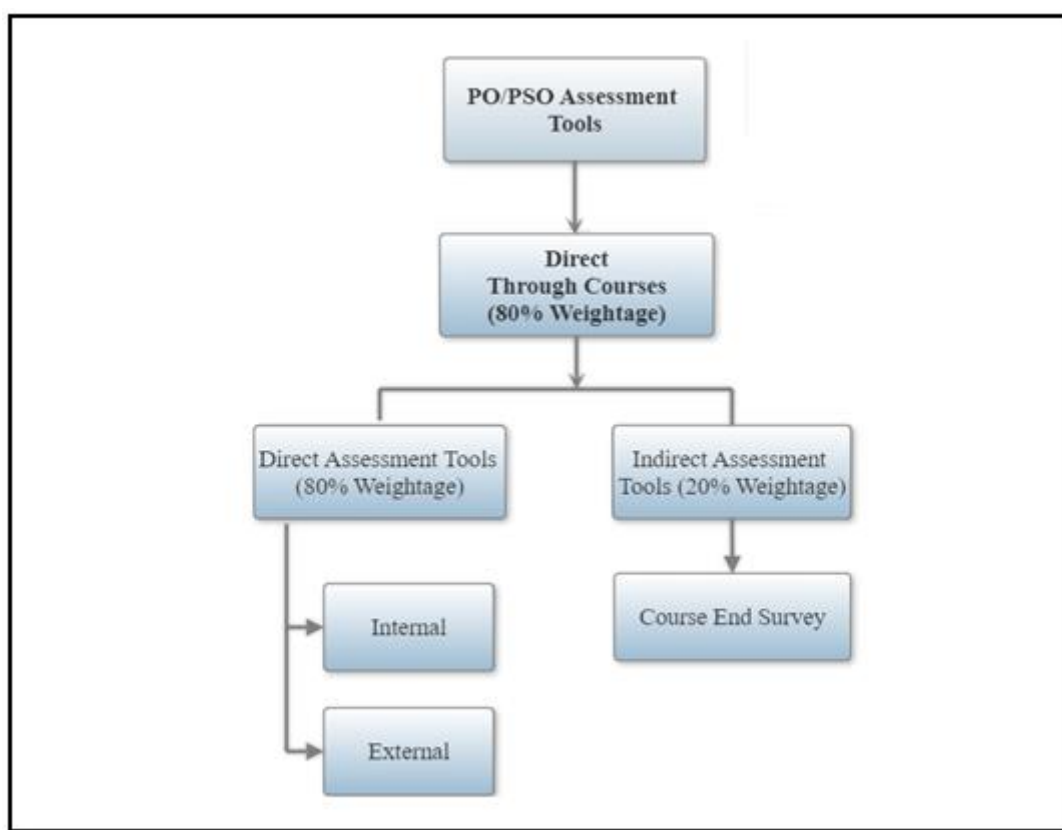
### **PO and PSO Assessment tools**

PO (Program Outcomes) and PSO (Program Specific Outcomes) assessment tools are used to evaluate the overall effectiveness of a program and to ensure that it meets the required standards.

There are various tools and techniques that can be used to assess POs and PSOs, some of which include:

- Direct assessment tools:** These tools assess the students' achievement of POs/PSOs through internal and external assessment. Internal assessment tools include assignments, test, CAS, etc. whereas external assessment tools include university theory exams, Project etc. Direct assessment tools are used to measure students' performance against the pre-defined performance indicators.
- Indirect assessment tools:** These tools evaluate the effectiveness of the program in terms of student satisfaction, feedback, and perception. Indirect assessment tools include surveys. Exit surveys are conducted with graduating students to evaluate the overall effectiveness of the program. Exit surveys can provide feedback on areas of strength and areas for improvement.

The tools used for assessment of POs/PSOs are same which are used for assessment of COs. These tools are defined in **Table – B 8.4.1 a**.



**Figure B 8.5.1 a: PO/PSO assessment tools**

The steps taken are

- Weightage Distribution:** A balanced distribution of weightage is used for direct and indirect assessment methods. A suggested distribution is 80% weightage for direct assessment and 20% weightage for indirect assessment, as both methods have their own strengths and limitations.



- b. Direct Assessment: Direct assessment of POs and PSOs is based on the attainment of COs, where COs are mapped to POs and PSOs.
- c. Indirect Assessment: Indirect assessment of POs and PSOs is conducted through surveys targeting different stakeholders. These surveys include graduate exit survey, employer survey, parent survey, and alumni survey. The weightage for each survey is equal.

### Attainment Levels of POs/PSOs

The various direct assessment tools used to evaluate COs, PO/PSOs and the frequency with which the assessment processes are carried out are listed in **Table – B 8.4.1 a**.

Tools used to evaluate PO/PSO attainment are same as that of CO attainment. Attainment Levels for internal as well as external assessment tools are also same for PO/PSO attainment and defined as;

**Attainment Level 1: 20% to 60 %** students scoring more than **60%** marks out of the relevant maximum marks.

**Attainment Level 2: 60% to 70 %** students scoring more than **60%** marks out of the relevant maximum marks.

**Attainment Level 3: More than 70%** students scoring more than **60%** marks out of the relevant maximum marks.

In order to assess attainment levels of program outcomes (POs) and program-specific outcomes (PSOs), the same tools and criteria used to define course outcomes (COs) attainment levels are applied. As a result, the attainment levels of COs are used to calculate the attainment levels of PSOs and POs. Direct assessment of PSOs and POs is based on the attainment levels of COs and the degree of correlation between them.

Sample calculation for PO/PSO attainment is described in following three steps:

#### Step – 1

CO Attainment and CO – PO/PSO mapping is defined for course by correlation level low to high (1 to 3).

**Table B 8.5.1 a: CO - PO Mapping**

Course Outcomes	CO Attainment	Program Outcomes			
		PO1	PO2	PO3	PSO1
CO207002.1	2.5	3	1		
CO207002.2	2.8	3	2	1	1
CO207002.3	2.3	2	2		2
CO207002.4	1.5	2	1	1	1
CO207002.5	2.0	1	1		
CO207002.6	3.0	3	3		





## Step – 2

The program-specific outcome (PSO) or program outcome (PO) attainment is based on the level of mapping between the POs and course outcomes (COs) and the CO attainment level.

Direct PO/PSO attainment is calculated using following formula:

$$\text{PO/PSO attainment} = (\text{Level of Mapping of PO with CO} \times \text{CO attainment Level}) / 3$$

**Table B 8.5.1 b: PO/PSO Attainment Calculations**

Course Outcomes	CO Attainment	Program Outcomes			
		PO1	PO2	PO3	PSO1
CO207002.1	2.5	=2.5x3/3	=2.5x1/3		
CO207002.2	2.8	=2.8x3/3	=2.8x2/3	=2.8x1/3	=2.8x1/3
CO207002.3	2.3	=2.3x2/3	=2.3x2/3		=2.3x2/3
CO207002.4	1.5	=1.5x2/3	=1.5x1/3	=1.5x1/3	=1.5x1/3
CO207002.5	2.0	=2.0x1/3	=2.0x1/3		
CO207002.6	3.0	=3.0x3/3	=3.0x3/3		

## Step – 3

Direct PO/PSO attainment is evaluate by taking average of PO/PSO attainment by each CO attainment.

**Table B 8.5.1 c: Average PO/PSO Attainment by Course**

Course Outcomes	CO Attainment	Program Outcomes			
		PO1	PO2	PO3	PSO1
CO207002.1	2.5	2.50	0.83		
CO207002.2	2.8	2.80	1.87	0.93	0.93
CO207002.3	2.3	1.53	1.53		1.53
CO207002.4	1.5	1.00	0.50	0.50	0.50
CO207002.5	2.0	0.67	0.67		
CO207002.6	3.0	3.00	3.00		
Average PO/PSO Attainment		1.92	1.40	0.72	0.99

Using direct tools to assess PO/PSO attainment provides objective evidence of students' learning outcomes and helps department to identify areas for improvement in the program. Additionally, it allows for a more accurate evaluation of the effectiveness of the program's curriculum, instructional methods, and teaching strategies.

## Attainment of POs/PSOs through Indirect Tools

Indirect tools provide valuable information about students' perceptions of their learning experiences and the extent to which they perceive that they have achieved program outcomes.



While indirect tools have limitations, they can provide valuable insights into students' experiences and perceptions of the program, as well as how well it aligns with the needs of employers and the community.

By combining direct and indirect tools, department gain a more comprehensive understanding of the program's effectiveness in achieving its intended learning outcomes.

Graduate Exit Survey, Employer Survey, Parents Feedback and Alumni Survey are conducted at the end of program and equal weightage is given each.

The department conducts surveys using a relevant questionnaire in order to assess the attainment of Program Outcomes (POs) and Program Specific Outcomes (PSOs). The questionnaire provides 5 response options, namely Excellent, Very Good, Good, Average, and Poor, which are assigned scores of 5, 4, 3, 2, and 1, respectively. The survey results are then tabulated, and the average scores for each PO and PSO are calculated. To determine the attainment level for each PO and PSO, the average score is converted to a scale of 0 to 3.

For indirect PO/PSO attainment 20% weightage is given.

Total PO/PSO attainment is calculated as:

Direct Attainment by all courses X 0.8 + Indirect Attainment X 0.2

ACADEMIC YEAR 2020-21 PO Mapping Matrix																	
S r. N o.	Cour se	Course Title	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3
1	1070 01	EM-I	3	2	1		1								1		
2	1070 02	Engineeri ng. Physics	2	1			1		1			1			1	1	1
3	1020 03	Systems in Mechanic al Engineeri ng	2	1					1			1			1		
4	1030 04	Basic Electrical Engineeri ng	1.5	1.5	1		1								1		1
5	1100 05	Program ming and	1.25	2	1.6		1			1	1	1		1	1	1	1



		Problem Solving															
6	111006	Workshop	1	1	1	1		1							1	1	
7	107008	EM-II	3	2	1		1								1		
8	107009	Engineering Chemistry	2.33	2	1				1		1	1			1	1	
9	104010	Basic Electronics Engineering	2	1	1		1								1		
10	101011	Engineering Mechanics	2	2			1					1			1		
11	102012	Engineering Graphics	2	1	1		1					1			1		1
12	110013	Project Based Learning	2.33	1.33	1		2.5	1	1		2	1	1		1	1	1
Direct Attainment Target*			2.03	1.49	1.07	1.00	1.17	1.00	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Contributing Subjects			12	12	9	1	9	2	4	1	3	7	1	1	12	5	5



**Attainment Matrix**

**Table 8.5.1**

A.Y- 2020--21 CO-PO Attainment Matrix																	
S r. N o.	Cour se	Course Title	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3
1	1070 01	EM-I	2.35	1.57	0.78		0.78								0.97		
2	1070 02	Engineeri ng. Physics	1.78	0.74			0.74		0.96			0.82			0.98	0.86	0.86
3	1020 03	Systems in Mechanic al Engineeri ng	1.86	0.93 5					0.93 5			0.93			0.94 5		
4	1030 04	Basic Electrical Engineeri ng	1.435	1.43 5	0.94		0.97								0.86 5		0.86 5
5	1100 05	Program ming and Problem Solving	1.21	1.95	1.53 5		0.96			0.96	0.97	0.96		0.96	0.96	0.97	0.97
6	1110 06	Worksho p	0.95	0.95	0.95	0.95		0.95							0.95	0.95	
7	1070 08	EM-II	2.945	1.96	0.98 5		0.98 5								0.98 5		
8	1070 09	Engineeri ng Chemistr y	2.215	1.94 5	0.95 5				0.94		0.95 5	0.95 5			0.94	0.94 5	
9	1040 10	Basic Electroni cs Engineeri ng	1.95	0.98	0.98		0.98								0.98		
10	1010 11	Engineeri ng Mechanic s	1.955	1.95 5			0.97 5					0.97 5			0.97 5		



1 1	1020 12	Engineering Graphics	1.325	0.66	0.66 5		0.66					0.66 5			0.66		0.66
1 2	1100 13	Project Based Learning	2.295	1.31	0.98 5		2.46	0.98 5	0.98 5		1.96 5	0.98 5	0.98 5		0.98 5	0.98 5	0.98 5
Direct Attainment Target*			1.86	1.37	0.98	0.95	1.06	0.97	0.96	0.96	1.30	0.90	0.99	0.96	0.93	0.94	0.87
Contributing Subjects			12	12	9	1	9	2	4	1	3	7	1	1	12	5	5

\* Direct attainment level of a PO is determined by taking average across all courses addressing that PO. Fractional numbers may be used for example 1.55.

### 8.5.2 Actions taken based on the results of evaluation of relevant POs (5)

(The attainment levels by direct (student performance) are to be presented through Program level Course-PO matrix as indicated)

#### PO Attainment Levels and Actions for improvement - CAY – Mention for relevant PO's

Table B.8.5.2

ACADEMIC YEAR 2020-21			
PO's	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	1.86	Attainment is 91.23% of target value. Subjects showing lower attainment values are Physics, EM-I The students faced difficulty to understand basic concepts of the courses.
Action 1	Conduct Expert Lecture & Extra Test/Quiz to enhance basic engineering knowledge.		
Action 2	Provide a question bank to improve engineering knowledge.		
Action 3	Encourage students to choose interdisciplinary problems in Project Based Learning		
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	1.49	1.37	Attainment is 91.92% of target value. Subjects showing lower attainment values are Physics,PBL,EM-I,BEE These courses need better understanding through practical knowledge and sound basics.
Action 1	To give more problems to improve understanding of the subject		
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	1.07	0.98	Attainment is 91.41% of target value. Subjects showing lower attainment values are PBL, EM-I. These kind of courses need more practice. Students need to practice on on calculations and



			derivations-related questions.
Action 2	Organize an industrial visit to get familiar with engineering problems		
Action 3	<b>Students are encouraged to take on projects related to societal and environmental considerations.</b>		
<b>PO4: 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.</b>			
PO4	1.00	0.95	Attained 95%
Action 1	New targets to be set.		
<b>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.</b>			
PO5	1.17	1.06	Attainment is 90.57% of target value. Subjects showing lower attainment values are Physics, EM-I
Action 1	Effective utilization of modern tools like Vlab, Google Quiz, PPT, YouTube Videos, google website, NPTEL video lectures, MS Teams		
Action 2	Encourage students to use modern online softwares, Simulation software		
<b>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.</b>			
PO6	1.00	0.97	Attainment is 96.75 % of target value. PBL is showing a lower attainment value.
Action 1	<b>To motivate students to take Techno-social Projects for Project Based Learning</b>		
<b>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.</b>			
PO7	1.00	0.96	Attainment is 95.50% of target value. PBL is showing a lower attainment value.
Action 1	Awareness through Lab Activity and Field Visit to explore the knowledge of Environment & Sustainability		
<b>PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.</b>			
PO8	1.00	0.96	Attainment is 96% of target value. PBL is showing a lower attainment value.
Action 1	Organize expert lectures/ motivational talk to overcome above observation		
<b>PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.</b>			
PO9	1.33	1.3	Attainment is 97.25% of target value. Subjects showing lower attainment values are PBL, Physics Attempts to be made for further enhancement in individual and team work
Action 1	Evaluation of student performance through Group activities/presentations.		





**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	1.00	0.90	Attainment is 89.86% of target value. PBL is showing a lower attainment value. Increasing the participation of students in team work activities to boost effective communication.
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Action 1 Encourage students to improve verbal & written communication through practical activities/Group Discussion/Presentations/Reports

**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	1.00	0.99	Attainment Level is 98.50% target level. PBL is showing a lower attainment value.
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Action 1 To create awareness among the students through project 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	1.00	0.96	Attainment Level is 96% target level. Students need to be encouraged to participate in professional chapters for overall development.
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Action Students are encouraged to participate in the different activities under various student chapters and NSS.

#### ACADEMIC YEAR 2020-21

PSO's	Target Level	Attainment Level	Observations
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**PSO1: Exhibit technical knowledge in planning, analysis, design and management for infrastructural development.**

PSO 1	1.00	0.93	Attainment is 93.29 % of target value.
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Action 1 Expert lecture, industrial visits will be planned to overcome the difficulties of students in different courses.

Action 2 Under the mentorship of faculty, students will be trained to participate in events related to project based learning.

**PSO2: Apply the innovative technologies to address Civil Engineering problems of the society.**

PSO 2	1.00	0.94	Attainment Level is 94.20% target level.
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Action 1 Students will be encouraged to get acquainted with the civil engineering problems faced by the society and the ways to deal with them.

**PSO3: Enhance professional abilities to meet industrial need.**

PSO 3	1.00	0.87	Attainment Level is 86.80 % target level.
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Action 1 Students will be motivated to participate in various professional forums.

Action 2 Students will be encouraged to participate in various activities conducted under Unnat Bharat abhiyan.



## ANNEXURE I:

### **PROGRAM 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 modeling to complex engineering activities with an understanding of the limitations.
- 6. The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- 7. Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- 8. Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- 9. Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- 10. Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.



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



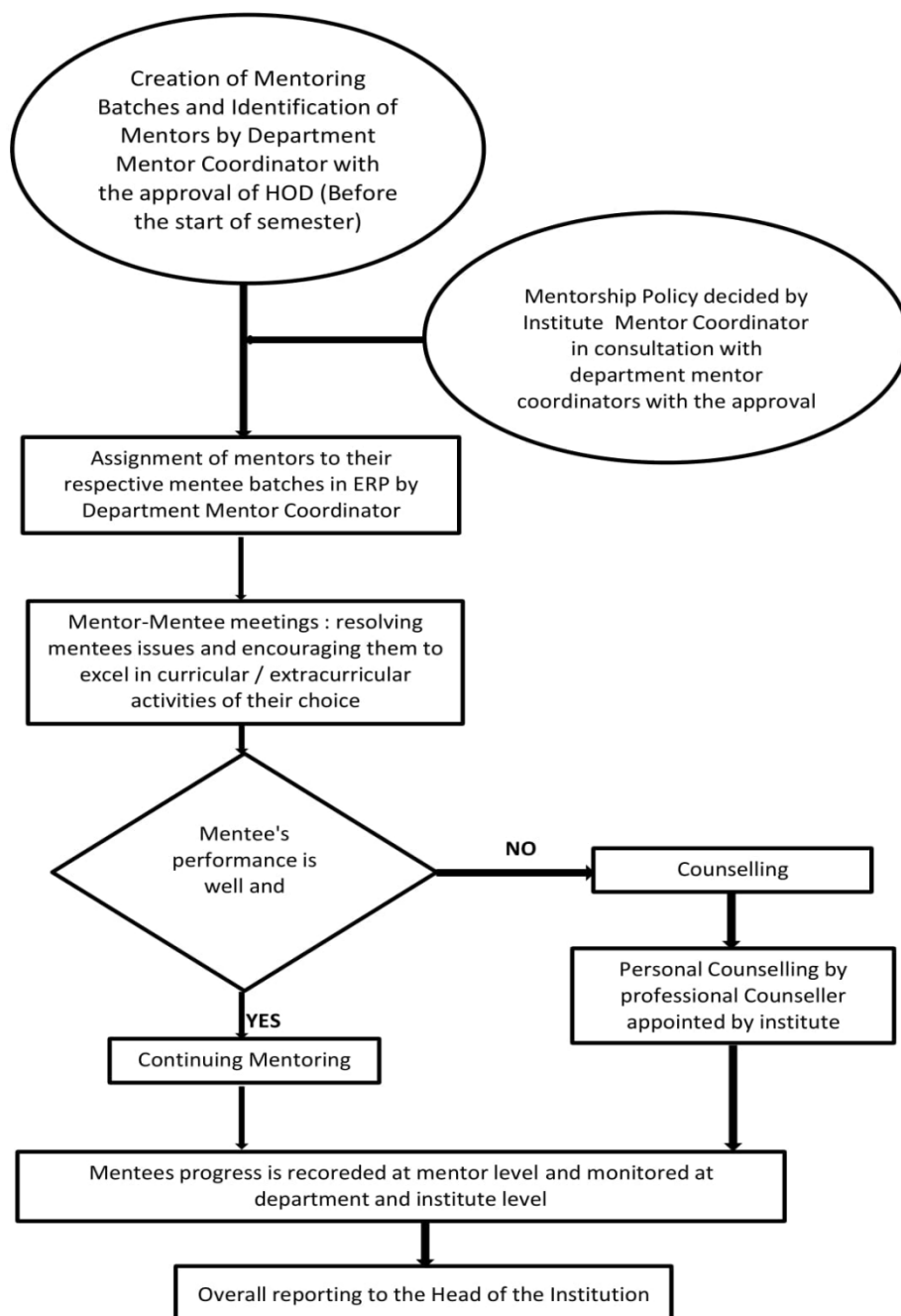
## DEPARTMENT OF CIVIL ENGINEERING

### CRITERION IX

#### STUDENT SUPPORT SYSTEMS

CRITERION IX	STUDENT SUPPORT SYSTEMS	50
9.1	Mentoring system to help at individual level	05

Counselling and Mentoring encompasses a broad set of skills, approaches and techniques that are essentially aimed at helping students with problem solving, problem management, resolving past issues, working towards developmental aims and goals for the future, which include improving performance and meeting career and personal aspirations.



**Fig B 9.1.1 Mentoring Process**

The counselling and mentoring process is developed

1. To help students to overcome emotional challenges,



2. To assist a student to know him/herself better his/her interest, abilities, attitudes and opportunities,
3. To work out a plan (behavioural therapy) for solving his difficulties.
4. To assist students in planning for career choices.

**Functioning:**

- Each faculty acts as a mentor in the counselling & mentoring process.
- A mentor is responsible for guiding about 20 students of a class.
- The mentor listens to the problems of the mentee, both academic and personal which hinder their learning abilities.
- In the mentoring sessions, students raise their difficulties/problems regarding academics/general facilities/hostel facilities with their respective mentors.
- If the mentor/course coordinator/GFM/HOD observes or finds a student who needs professional counselling, his case is forwarded to the Professional Counselling agency through the Counselling & Mentoring Coordinator.

**Post Counselling:**

- Feedback and Behavioural improvements are observed from the student seeking professional counselling.
- Record of a case study report is asked from the mentor mentioning the positive changes and improvement observed for the student.

**Role of Department Mentor Coordinator:**

- To distributes required formats to the department mentors.
- To maintain the list of the students and respective mentors.
- To monitor the records of mentors on regular base and report to the HOD.
- To collect the records from all the mentors at the end of every semester & retain in the department.
- To handover the mentor records of earlier semester to next mentors at the beginning of semester through HOD
- To conduct the meeting once in the month within department and maintain the minutes.

**Roles and Responsibilities of Mentors:**

- To collect the list of allotted students and formats for updating the students' record.
- To collect the "Student Information" from the respective GFM.
- To establish the contact with the parents through telephonic discussion, appraise them about the development of their ward.
- Conduct meeting with students fortnightly.
- To act as a Counsellor, Guide and Philosopher of the student.
- To encourage the student to have open dialogue.



- To record the observations about student viz. achievements, doubts, fears, grievances, etc.
- To evaluate the student's ability, strengths and weaknesses.
- To help the student to overcome their weaknesses and strengthen the abilities to excel in his/her defined objectives.
- To submit the files, complete on all respect to HOD at the end of term.
- To update student's information on ERP.
- To report the weak cases to the Students Counselling Cell, as well as those cases wherever special assistance is required, through HOD.

**Mentor-Mentee Allotment (A Sample copy)**  
**DEPARTMENT OF CIVIL ENGINEERING**  
**Academic Year 2021-2022, TERM-I**

**AISSMS**  
 COLLEGE OF ENGINEERING  
 ज्ञानम् सकलजनहिताय  
 Accredited by NAAC with "A+" Grade

**Departmental of Civil Engineering**  
 VISION:-Nurture the talent in civil engineers to work as global leaders for development of society

---

Academic Years 2022-23 –Sem- I  
 Ref. No.:AISSMSCOE/CIVIL/2022-23 Date : 01/08/2022  
 The following faculty are appointed as mentors for SE/TE/BE ( CIVIL )

Sr.No	Class	Batch	Mentor(2022-23) Sem-I	Number of students	Sign
1	SE	A	Dr. U. R. Awari	17	
2		B	Dr. A. A. Manchalwar	17	
3		C	Mr. C. S. Misal	18	
4		D	Mrs. M. S. Chiwande	17	
5		E	Miss. R. S. Meshram	17	
6		F	Dr. P. B. Nangare	15	
7	TE	A	Mrs. S. A. Chavan	19	
8		B	Dr. S. R. Parekar	19	
9		C	Dr. V. N. Patil	18	
10		D	Dr. S. D. Nagrale	23	
11		E	Mr. U. J. Jadhav	19	
12		F	Dr. D. V. Wadkar	19	
13		G	Miss. K. D. Kashid	19	
14		H	Mr. C. R. Yeole	23	
15	BE	A	Dr. R. D. Nalawade	20	
16		B	Mrs. K. N. Kulkarni	20	
17		C	Miss. S. P. Khedekar	20	
18		D	Dr. V. S. Chavhan	20	
19		E	Mr. P. R. Modak	20	
20		F	Dr. G. C. Chikute	20	
21		G	Mr. S. S. Mulay	20	
22		H	Dr. M. V. Waghmare	20	

Mentor Coordinator

Head of Department

Encl : List of Students

M1 :Provide quality education to develop competent civil engineers.  
 M2 :Create awareness among students for sustainable development.  
 M3 :Cultivate the leadership qualities for becoming successful entrepreneurs.

**Fig B 9.1.2 Mentor allotment list of the Department**

27/09/2022, 13:53

NBA 20sept 2019 - Google Docs



**AISSMS**  
COLLEGE OF ENGINEERING

ज्ञानम् सकलजनहिताय  
Accredited by NAAC with "A+" Grade



**Department of Civil Engineering**

Vision: Nurture the talent in Civil Engineers to work as global leaders for development of society

Dated:- 20/09/2019

All students are hereby informed that the college has appointed professional counselors for the students. Interested students can give their name to the respective mentors for further process.

*For* *Ahavan*

Mrs. A. M. Dehulkar  
(Mentor Coordinator)

*Dr. U. R. Awari*

Dr. U. R. Awari  
(HOD Civil Engineering Department)

SEA - R PRM  
SEB - SRP SRP  
TEA - Jally UJJ  
TEB - VSC  
BEA - DVW  
BEB - VNP

**Mission:**

- Provide quality education to develop competent Civil Engineers
- Create awareness among students for sustainable development
- Cultivate the leadership qualities for becoming successful entrepreneurs

**Fig B 9.1.3 Notice of Professional Students Counselling**

27/09/2022, 14:06

AISSMS College of Engineering Mail - Counseling Session for mentees and Mentor meeting



Sonal Chavan <sachavan@aiissmscoe.com>

## Counseling Session for mentees and Mentor meeting

Kalyani Kulkarni <knkulkarni@aiissmscoe.com>  
To: Sonal Chavan <sachavan@aiissmscoe.com>

Mon, Sep 19, 2022 at 1:32 AM

----- Forwarded message -----

From: Kalyani Kulkarni <knkulkarni@aiissmscoe.com>  
Date: Sat, 12 Oct 2019 at 11:11  
Subject: Re: Counseling Session for mentees and Mentor meeting  
To: A M Deulkar <amdeulkar@aiissmscoe.com>

From BE A B batch i would like to give name of Aman Chopda roll no.16CV020 for mentoring

Regards  
K N Kulkarni  
BE A Mentor B Batch

On Sat, Oct 12, 2019 at 8:41 AM A M Deulkar <amdeulkar@aiissmscoe.com> wrote:  
[Quoted text hidden]

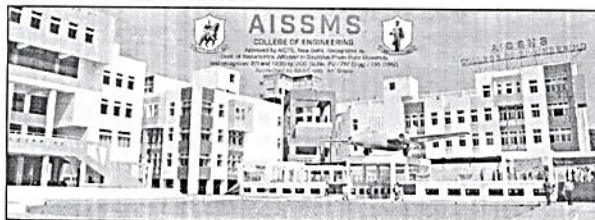
--  
Best Regards,  
Kalyani N Kulkarni

Assistant Professor | Civil Engineering Department | AISSMS College of Engineering,

Kennedy Road, Pune , MH, India - 411001

Mobile +91 9011116974

Website:- [www.aiissmscoe.com](http://www.aiissmscoe.com)



### DEPARTMENT OF CIVIL ENGINEERING

**Vision:** Nurture the talent in Civil Engineers to work as global leaders for development of society

**Mission:** 1) Provide quality education to develop competent Civil Engineers

2) Create awareness among students for sustainable development

3) Cultivate the leadership qualities for becoming successful entrepreneurs

<https://mail.google.com/mail/u/0/?ik=3356d5c01e&view=pt&search=all&permmsgid=msg-f%3A1744386218078610885&simpl=msg-f%3A174438...> 1/1

**Fig B 9.1.4 Email correspondence by mentor-to-mentor co-ordinator**

Oct 2019

ALL INDIA SHRI SHIVAJI MEMORIAL SOCIETY'S  
COLLEGE OF ENGINEERING, PUNE - 1.

Attendance Sheet of Counselling 2019-20 Term-I (Student)

Name of Counselor: Ju. Nam Joshi Contact No: 98811-34058

Sr. No.	Date	Time	Name of Student	Branch	Roll Number	Student Signature	Mobile Number	Signature of Counselor
	9/10/19	1:00	Aman Kumar Singh	Mech	17ME407	<i>aman</i>	8370287219	<i>Ju.</i>
	19/10/19	1:45	Himanshu Gadgil	Comp	17CO013	<i>him</i>	9761179338	<i>Ju.</i>
	19/10/19		Amurag Bhale	Mech S/w	19MS009	<i>Amurag</i>	9158845763	<i>Ju.</i>
	19/10/19		Rutuja Karkate	Mech A	18ME049	<i>Rutuja</i>	7507500502	<i>Ju.</i>
	9/10/19	2:30	Aaqib Nazki	Comp	17CO065	<i>Aaqib</i>	8999569292	<i>Ju.</i>
	16/10/19	1:00	Aman K. Chyda	Civil	16CV020	<i>Aman</i>	8381071435	<i>Ju.</i>
	16/10/19	1:45	Ashish Shargale	Mech A	18ME015	<i>Ashish</i>	7719904479	<i>Ju.</i>
	16/10/19	2:30	Priyanka G. Kante	Civil	17CV096	<i>Priyanka</i>	7972889205	<i>Ju.</i>
	16/10/19	2:45	Rutuja Karkate	Mech A	18ME049	<i>Rutuja</i>	7507500502	<i>Ju.</i>
	18/10/19	1:00	Pratik Dahifale	Electrical	17EL010	<i>Pratik</i>	9021416958	<i>Ju.</i>
	18/10/19	13:45	Pradnya W. More	Electrical	16EL028	<i>Pradnya</i>	8806006337	<i>Ju.</i>
	18/10/19	3:00	Jaykumar Shew	Civil	17CV325	<i>Jaykumar</i>	8626000604	<i>Ju.</i>

*S.R. Lengade*

Fig B 9.1.5 Attendance record by professional counsellor



Dr. Thombare's  
**IHHI Private Limited**  
Healing Minds, Transforming Souls

AISSMS COE

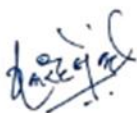
### Counseling Session report of Student.

Client name: Aman Chopde

(Growth counseling)

Student from civil department visited for counselling session. Client is an extrovert personality. Client is comfortable talking with others. During session we discussed about different career options. This session was about growth counselling. While talking counselor found he is very much focused on his career. Client had already decided what he wanted to achieve. Therefore further discussions were done about the efforts and path to reach the goal which he has decided for himself. Client had few doubts but they were resolved during the session. At the end of the session client was happy, comfortable and more confident about his carrier choice.

Dr Makarand Thombare



Founder, Director  
IHHI Pvt Ltd, Pune



102, Mayur Apartments, 77, Mayur Colony, Kothrud, Pune, Maharashtra 411029.  
Contact: 9623086665, 9405969996  
[www.holistichealingindia.org](http://www.holistichealingindia.org), [ihhipune@gmail.com](mailto:ihhipune@gmail.com)

**Fig B 9.1.6 counsellor report of counselling**




**Table. B 9.1.1 Mentor - Mentee Session meeting discussion (Sample)**

Week No	Session Date & Time	No. of Students Present	Point Discussed
1	04/08/2020 [5:00 PM - 6:00 PM]	19	Discussed difficulties in online mode of learning, many mentees asking to reduce the daily time span of online teaching or to start the sessions early @ 8.30 am Discussed admission related difficulties, they have completed admission procedure on Encouraged mentee regarding the safety measures in this pandemic situation as well as to participate in online co-curricular and extracurricular activities Encouraged mentee to register and complete courses through NPTEL and Coursera Taken review of attendance
2	10/08/2020 [5:00 PM - 6:00 PM]	19	Still Discussed difficulties in online mode of learning, as data pack is not sufficient upto last lecture. asking to reduce the lecture timing of online class. ERP updation of all the students are done excluding the Arpit Kadu Encouraged mentee to register and complete courses through NPTEL and Coursera Taken review of attendance
3	18/08/2020 [5:00 PM - 6:00 PM]	19	All the students from batch B and C are admitted in ERP. Everyone has taken the admission. From batch B and C Following students are pending to pay the fee Krushali Ekbote (her issue discussed with Mr. Bhonsale) Akshay Gaware (He discussed his issue with Mr. Bhonsale) From my class all are attending the lecture. No one are below 25 credits from the batches All students have completed online courses. Everyone has seen the online result from the batch other points raised Mobile data pack is not sufficient for the day. Will fee get reduced through online classes.
4	02/09/2020 [2:30 PM - 3:30 PM]	15	Some fee-paying issues due to lockdown are steel continued Trouble for paying fees through online due to not updated on ERP Financial issues at home.
5	18/09/2020 [2:30 PM - 3:30 PM]	17	Network problem in rural area. Data Consumption on microsoft team app lectures timing is too stressful need some relaxation in timing Discussed the attendance percentage. ask to attend regularly
6	24/09/2020 [5:00 PM - 6:00 PM]	16	Ask about paying the fees for those who have not paid. Discussed about the lecture understanding in online mode Discussed the attendance percentage. ask to attend regularly
7	09/10/2020 [5:00 PM - 6:00 PM]	13	Ask about paying the fees for those who have not paid. Discussed about the lecture understanding in online mode Discussed the attendance percentage. ask to attend regularly
8	21/10/2020 [5:00 PM - 6:00 PM]	16	Smooth conduction of online lecture. Term end date discussed with students ERP issue Sahil Gholap.his name is not on ERP due to fee of the last year is not paid by him (asked him to concat Mr. Bhonsale) Shubham Bhonde He is not also not ERP his request has forwarded to higher authority and again taken follow up. Still in process Jay Kothari he is on ERP but not able to see any details on ERP his request is also in process from my class all are attending the lecture. All students have completed online courses. Discussed on fee pay status Due to some financial Issue Yash Deshmukh will pay second instalment in November end Akshay Gaware said that he will pay 1st instalment in this week Khushali Ekbote has contacted Bhonsle sir, even mailed to office through me but still not getting any reply from higher side as she is facing some financial issue.



All India Shri Shivaji Memorial Society's  
College of Engineering, Pune-411001  
Approved by AICTE, New Delhi  
Affiliated to Savitribai Phule Pune University, Pune

**Mentoring Record**

Name of Department: \_\_\_\_\_

Name of Student	
Year/Class	
Division	
Name of Mentor	

**Academic Mentoring (Maintain record for every fortnight)**

Academic Issue/Class Attendance	Action Taken	Remark	Sign student

**Psychological Mentoring (As per need)**

Psychological Issue / Description of Mentoring	Action Taken	Remark	Sign Student

**Financial Mentoring (As per need)**

Financial Issue / Description of Mentoring	Action Taken	Remark	Sign Student

**Overall Mentoring**  
(Encouragement for co-curricular & extracurricular activities, Overall development of student considering personality skills, career related issues and abilities, refer annexure-A)

Overall Issue / Description of Mentoring	Action Taken	Remark	Sign Student

**Communication with Parents (Minimum once in a month)**

Sl.	Mother / Father	Date	Issue Discussed

**Comment:** (Overall progress after every semester by concerned mentor)

Signature  
Name of Mentor \_\_\_\_\_

Head of Department \_\_\_\_\_

---

All India Shri Shivaji Memorial Society's  
College of Engineering, Pune-411001  
**STUDENT'S COUNSELLING CELL**  
**ATTENDANCE REPORT**

Name of Mentor: \_\_\_\_\_ Date: \_\_\_\_\_  
Academic Year: 20\_\_-20\_\_ Department of: \_\_\_\_\_ Term: I / II

S.N.	Name of student	Signature of student									
		1	2	3	4	5	6	7	8	9	10
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
Mentor's signature											

All India Shri Shivaji Memorial Society's  
College of Engineering, Pune - 411 001  
Specific Case in Mentoring  
Academic Year 20\_\_-20\_\_

- Department:
- Name of Mentor:
- Name of Mentee (Student):
- Duration of mentoring:
- Problem/ Issue of student:
- Methodology adopted to resolve the issue:
- Observations findings:
- Outcome of mentoring efforts:
- Suggestions:
- Any other:
- Record details -Parent call record, visit record, counseling details

Signature of Mentor \_\_\_\_\_

Contact no: \_\_\_\_\_

Email: \_\_\_\_\_

Through: HOD \_\_\_\_\_

**Fig. B 9.1.7 Counselling session report and Various Mentoring forms**

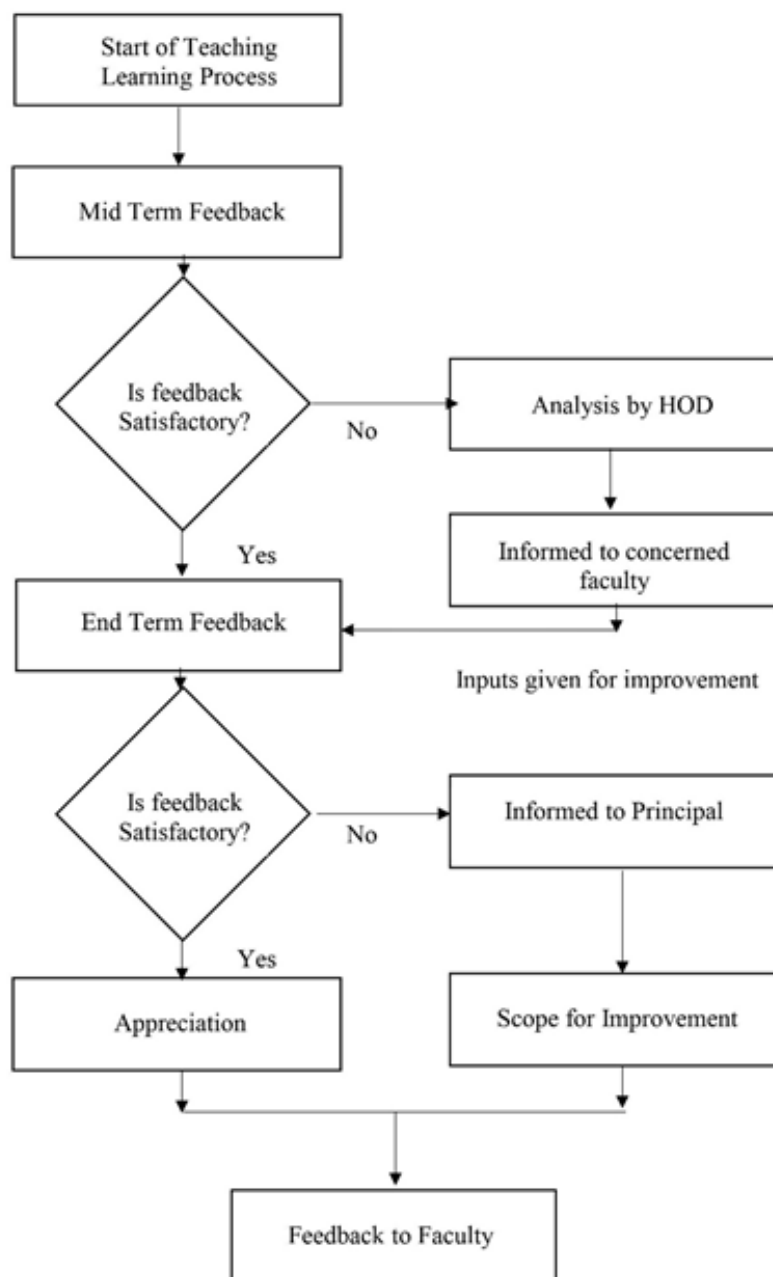
Mentoring system supports to get feedback of students regarding facilities such as internet, classroom/lab cleanliness, drinking water, canteen etc. through mentor-mentee interactions. Mentor monitors students (mentees) regularity in the classes. This monitoring supports to teaching learning system. Monitoring is done through SMS, calling to parents and by the way of ERP. In a nutshell, mentoring helps to student to get professional guidance, to choose a right career and performing well in the academics.

9.2

**Feedback analysis and reward /corrective measures taken, if any**

10

Student's feedback about teaching a course is collected for all courses twice in a semester through the ERP system. Frequency of Feedback: Per Semester Mid Term and End Term.



**Fig. B 9.2.1 Feedback process**

**Following questionnaire is set for feedback.**

1. Has the teacher covered the entire syllabus as prescribed by university, college, board?
2. Has the teacher covered relevant topics beyond syllabus?
3. Pace on which contents were covered.
4. Motivation and inspiration for students to learn.
5. Clarity of expectations of students.

6. Feedback provided on students' progress.
7. Effectiveness of teacher in terms of technical e-course content, communication skills and teaching aids.
8. Support for the development of student's skill practical demonstration through V-Lab, video demonstration, you tube video.
9. Support from teacher during pandemic for addressing students' issue.

A rubric is followed to assess the syllabus covered by the faculty, pace of teaching, topic covered etc. is shared with students through ERP for evaluation of the faculty. Each question is assessed on a 5 to 1 scale. (5 - Excellent, 4 - Very Good, 3 - Good, 2 - Satisfactory and 1 - Non-satisfactory). At the end of the feedback collection process, reports are generated in ERP showing a performance index. The method of obtaining feedback performance index is as follows.

Let total  $N$  students in a class participate in the feedback process and  $n_1, n_2, n_3, n_4$  and  $n_5$  be the number of students giving feedback as Excellent, Very Good, Good, Satisfactory and Non-satisfactory, respectively. Each question in the questionnaire is assessed on a 5 to 1 scale (5 - Excellent, 4 - Very Good, 3 - Good, 2 - Satisfactory and 1 - Non-satisfactory). The method of obtaining feedback performance index is as follows.

$$N = n_1 + n_2 + n_3 + n_4 + n_5$$

$$\text{Total marks obtained for a question} = 5 \times n_1 + 4 \times n_2 + 3 \times n_3 + 2 \times n_4 + 1 \times n_5$$

$$\text{Maximum marks} = 5 \times N$$

$$\text{Feedback obtained} = (\text{Total marks obtained for a question} / \text{Maximum marks}) \times 100\%$$

The procedure is repeated to get feedback obtained for all questions in the questionnaire. The performance index is simply an average of the percentage feedbacks thus obtained. This index is mentioned in the feedback report.

MID TERM FEEDBACK AY 2021-22, Term II									
TEACHER -		DEPARTMENT - CIVIL ENGINEERING					TOTAL STUDENTS - 78		
ACADEMIC YEAR - 2021-2022		SUBJECT - PROJECT MANAGEMENT (THEORETICAL)					SEMESTER 4 (A)		
DATE - 21/03/2022		TERM - MID TERM							
SR NO	QUESTION	EXCELLENT	VERY GOOD	GOOD	SATISFACTORY	NOT SATISFACTORY	TOTAL MARKS	OUT OF	PERCENTAGE
1	HAS THE TEACHER COVERED ENTIRE SYLLABUS AS PRESCRIBED BY UNIVERSITY, COLLEGE, BOARD	52	17	6	3	0	352	390	90%
2	HAS THE TEACHER COVERED RELEVANT TOPICS BEYOND SYLLABUS	45	23	9	1	0	346	390	89%
3	PACE ON WHICH CONTENTS WERE COVERED	52	18	7	1	0	355	390	91%
4	MOTIVATION AND INSPIRATION FOR STUDENTS TO LEARN	52	20	5	1	0	357	390	92%
5	CLARITY OF EXPECTATIONS OF STUDENTS	54	18	5	1	0	359	390	92%
6	FEEDBACK PROVIDED ON STUDENTS PROGRESS	51	19	8	0	0	355	390	91%
7	EFFECTIVENESS OF TEACHER IN TERMS OF TECHNICAL E-COURSE CONTENT, COMMUNICATION SKILLS AND TEACHING AIDS	52	18	8	0	0	356	390	91%
8	SUPPORT FOR THE DEVELOPMENT OF STUDENTS SKILL PRACTICAL DEMONSTRATION THROUGH V-LAB, VIDEO DEMONSTRATION, YOU TUBE VIDEO	49	20	8	1	0	351	390	90%
9	SUPPORT FROM TEACHER DURING PANDEMIC FOR ADDRESSING STUDENTS ISSUE	50	22	6	0	0	356	390	91%
TOTAL		457	175	62	8	0	3187	3510	91%
TOTAL(%)		65%	25%	9%	1%	0%	PERFORMANCE INDEX - 91		

**Fig B 9.2.2 Feedback report**

Faculty are provided with letters of appreciation or improvement based on performance index. This index is used for measuring quality of teaching & learning. For the performance index of 75 and more, appreciation letters are issued by the Head of the Department. For a lower index, the Head of the Department issues improvement.

**Table B 9.2.1 Percentage of Students given Feedback**

Sr.No	Faculty	Class	Division	Subject	Mid Term	End Term	Average Feed back
1	DR. U R Awari	SE	A	Structural Analysis	86	80	83
2	DR. V N Patil	SE	A	Project Management	91	89	90
3	DR. R D Nalawade	SE	A	Geotechnical Engineering	85	87	86
4	U J Jadhav	SE	A	Survey	84	87	85.5
5	K D Kashid	SE	A	Concrete Technology	84	80	82
6	DR. S R Parekar	SE	B	Structural Analysis	85	88	86.5
7	DR. S D Nagrale	SE	B	Project Management	84	88	86
8	M S Chiwande	SE	B	Geotechnical Engineering	89	89	89



9	S A Chavan	SE	B	Survey	86	87	86.5
10	C S Misal	SE	B	Concrete Technology	96	93	94.5
11	DR. V N Patil	TE	A	Remote Sensing and GIS	91	88	89.5
12	DR. M V Waghmare	TE	A	Design of RC Structures	90	89	89.5
13	P R Modak	TE	A	Water Waste Engineering	89	92	90.5
14	DR. P B Nangare	TE	A	(Ele-II) Architecture and Town Planning	88	88	88
15	Dr. V S Chavan	TE	B	Remote Sensing and GIS	84	85	84.5
16	DR S R Parekar	TE	B	Design of RC Structures	86	88	87
17	DR. D V Wadkar	TE	B	Water Waste Engineering	87	91	89
18	S P Khedekar	TE	B	(Ele-II) Architecture and Town Planning	94	94	94
19	DR. V S Chavan	BE	A	Dams and Hydraulic Structures	81	85	83
20	DR. R D Nalawade	BE	A	Quantity Surveying Contracts and Tenders	85	88	86.5
21	P R Modak	BE	A	(Ele-III) Air Pollution and Control	84	86	85
22	DR. S D Nagrale	BE	A	(Ele-III) Construction Management	81	60	70.5
23	DR. P B Nangare	BE	B	Dams and Hydraulic Structures	84	87	85.5
24	DR. G C Chikute	BE	B	Quantity Surveying Contracts and Tenders	86	91	88.5
25	DR. D V Wadkar	BE	B	(Ele-III) Air Pollution and Control	85	90	87.5
26	K N Kulkarni	BE	B	(Ele-III) Construction Management	87	81	84


**Table: B 9.2 .2 Faculty Feedback AY 2021-22**

Sr. No.	Name of Faculty	Subject	Strength of class	No. of students given feedback (Mid Term)	No. of students given feedback (End Term)	Percentage (Mid Term)	Percentage (End Term)
1	DR V S Chavan	Remote Sensing and GIS	82	80	81	97.56	98.78
2	DR S R Parekar	Design of RC Structures	82	80	80	97.56	97.56
3	DR D V Wadkar	Water Waste Engineering	82	80	81	97.56	98.78
4	S P Khedekar	(Ele-II) Architecture and Town Planning	82	79	80	96.34	97.56

**Reward / Corrective measures:**

1. Faculty members with more than 75% feedback were motivated to continue their hard work and explore the scope of further improvement.
2. Faculty members with less than 75% feedback were asked to discuss any kind of problem or issue being faced by them in subject content, preparation and delivery of lecture. They were motivated to attend faculty development programs in order to improve modes of teaching. They were also advised to go through video lectures available online.





# AISSMS COLLEGE OF ENGINEERING

ज्ञानम् सकलजनहिताय

Approved by AICTE New Delhi, Recognized by Govt. of Maharashtra,  
Affiliated to Savitribai Phule Pune University and recognized 2(f) and 12(B) by UGC (Id. No. PU/PN/Engg/093(1992))  
Accredited by NAAC with 'A+' Grade



Kennedy Road, Pune 411001, Maharashtra, India. Tel: +91 - 20 - 26058587, 26057660, 26058342 Email: [contact@aiissmscoe.com](mailto:contact@aiissmscoe.com), [principal@aiissmscoe.com](mailto:principal@aiissmscoe.com)  
[www.aiissmscoe.com](http://www.aiissmscoe.com)

Date

## Department of Civil Engineering

To,



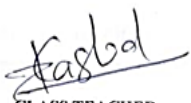


ASSISTANT PROFESSOR

**Subject - Letter of Improvement**

Dear Sir,

It gives me pleasure to inform you that your teaching efforts have been appreciated by the students of Civil Engineering department. However, based upon the analysis of feedback forms submitted by the students of BE for the subject **Elective IV Construction management**. It has been observed that there is still some scope of improvement. Please keep it up good work and incorporate some changes in your teaching methodology to improve your performance. Wishing you all the best !!!

**Fig. B 9.2.3 Letter of improvement**

	<h2 style="margin: 0;">AISSMS</h2> <h3 style="margin: 0;">COLLEGE OF ENGINEERING</h3> <p style="margin: 0;">ज्ञानम् सकलजनहिताय Approved by AICTE New Delhi, Recognized by Govt. of Maharashtra, Affiliated to Savitribai Phule Pune University and recognized 2(f) and 12(B) by UGC (Id. No. PU/PN/Engg/093(1992) Accredited by NAAC with 'A+' Grade</p>	
Kennedy Road, Pune 411001, Maharashtra, India. Tel: +91 - 20 - 26058587, 26057660, 26058342 Email: contact@aiissmscoe.com, principal@aiissmscoe.com www.aiissmscoe.com		
<b>Department of Civil Engineering</b>		Date <u>21/03/2022</u>
To,  Mr  ASSOCIATE PROFESSOR		
<b>Subject - Letter of Appreciation</b>		
Dear Madam,		
<p style="text-align: center;">It gives me immense pleasure to congratulate you on the behalf of <b>Civil Engineering</b> department based upon the analysis of feedback forms submitted by the students of <b>SE</b> for the subject <b>Project Management</b> . It has been assumed that you are carrying out a commendable job of teaching . The department highly appreciates your efforts and wishes to see the same kind of enthusiasm from you, towards your work for as long as associated with us. Wishing you all the best !!!</p>		
 CLASS TEACHER	 FEEDBACK COORDINATOR	 HEAD OF DEPARTMENT

**Fig. B 9.2.4 Letter of Appreciation**

**Reward / Corrective measures:**

1. Faculty members with more than 75% feedback were motivated to continue their hard work and explore the scope of further improvement.
2. Faculty members with less than 75% feedback were asked to discuss any kind of problem or issue being faced by them in subject content, preparation and delivery of lecture. They were motivated to attend faculty development programs in order to improve modes of teaching. They were also advised to go through video lectures available online on platforms like NPTEL.
- 3.

9.3

Feedback on facilities



05

Different facilities are provided to the students to enhance their overall development. A few of them are cultural, sports, and technical events consisting of workshops, seminars, etc. Very good infrastructure facilities are also provided to the students. Every year at the end of the second semester, i.e., in the months of March and April, one feedback form is delivered to the students by ERP, and the students fill it out. The feedback form questions are structured in such a way that the institute can receive clear feedback on how to enhance the facilities. Corrective actions are being made to ensure that students have adequate facilities for the coming academic year.

Questions are as follows:

1. Class room infrastructure (boards, internet, LCD projector, etc.) and overall ambience
2. Laboratory facilities (boards, internet, computer, equipment, etc.)
3. Cleanliness and ambience of campus
4. Library, reading room and other library facilities
5. Sports, Cultural and Extra-curricular activities facilities (NSS, Annual functions, etc.)
6. Parking, security and proctorial services in the campus
7. Mentoring, Counselling, Redressal of grievances and support to students for admissions, examinations, etc.)
8. Support to training, placements and internships
9. Overall impression about infrastructure and facilities provided in the institute
10. Canteen facility and availability of drinking water

#### A Sample Infrastructure and Facility feedback on ERP

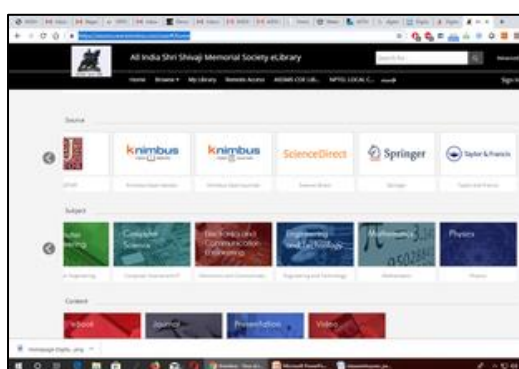
<div style="display: flex; justify-content: space-between; align-items: center;">  <div style="text-align: center;"> <b>AISSMS</b>  <b>COLLEGE OF ENGINEERING</b>  <small>ज्ञानम् सफलजनहिताय</small>  <small>Approved by AICTE New Delhi, Recognized by Govt. of Maharashtra,</small>  <small>Affiliated to Savitribai Phule Pune University and recognized 2(f) and 12(B) by UGC (Id. No. PU/PN/Engg/093(1992)</small>  <small>Accredited by NAAC with 'A+' Grade</small>  <small>Kennedy Road, Pune 411001, Maharashtra, India. Tel: +91 - 20 - 26058587, 26057680, 26058342 Email: contact@aiissmscoe.com, principal@aiissmscoe.com</small>  <small>www.aiissmscoe.com</small> </div>  </div>							
COURSE : CIVIL ENGINEERING YEAR : TE							
ONLINE STUDENTS FEEDBACK ON INFRASTRUCTURE AND FACILITIES FOR A.Y. 2021-2022							
SR NO	INFRASTRUCTURE AND FACILITIES	5 (EXCELLENT)	4 (VERY GOOD)	3 (GOOD)	2 (AVERAGE)	1 (POOR)	TOTAL
1	CLASS ROOM INFRASTRUCTURE (BOARDS, INTERNET, LCD PROJECTOR, ETC.) AND OVERALL AMBIENCE	53	39	21	7	4	124
2	LABORATORY FACILITIES (BOARDS, INTERNET, COMPUTER, EQUIPMENT, ETC.)	47	46	26	2	3	124
3	CLEANLINESS AND AMBIENCE OF CAMPUS	54	49	15	3	3	124
4	LIBRARY, READING ROOM AND OTHER LIBRARY FACILITIES	57	46	19	0	2	124
5	SPORTS, CULTURAL AND EXTRA-CURRICULAR ACTIVITIES FACILITIES (NSS, ANNUAL FUNCTIONS, ETC.)	61	36	17	4	6	124
6	PARKING, SECURITY AND PROCTORIAL SERVICES IN THE CAMPUS	68	36	14	2	4	124
7	MENTORING, COUNSELLING, REDRESSAL OF GRIEVANCES AND SUPPORT TO STUDENTS FOR ADMISSIONS, EXAMINATIONS, ETC.)	54	44	19	4	3	124
8	SUPPORT TO TRAINING, PLACEMENTS AND INTERNSHIPS	51	46	18	6	3	124
9	OVERALL IMPRESSION ABOUT INFRASTRUCTURE AND FACILITIES PROVIDED IN THE INSTITUTE	55	41	24	2	2	124
10	CANTEEN FACILITY AND AVAILABILITY OF DRINKING WATER	49	33	20	11	11	124
TOTAL		549	416	193	41	41	1240

**Fig. B 9.3.1 Infrastructure and Facility feedback on ERP**

Based on the feedback, various corrective actions have been taken such as improvement in canteen facility, purified water supply, internet bandwidth, cleanliness, stationary availability, facility for co-curricular and extra-curricular facilities.

**9.4**
**Self-Learning**
**05**

Institute has provided a large scope to students to learn on their own as per their interest. This is in the form of online and offline, on campus and off campus. AICTE's NPTEL platform has attracted students a lot at par with regular courses. Students can register online and learn at their pace. Online platforms such as Coursera, edX, IIRS are made available to students. Subscribed E-resources are IEEE, ASCE, ASME, J-GATE, McGraw Hill and Science Direct.



### Knimbus Digital Library and Remote Access

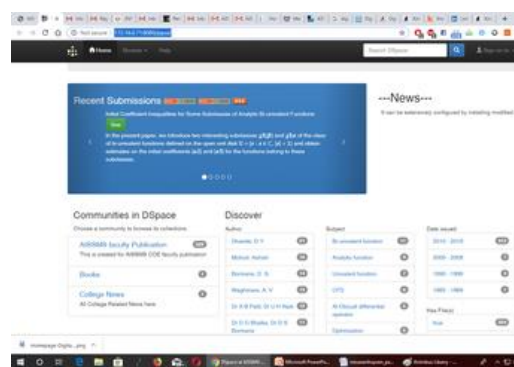
<https://aissms.new.knimbus.com/user#/home>

The AISSMS COE Library has subscribed to Digital Library. Remote Access to E resources facility is available under the platform.

### Faculty Publications Repository --

<http://172.16.0.71:8080/jspui/>

Faculty Publications are archived under Dspace Repository. Department wise faculty publications can accessed through this link in College LAN Ki



### Calibre Digital Library

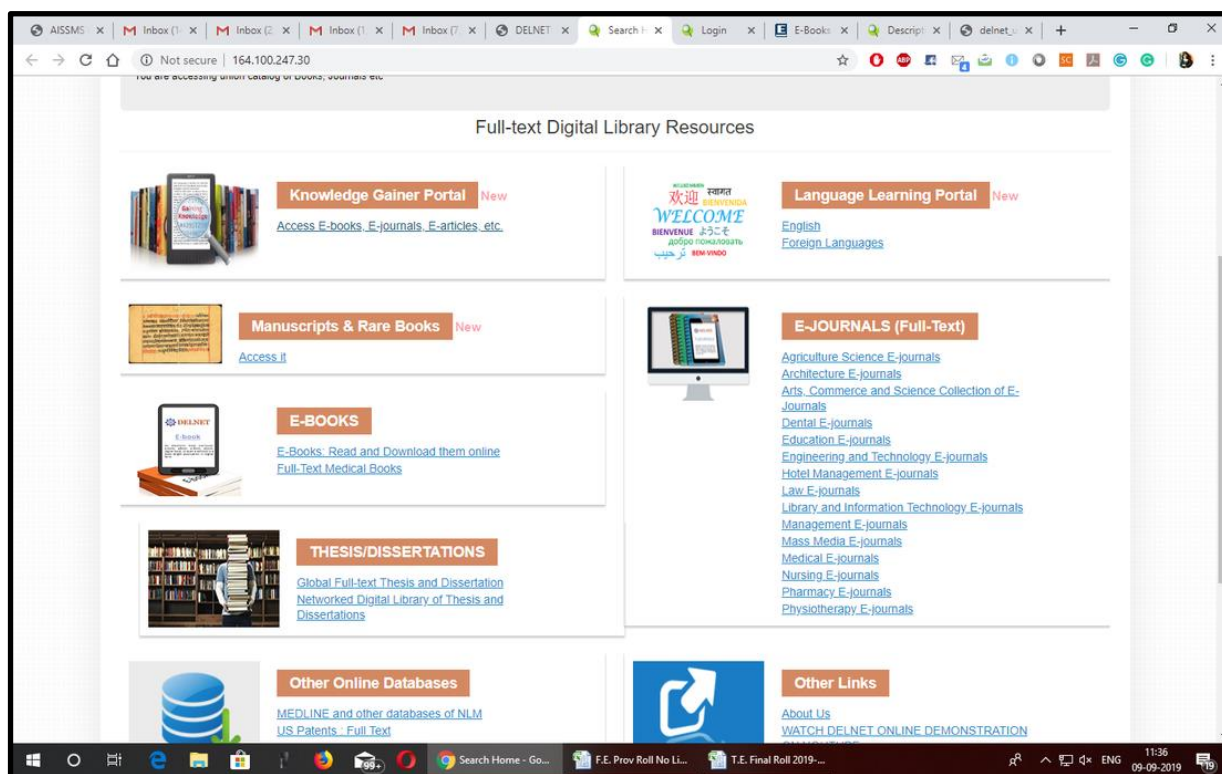
<http://172.16.2.101:8080/>

The Calibre Digital Library has been set up for E books and previous year question papers students.



**Fig B 9.4.1 Self-Learning facilities: Details of Digital Library/Remote Access**

Link for DELNET Service - <http://www.delnet.in/#> <http://164.100.247.26/>



**Fig B 9.4.2 Facilities available: 1. Inter Library Loan - Required books /Articles can be borrowed from member Library 2. Free access to digital resources eBooks 3. Remote access is available.**

**Table B 9.4.1 NPTEL Results**

Course Run	Present	Gold	Elite	Silver	Successful	Participation	Topper
July April 2022	137	02	13	3	17	137	9

**Table B 9.4.2 edX Course, Jan 2021**

Invitation Sent	Learners Joined	Enrolled Learner (at least one course)	Active learners	Course Completion
930	353	210	80	22

**Table B 9.4.3 Coursera E learning Platform Usage and enrolment records**

Invitation sent	Learners Joined	Enrolled Learners	Total Learning hours	Leasson taken	Course Rating
2924	2019	1870	40126	71410	4.7



**Table B 9.4.4 IIRS Training Program**

Invitation Sent	Learners Joined	Enrolled Lernerers	Total Learning hours	Leasson taken	Course Rating
2924	2019	1870	40126	71410	4.7

**Table B 9.4.4 Details of Students completed Courses**

	No. of Students registered			No of Students successfully Completed		
	2019-20	2020-21	2021-22	2019-20	2020-21	2021-22
<b>Webinar/Seminar</b>	4866	2219		4866	2219	
<b>Swayam/NPTEL Courses</b>	2195	3178	2554	161	107	169
<b>edX Courses</b>		210	994		22	253

This certificate is computer generated and can be verified by scanning the QR code given below. This will display the certificate from the NPTEL repository, <https://npTEL.ac.in/noc/>

**Roll No: NPTEL21CE42S24200908**

To  
**WAGH ADITYA BALASAHEB**  
 B203 DREAM VILLE KALEPADAL  
 HADAPSAR PUNE 411028  
 PUNE  
 MAHARASHTRA - 411028  
 PH. NO :8237450030

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

**No. of credits recommended by NPTEL:3**  
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

**Elite**

**NPTEL Online Certification**  
(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to  
**WAGH ADITYA BALASAHEB**  
 for successfully completing the course  
**Design of Reinforced Concrete Structures**

with a consolidated score of **79** %

Online Assignments	20.94/25	Proctored Exam	57.75/75
--------------------	----------	----------------	----------

Total number of candidates certified in this course: **216**

**Prof. G P Raja Sekhar**  
Dean, Continuing Education  
IIT Kharagpur

**Jul-Oct 2021**  
**(12 week course)**

**Prof. Debjani Chakraborty**  
Coordinator, NPTEL  
IIT Kharagpur

Indian Institute of Technology Kharagpur

Roll No:NPTEL21CE42S24200908

To validate and check scores: <https://npTEL.ac.in/noc/>

**Fig B 9.4.3 Certificate of NPTEL**



**9.5**
**Career Guidance, Training, Placement**
**10**

Centre for Information Training and Placement (CITP), a common section has been formed to cater Trainings, Placements and for Career guidance to students by taking help of Alumni strength and interaction with industry. The CITP has a well-established infrastructure to cater the said services. The career guidance to students is done at well-structured one to one mentoring and through professional counselling. Pre-placement and industry specific training are done at every stage of their undergraduate studies. Student's inclination towards a career is identified at first year level. In their second-year studies, communication and soft skills are honed. Aptitude required for employment in general is prepared at third year level. Company specific training with contemporary knowledge is enhanced in the final year of their study. The CITP respects "One student one job policy".

Innovative TRIZ-based training enables students to improve their performance in terms of understanding the technical concepts (basic as well as advanced) in a deeper and appropriate way. at a higher cognitive level. This prepares them to perform more effectively in interviews (HR and Technical rounds).

**The policy is elaborated as follows:**

1. The companies visiting the campus are divided into IT/Software companies (product, service based) and Core Companies (Non IT/Software) (Manufacturing, service providers).
2. Companies are invited and scheduled on the basis of following parameters:
  - a. Eligibility criteria, opportunities for all.
  - b. Job profile and growth prospects.
  - c. The package being offered by the company.
  - d. Past record of recruitment at AISSMS COE.
  - e. Feedback from the students regarding the company.
3. If a company prefers to have a common selection process for our institute students along with nearby Engineering institutes, the selection drive is conducted either by our institute or by the other institute after discussion with participating institutes.
4. If the market situation and job scenario necessitate a revision in the Placement Policy, it will be done in a manner so as to maximize the benefit to the student community as a whole.

**Pre-Placement Talks (PPT):**

1. Notices of the PPT will be published in the placement website well in advance. Students should be available 15 minutes before the scheduled start of the PPT.
2. Students interested in a particular company, can attend its PPT.

3. Students must go through the complete selection process of a particular company.
4. Any clarification regarding salary break-up, job profile, place of work, bond details, etc. must be sought from the companies during PPT or interview.
5. Students must be formally dressed whenever they participate in any interaction with a company. CITP reserves the right to refuse permission to a student to attend the selection process/PPT, if they do not dress up formally.

#### Placement Procedure:



**Fig B.9.5.1 Placement Procedure**

#### Job Offers:

1. **Pre-Placement Offers:** The following rules are applicable to companies that make PPO through the CITP Office.
  - a. The offer of PPO (by the company) and its acceptance (by the student) shall be through CITP office only.
  - b. Once a student accepts a PPO, he / she shall be de-registered from placement process.

2. **Multiple Offers:** Each student is eligible for one CORE and one NON-CORE job offer only.
  - a. If a student receives more than one offer in a session/day and if there is a delay in the announcement of results by some companies, the student is bound to accept/reject the job offers of the company whose results are declared in time.
  - b. If the results are declared on the same session / day, the student may choose from the offers in hand and inform the CITP office of his/her choice, within 24 hrs of announcement of results.
3. Every student who is selected by a company is out of placement thereafter i.e. deregistered from the placement website.
4. All companies are requested to release the Offer and hand over to CITP office after the completion of the recruitment session.
5. **Offer Acceptance:** The students should inform the acceptance/rejection of offer within 24 hours (on the day following the release of offer letter/mail). The company shall be intimated of the offer acceptance/rejection within three days of release of offer.
6. In case of those students who are placed and waitlisted by other companies, they will be given 2 days to accept the offer on hand.  
The Placement Office in the meantime will inform the company where he/she is waitlisted about his present offer.  
The company that has waitlisted the students is required to release the offer within 24 hours, failing which the name of the student will be removed from the waitlist.
7. Announcement on the website will be considered as firm offer. Offers received from companies must be collected as per timings in circular / notice. The responsibility of going through the offer letter and taking actions therein such as submission of documents lies entirely with the student. All offers (made by the companies) shall be through this office only. This office will not be in a position to resolve problems, if any, that may arise with respect to offers made directly to the student by the company.
8. Second option is given to selected student if forthcoming offer is doubled the existing package or more than 8 LPA.

### **Soft Skill and Aptitude Training:**

Soft skill and Aptitude trainings are conducted on regular basis. Pre-placement and industry specific trainings are carried out at every stage of their undergraduate studies. Student's inclination towards a career is identified at first year level. In their second year studies, communication and soft skills are honed. Aptitude required for employment in general is prepared at third year level. Company specific training with contemporary knowledge is enhanced in the final year of their study.

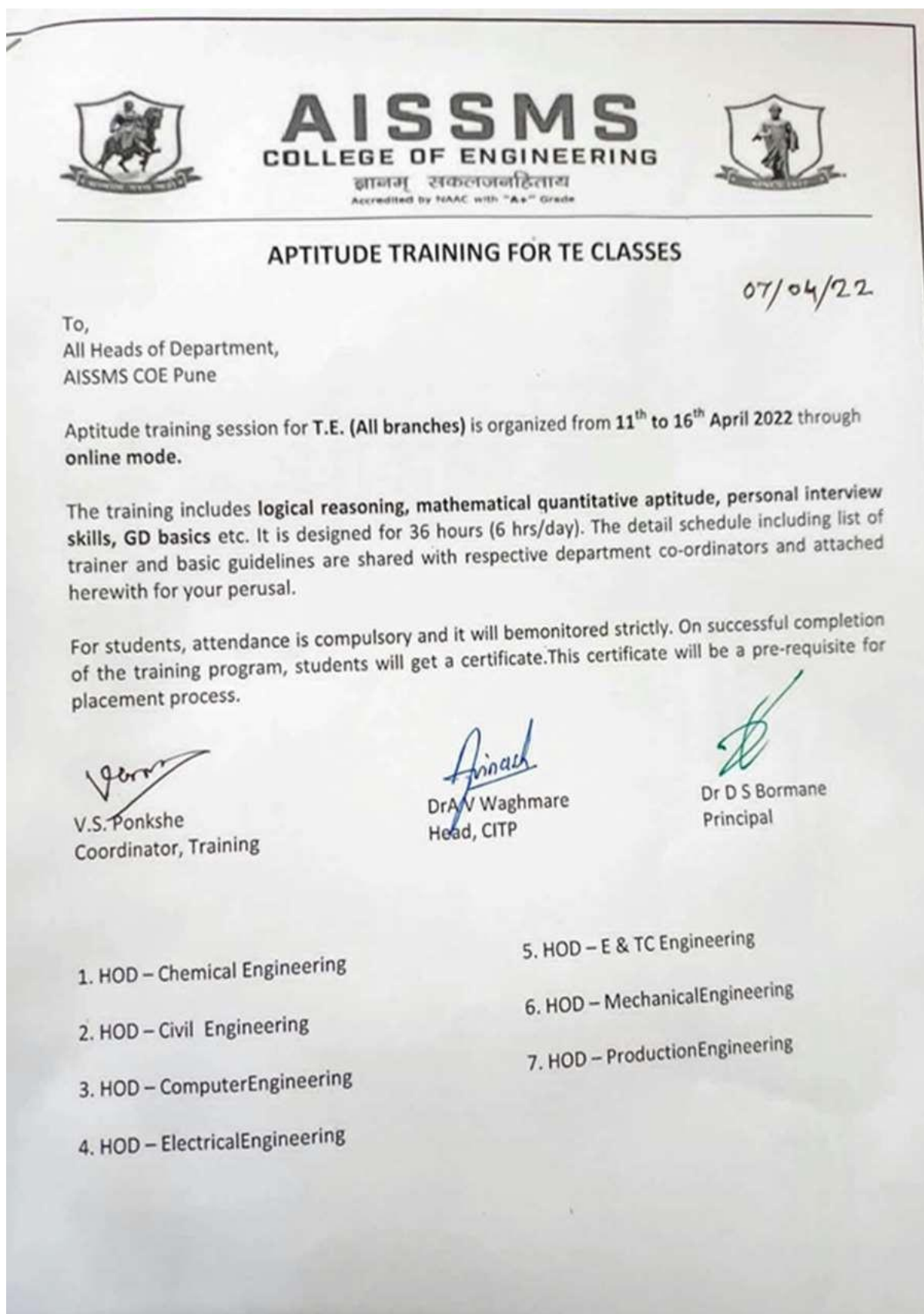


Fig B 9.4.2 Notice for aptitude training for the classes





# AISSMS

## COLLEGE OF ENGINEERING

ज्ञानम् सकलजनहिताय

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**Soft Skill Training Sessions - Online**

**A.Y. 2021-22 (Term - II)**

**From - 11/04/22 to 16/04/22**

**Class: T.E.**

	Department	Division	Faculty Co-ordinator (with mobile no)	Name of GFM (with mobile no)	Name of Trainer	Contact No	Email
1	Chemical		Prof P.M. Warke (9823103089)		Pranav Thorat	7977889404	<a href="mailto:pr.thorat91@gmail.com">pr.thorat91@gmail.com</a>
2	Civil	A	Prof V.S. Chavan (9767193755)	S A Chavhan (9960430643)	Pratiksha Tilekar	9604433127	<a href="mailto:pratikshatilekar85@gmail.com">pratikshatilekar85@gmail.com</a>
3		B		Dr D V Wadkar(9730020695)	Chetan Manurkar	7773984154	<a href="mailto:chetanmanurkar92@gmail.com">chetanmanurkar92@gmail.com</a>
4	Computer	A	Prof Monali Deshmukh (7030990816)	Mr. A. P. Kadam (94210 89450)	Shruti Purandare	9422616758	<a href="mailto:shrutip41@gmail.com">shrutip41@gmail.com</a>
5		B		Mrs. Shikha Phachouly (77688 64108)	Jay Prakash	9542956419	<a href="mailto:vakatijayaprakash@gmail.com">vakatijayaprakash@gmail.com</a>
6	Electrical		Prof V.S. Ponshe (9284519408)	Prof V.S. Ponshe (9284519408)	Musharraf	8793327574	<a href="mailto:mushimh@gmail.com">mushimh@gmail.com</a>
7	E & TC		Prof S. B. Dhekle (9049996452)		Mangesh Rethrekar	9112880561	<a href="mailto:mangeshretharekar@gmail.com">mangeshretharekar@gmail.com</a>
8	Mechanical	A	Prof Ansari (8983153332)	DSM (9921618501)	Mohit Mundra	9571091011	<a href="mailto:mail4mohitmundra@gmail.com">mail4mohitmundra@gmail.com</a>
9		B		RAM (9822190513)	Anwar Rashid	7385180479	<a href="mailto:anwar.rashid0102@gmail.com">anwar.rashid0102@gmail.com</a>
10	Mech S/W		Prof M.P. Bauskar (9730923304)		completed		
11	Production		Prof S.S. Kallurkar (8007959797)	Prof S.S. Kallurkar (8007959797)	Sandip Bhojar	9923106220	<a href="mailto:sandip_bhojar@yahoo.co.in">sandip_bhojar@yahoo.co.in</a>

Fig B 9.5.3 Soft skill training schedule



Entrepreneurship and Skill Development Cell  
Organises

## Entrepreneurship Awareness Camp

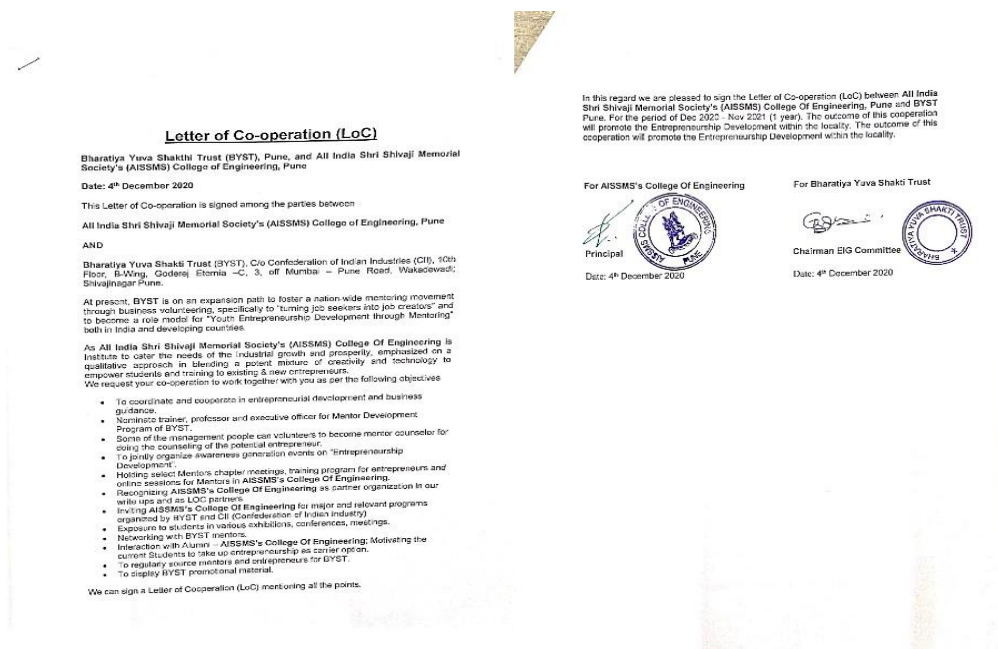
Sponsored by



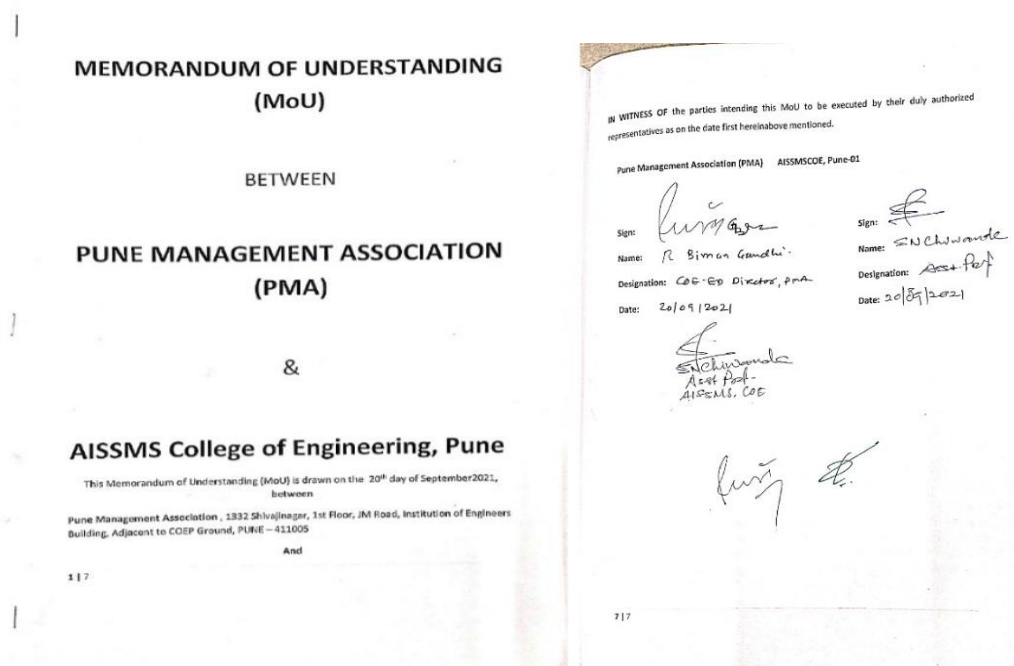
सत्यमेव जयते  
Department of Science and Technology  
Ministry of Science and Technology  
Government of India

Department of Science and Technology, New Delhi  
&  
Entrepreneurship Development Institute of India, Ahmedabad

● **MoU with Bharatiya Yuva Shakti Trust**



● **MoU with Pune Management Association**



**Fig B 9.5.2 Notice for Aptitude Training Classes**



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<b>Soft Skill Training Sessions - Online</b> <b>A.Y. 2021-22 (Term - II)</b> <b>From - 11/04/22 to 16/04/22</b>						
Class: T.E.						
Sl. No.	Department	Division	Faculty Co-ordinator (with mobile no)	Name of GFM (with mobile no)	Name of Trainer	Contact No
1	Chemical		Prof P.M. Warke (9823103089)		Pranav Thorat	7977889404
2	Civil	A	Prof V.S. Chavan (9767193755)	S A Chavhan (9960430643)	Pratiksha Tilekar	9604433127
3		B		Dr D V Wadkar(9730020695)	Chetan Manurkar	7773984154
4	Computer	A	Prof Monali Deshmukh (7030990816)	Mr. A. P. Kadam (94210 89450)	Shruti Purandare	9422616758
5		B		Mrs. Shikha Phachouly (77688 64108)	Jay Prakash	9542956419
6	Electrical		Prof V.S. Ponshe (9284519408)	Prof V.S. Ponshe (9284519408)	Musharraf	8793327574
7	E & TC		Prof S. B. Dhekle (9049996452)		Mangesh Rethrekar	9112880561
8	Mechanical	A	Prof Ansari (8983153332)	DSM (9921618501)	Mohit Mundra	9571091011
9		B		RAM (9822190513)	Anwar Rashid	7385180479
10	Mech S/W		Prof M.P. Bauskar (9730923304)		completed	
11	Production		Prof S.S. Kallurkar (8007959797)	Prof S.S. Kallurkar (8007959797)	Sandip Bhoyar	9923106220

Fig. B 9.5.3 Soft skills training schedule

Apart from this, various initiatives have been taken to upskill students. NASSCOM, EDUSKILL, SPRINGBOARD training programs are accessible to students.



Fig. 9.5.4 Skill Academy Bootcamp Registration

Feedback link and Fer X | Inbox (62) - placem X | Convert PDF to JPG... X | (6) WhatsApp X | e-NBA X | Students Performance X +

data.testbook.com/public/dashboards/PnTOXkCSH87QxW2CPEGu4uV19j9hNjgPu52dQXmn?%24web\_only=true&\_branch\_match\_id=1023114201613624444&\_bra...

### Aptitude Test Wise Attempt Summary

enter Test

Skill Campus Program: Live Aptitude Test

Student Name	Department	Admission Year	Marks	College Rank	Global Rank	Attempt %	Accuracy %	Time Taken%
Pritesh Kawade	Mechanical Engg.	2019	51.0 / 90.0	1 / 12	373 / 2965	100.00	56.67	1.61
Rajput Rupesh Bhupendrasing	Computer Science & Engg.	2019	42.5 / 90.0	2 / 12	592 / 2965	64.44	77.59	1.61
Shree Rajaram Khopade	Mechanical Engg.	2020	41.0 / 90.0	3 / 12	629 / 2965	70.00	65.08	1.66
Vishvajeet Vivek Ghatage	Mechanical Engg.	2019	37.75 / 90.0	4 / 12	722 / 2965	100.00	53.33	0.82
Aishwarya Patil	Computer Science & Engg.	2019	16.5 / 90.0	5 / 12	1630 / 2965	34.44	61.29	0.35
Alex	Computer Science & Engg.	2019	14.5 / 90.0	6 / 12	1698 / 2965	45.56	39.02	0.91
Pranali suresh tarange	Computer Science & Engg.	2021	14.0 / 60.0	7 / 12	1709 / 2965	66.67	23.33	0.72
Rutuja Kank	Mechanical Engg.	2018	13.75 / 90.0	8 / 12	1726 / 2965	100.00	32.22	0.09
Sakshi sanjay Ahirrao	Chemical Engg.	2020	7.5 / 90.0	9 / 12	1972 / 2965	100.00	26.67	0.13
Mahima Chauhan	Computer Science & Engg.	2020	1.0 / 90.0	10 / 12	2341 / 2965	1.11	100.00	0.01

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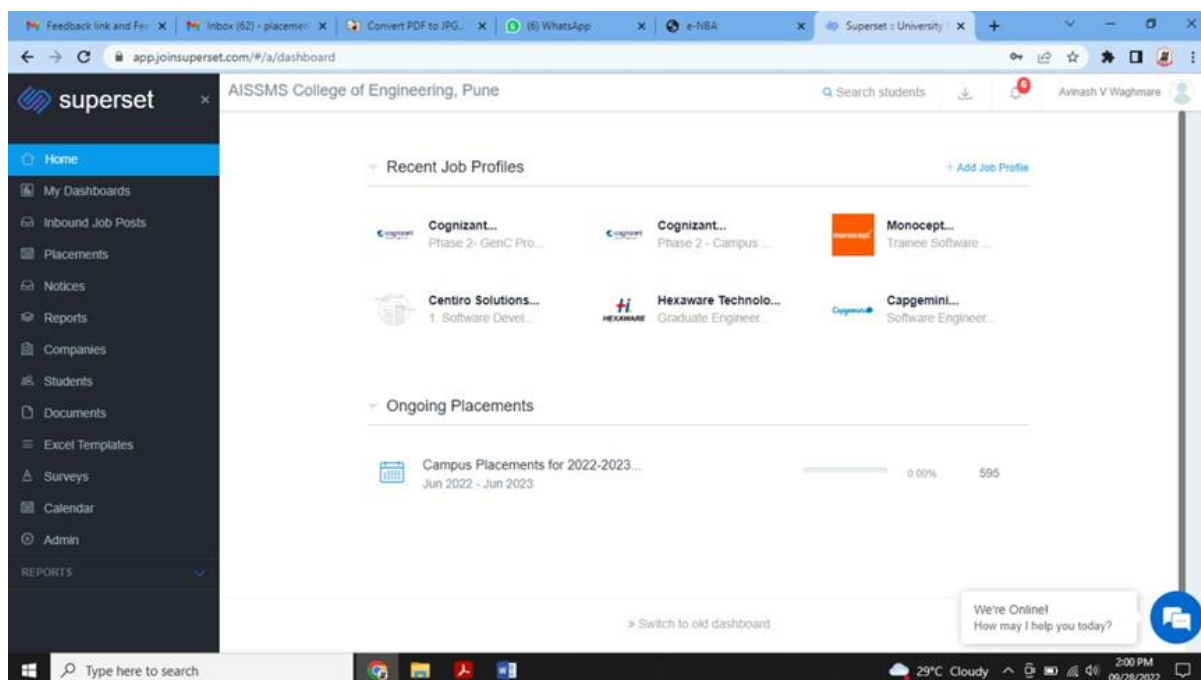
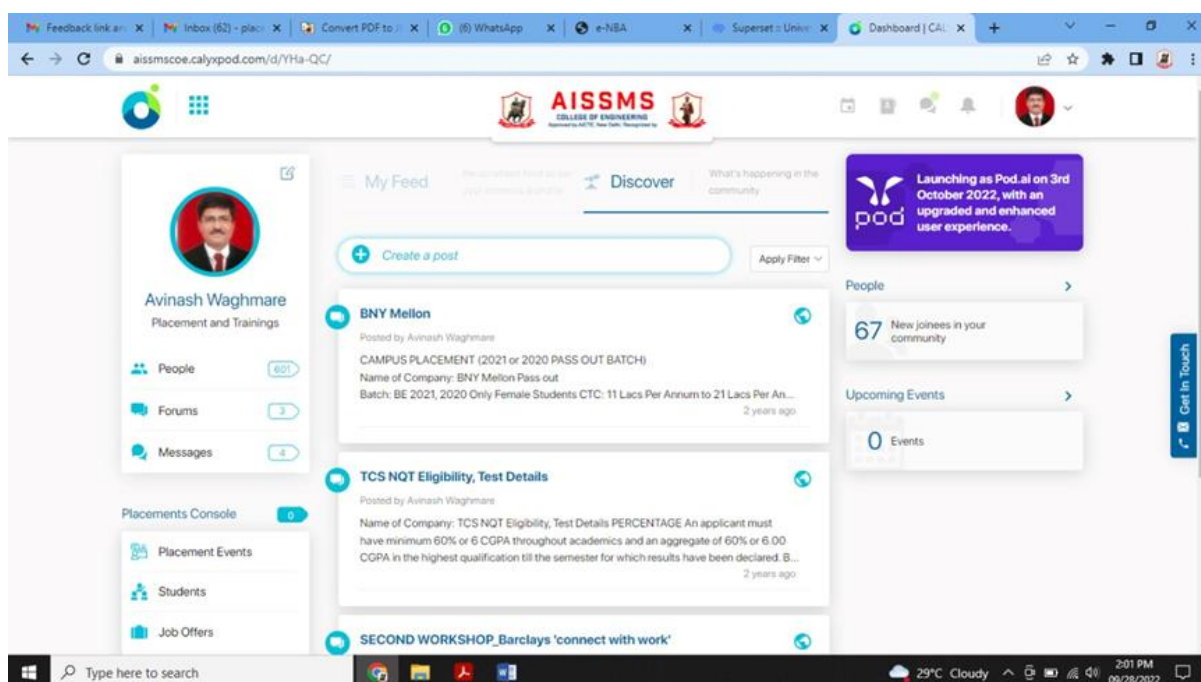
29°C Cloudy 1:57 PM 09/28/2022

Fig. B 9.5.5 Skill Academy's Aptitude Test Summary

# Springboard Digital Platform

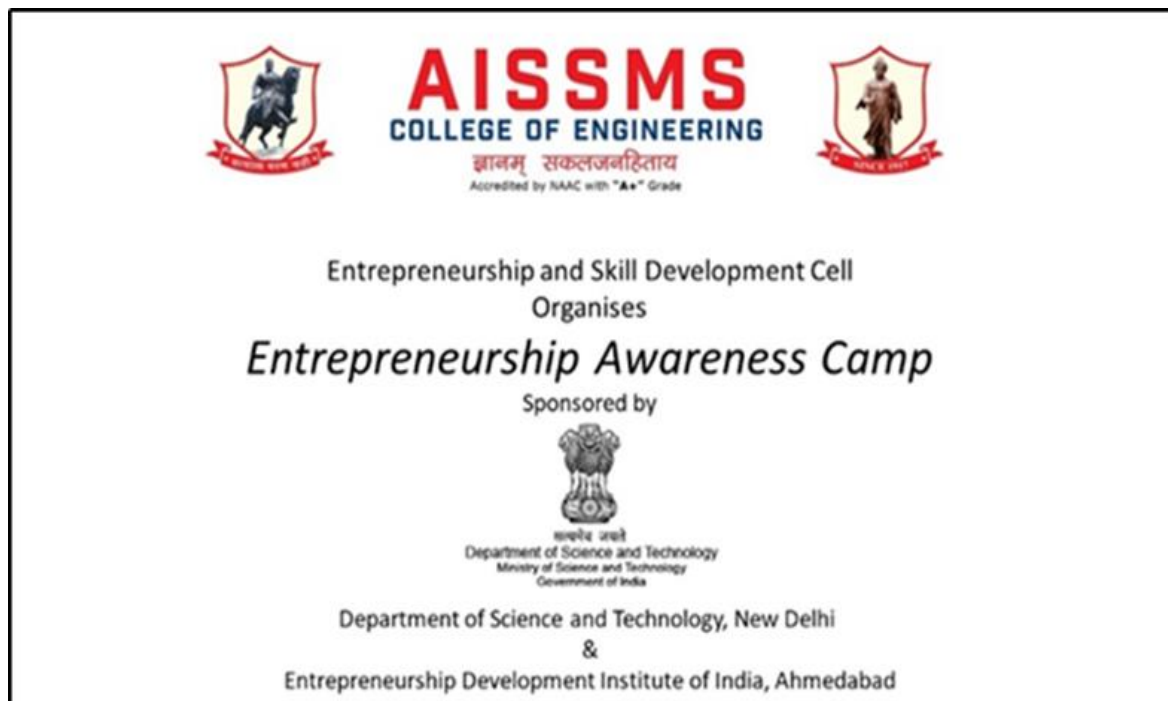
[infvspringboard.onwingspan.com](http://infvspringboard.onwingspan.com)
[www.dtemaharashtra.gov.in](http://www.dtemaharashtra.gov.in)

Fig. B 9.5.6 DTE Maharashtra Springboard Digital Platform


**Fig 9.5.7 SUPERSET, Placement Platform**

**Fig B 9.5.8 CALYXPOD, Placement Platform**
**9.6**
**Entrepreneurship Cell**
**15**

The Entrepreneurship & Skill Development Cell at AISSMS College of Engineering has been formed to focus on preparing successful entrepreneurs especially techno-preneurs for the society. The objective is to inculcate Indian cultural values amongst prospective entrepreneurs. The activities are carried out to enhance the eternal spirit of entrepreneurship amongst the students in addition to the basic necessity of academics. The entrepreneurial activities aren't new for the Institute. Many Alumni have established their enterprises and have shown sustainability in business and entrepreneurship. The academic departments have carried out entrepreneurial

activities for educating and motivating students in respective areas in techno-entrepreneurship. A dedicated cell was formed as a requirement to inculcate current trends in Entrepreneurship Development in the prospective techno-preneurs. The E&SD Cell has been continually taking efforts to motivate the students to start with entrepreneurial thinking. Cell has conducted an Entrepreneurship Awareness Camp sponsored by DST



**Fig. 9.6.1 Entrepreneurship Awareness Camp**



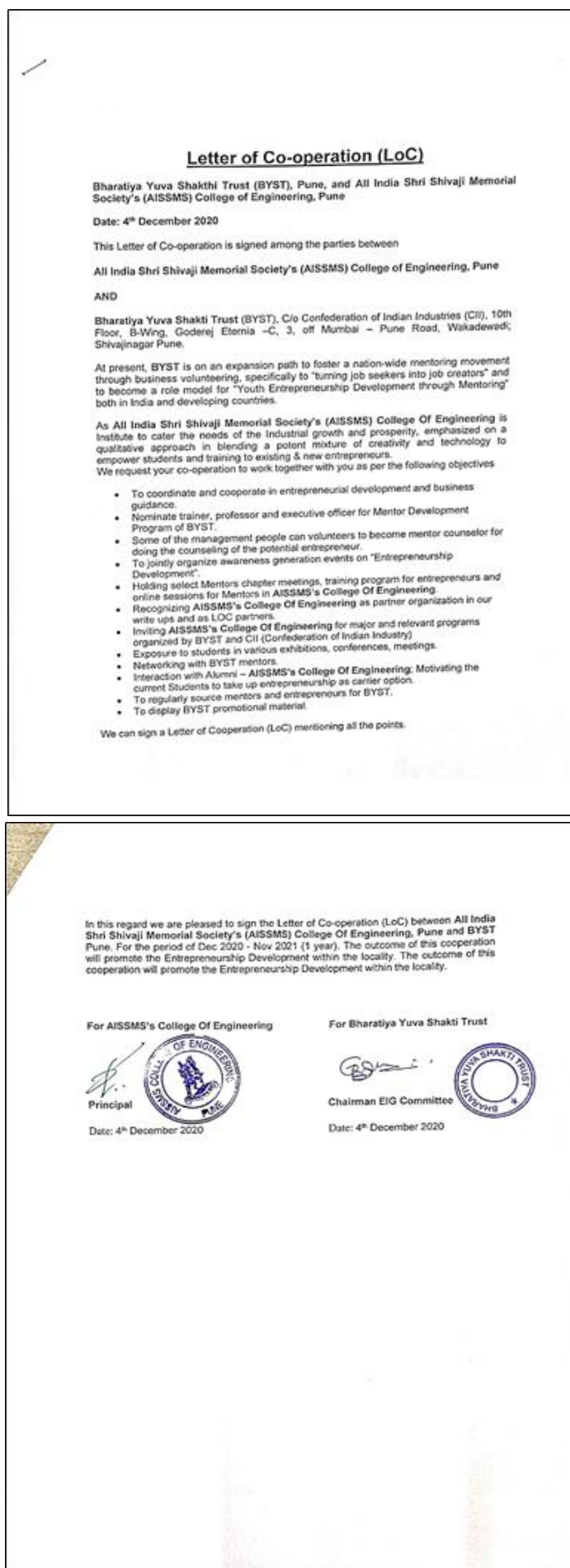
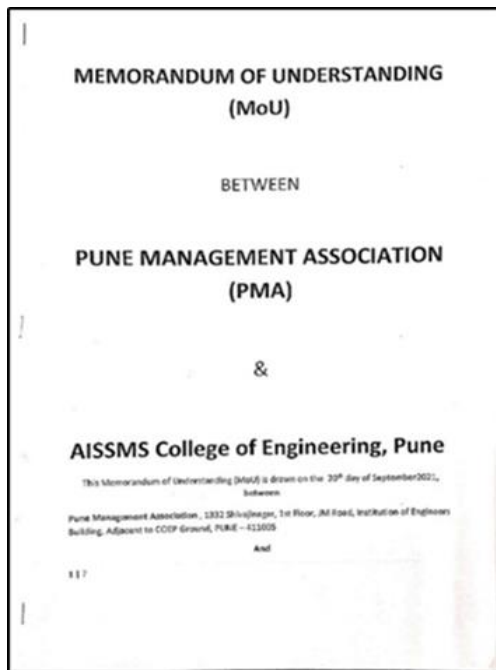


Fig. B 9.6.2 MoU with Bharatiya Yuva Shakti Tru



**Fig. B 9.6.3 MoU with Pune Management Association**





# AISSMS

  
**COLLEGE OF ENGINEERING**

ज्ञानम् सफलतायै हिताय  
 Accredited by NAAC with "A+" Grade



## Entrepreneurship and Skill Development Cell

Activities Carried Out With The Cell				
First Half (01 July 2020 to 31 December 2020)				
S N	Details of Activity conducted	Name of Chief guest/ Coordinator	Date and duration	Total Number of Students and faculty involved
1	Mystery behind successful entrepreneur	Mr Sachin Patil	24/10/2020	Students involved 65
2	Webinar on Design Thinking for Entrepreneurs	Ms Garima Gurjar	26/10/2020	Students involved 90
3	Webinar on "Presentation Skills"	Dr. Pragya Bajpai	03/11/2020	Students involved 100
4	Interaction with Entrepreneur	Mr. Sharad Tandle	4/11/2020	Faculties involved 20
5	MoU with BYST	Mr Biman Gandhi	5/12/2020	Faculties involved 08
6	Webinar on "Communication Skills"	Dr. Pragya Bajpai	05/11/2020	Students involved 100
7	Webinar on "E-tendering"	Mr. Kiran Ghorpade	06/11/2020	Students involved 150
8	Idea Generation and Evaluation	Mr. Biman Gandhi	31/12/2021	Students involved 56



Second Half (01 January 2021 to 30 June 2021)				
Activities Carried Out With The Cell				
S N	Details of Activity conducted	Name of Chief guest/ Coordinator	Date and duration	Total Number of Students and faculty involved
1	Entrepreneur Online Learning (EOL) Program - BYST	BYST Mentors	27/01/2021 to 28/01/2021 Two Days	Students involved 14
2	FE Induction - Introduction to Entrepreneur	Mr S N Chiwande & Mr M S Swami	04/02/2021 to 05/02/2021 Two Hours each	Students involved 556
3	Awareness Generation Program BYST	Mrs Ujwala Gosavi	24/2/2021 2 Hour	Students involved 50
4	Interaction with our own young startup Entrepreneurs	Mr. O Dahiwal Mr S Mangrulkar , Mr. Sumit Ghodke	25/02/2021 Half Day	Students involved 83 Faculties involved 07
5	Expert Talk	Mrs. Sujata Chandra	04/03/2021 Half Day	Students involved 70 Faculties involved 10
6	Webinar on "Preparation for being industry ready"	Mr G Zadge & Mr C Bhutada	20/03/2021	Students involved 80
7	Webinar on "Soft Skill: A must have asset for Engineers"	Dr. Utpal Ganatra	20/03/2021	Students involved 120
8	Awareness Generation Programmes (AGP) and Counselling Session	BYST, Pune Mentors	26/03/2021 & 27/03/2021 Two days	Students involved 05
9	Webinar on Career Success Mantra	Mr Rajesh D Kamath	01/05/2021	Students involved 100
10	One week STTP on "2D & 3D Modelling in STAAD Pro"	Mr R. Udhyasankar	10/05/2021 to 14/05/2021 05 days	Students involved 300

**Fig 9.6.4 (b) Activities organized by Entrepreneurship Cell**

9.7

**Co-curricular and Extra-Curricular Activities**

10

Institute supports students in co-curricular and extra-curricular activities. Institute runs various clubs such as drone club, robotics club, motorsports club, coding club, aero design club and so on. These students are supported financially and non-financially by the institute. Peer to peer learning, learning from alumni, result oriented activities, modern tool and software usages are the outcomes of these activities.

**Students Symposium 'AISSMS Engineering Today':** Every Year, the institute organizes technical competitions and symposia. These events provide students an opportunity to prepare technical papers, Quiz, Model Making, Robo-race, Science exhibition. Students also participate as



volunteers in the organization of such events.

**Cultural Activities:** AISSMS COE Conducts a state-level cultural and sports event “Ashwamedh”, “Shahu Trophy” every year. The Students of various colleges throughout the state participate in the event. Annual social gathering "Shivanjali" is the most awaited event for students.

AISSMS COE students actively participate at various levels and win prizes continuously in cultural and literary events organized by other organisations. Events are Firodiya Karandak, Purushottam Karandak, Dnyanottam Karandak, Kaware Trophy etc.

A strong unit of **NSS (National Service Scheme)** organises various activities leading toward energy saving, environmental protection, rural development, sanitation, flood relief, conservation of natural resources, women’s health, rural irrigation, youth development etc. The NSS team also works on state/central government schemes. Institution has also adopted a few villages where the NSS team is instrumental.

**Table B 9.7.1: Activities conducted under NSS AY 2020-21**

Sr. No.	Activity	Chief Guest
1	Yoga Day	Smt. Kailash Patel
2	Chh. Shahu Maharaj Jayanti	Chh. Malojiraje
3	Tobacco Free Campaign	Dr. D. S. Bormane
4	Tree Plantation (Campus)	Dr. D. S. Bormane
5	Kargil Vijay Divas	Shri. Nandkumar Choure
6	Yuva Mhiti Dut	Dr. D. S. Bormane
7	Energy Saving prog	Madhu Babu
8	Kolhapur Flood (Collection Drive)	Dr. D. S. Bormane
9	Fit India	Dr. D. S. Bormane
10	Disaster Management	Shri V R Patil
11	Blood Donation Camp	Chh. Malojiraje
12	Science Exhibition Program	Dr. Wagmare GMRT
13	NSS Day Celebration	Dr. Shivaji Pacharne
14	Tobacco rally, Shanivarwada	Dr N Shejwal
15	Tobacco Rally (Kondhanpur)	Shri. P.B. Nangare sir
16	Kondhanpur Oxygen Park	Shri H L Kamble
17	Kalyan Plastic Free Village	Dr N Shejwal
18	Tobacco free Pledge (Kondhanpur)	Dr N Shejwal
19	Kalyan Water Reservoir Survey	Shri. P. B. Nangre
20	Tree Plantation (Kalyan)	Shri Mandhare



21	Women Hygiene (Kondhanpur)	Mrs. H. L. Kamble
22	Energy Saver Award Program (Kondhanpur)	Shri. Mahesh Pawar
23	Energy Saver Award Program (SSPMS)	Sangeeta Jagtap
24	Energy Saver Award Program (R.M.School)	Dr. N. N. Shejwal
25	Energy Saver Award Program (Sangavi, Hujurpaga)	Dr. N. N. Shejwal
27	Dustbin Distribution Prog (Malvandi Dhore)	Mrs. Ranjana Dhore
28	Gramsabha Malvandi Dhore	Mrs. Ranjana Dhore
29	Best College Award (SPPU)	Dr. Nitin Karmalkar
30	Uttkal University (Orissa) Visit at Kasar Sai	Dr. Pareda
31	Maharashtra- Orissa Cultural Program	Chh. Malojiraje
32	Road Safety Program	PSI Deccan
33	Tobacco free India	PSI Deccan
34	Marathi Bhasa Din	Mrs. Rucha Thhate
35	R.O Installation Survey	Mrs. Ranjana Dhore
36	Survey of Soak Pits	Mrs. Jalkute, Gramsevak
37	School Program	Mrs. Ranjana Dhore
38	Installation Of R.O. Plant	Mr. Balu Dhore
39	Poshan Pandharwada	Dr. N. N. Shejwal

**Table B 9.7.2 Department Engineering Today Summary**

Name of Contest	Activities Organized	Period of Activities	Nature of Participants	No. of Participants	Name of Sponsors
CIVISPARK-2019	CV 01- Tech Desk	18/09/2019	UG Students of Engineering	53	AISSMS COE Pune
	CV 02-Down Town Uthopia	19/09/2019		62	
	CV 03-Connaisance	18/09/2019		80	
	CV 04 – Gyan Ganga	19/09/2019		82	





**Fig. B 9.7.1 Glimpses of various activities conducted by NSS**



## DEPARTMENT OF CIVIL ENGINEERING

### CRITERION X

#### Governance, Institutional Support and Financial Resources





<b>CRITERION X</b>	<b>Governance, Institutional Support and Financial Resources</b>	<b>120</b>
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<b>10.1</b>	<b>Organization, Governance and Transparency</b>	<b>40</b>
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Student's feedback about teaching a course is collected for all courses twice in a semester through the ERP system. Frequency of Feedback: Per Semester Mid Term and End Term.

#### **10.1.1 State the Vision and Mission of the Institute**

##### **Vision of AISSMS College of Engineering Pune**

###### **Vision**

Service to society through quality education

##### **Mission of AISSMS College of Engineering Pune**

###### **Mission**

Generation of national wealth through education and research

Imparting quality technical education at the cost affordable to all strata of the society

Enhancing the quality of life through sustainable development

Carrying out high quality intellectual work

Achieving the distinction of highest preferred engineering college in the eyes of the stake holders

#### **10.1.2 Governing Body, Administrative Setup, Functions of Various Bodies, Service Rules, Procedures, Recruitment and Promotional Policies (10)**

AISSMS College of Engineering has well established organizational structure to execute out smooth functioning of administrative and academic processes. Various bodies are formulated which constitutes the organization chart. The governing body is the highest decision making body constituting members of the management, Principal and nominated faculty members. College Development Committee (formerly Local Management committee) includes representatives of members of society, Principal, three members elected from teaching faculty and one member of non-teaching staff. The constituents of the organization structure are as follows: Every department has Department Advisory Board (formerly Department Advisory Committee) to direct policies to excel students in academics and in work environments. It comprises one member each from industry, research establishment, and academic institute of repute, alumni, student, and parents and from management. Principal, Heads of the Departments, sectional heads and co-coordinators of various committees have adequate participation in making decisions in academic and administrative processes under their preview.

Members of Governing body, College development committee, Internal quality assurance cell and



institute level committees are shown in the tables below:

### Governing Body

**Table No. 10.1.1 Constitution of Governing Body**

Governing Body of Institute	
Chairman	To be nominated by the society
Member	Two to five members (Industrialist / Technologist / Educationalist) to be nominated by the society
Member	Nominee of the affiliating university
Member	Nominee of AICTE (Ex – Officio)
Member	Nominee of State Government
Member	Industrialist / Technologist / Educationalist from the region to be nominated by State Government.
Member Secretary	Principal of the college.
Member	Two faculty members to be nominated from the regular staff, one at the level of professor and one at the level of Assistant Professor.

**Table No. 10.1.2 List of Governing Body Members for the year 2020-21**

Sl. No.	Name	Designation
1	Shri Suresh Pratap Shinde	Chairman (Society)
2	Shri Malojiraje Chhatrapati	Honorary Secretary (Society)
3	Shri Sunil Hambirrao Mohite	Member (Society)
4	Shri Rushiraj Balasaheb Tekawade	Member (Society)
5	Shri Rahul Nanasaheb Yadav	Member (Society)
6	Dr Amit Dutta	Member (AICTE, Regional Officer) Ex-Officio
7	Dr (Smt) Sharmila Chaudhari	Member (Savitribai Phule Pune University Nominee)
8	Dr D R Nandanwar	Member (Govt. of Maharashtra) Industrialist/Technologist/Educationalist
9	Shri P N Jumle	Member (Ex-Officio)
10	Dr (Mrs) Ashwini Avinash Godbole	Member (Teaching)
11	Shri Ganesh Chandrakant Chikute	Member (Teaching)
12	Dr Dattatraya Shankar Bormane	Member Secretary (Principal)


**Table No. 10.1.3 Number of meetings of Governing Body**

S.N.	Academic Year	Number of Meetings
01	2021-22	01
02	2020-21	01
03	2019-20	02

**COLLEGE DEVELOPMENT COMMITTEE**
**Table No. 10.1.4 Constitution of College Development Committee**

<b>College Development Committee of Institute</b>	
Chairmen	Chairperson of the management or his nominee ex-officio chairperson
Member	Secretary of the management or his nominee
Member	One head of department to be nominated by the principal
Member	Three teachers in the college elected by full time amongst themselves out of whom one shall be women
Member	One nonteaching employee, elected by regular nonteaching staff
Member	Four local members nominated by management in consultation with principal from the field of education industry, research and social service of whom at least one shall be alumnus
Member	Coordinator, IQAC of the college
Member	President and secretary of college student council
Member Secretary	Principal of the college

**Table No. 10.1.5 List of College Development Committee members (2020-21)**

Sr No.	Name	Designation
1	Shri Suresh Pratap Shinde	Chairman (Society)
2	Shri Malojiraje Chhatrapati	Honorary Secretary (Society)
3	Dr (Mrs) Ashwini Avinash Godbole	Member (Head of Department-Teaching)
4	Shri Diwakar Haribhau Joshi	Member (Teaching)
5	Shri Laxman Shivaji Godse	Member (Teaching)
6	Ms Vismita Devidas Nagrale	Member (Woman - Teaching)
7	Shri Santosh Prabhakar Pimpale	Member (Non Teaching)



8	Shri Rahul Nanasaheb Yadav	Member (Society)
9	Shri Nikhil Ashok Khanse	Member (Society)
10	Shri Rishiraj Balasaheb Tekawade	Member (Society)
11	Shri Sunil Hambirrao Mohite	Member (Society)
12	Dr Chandrakishor Shrirang Choudhari	Member (Co-ordinator IQAC : Teaching)
13	Ms Anjali Chaudhari	Member (General Secretary of the College Students Council)
14	Dr Dattatraya Shankar Bormane	Member Secretary (Principal)

**Table No. 10.1.6 Number of meetings of Governing Body**

S.N.	Academic Year	Number of Meetings
01	2019-20	02
02	2020-21	01
03	2021-22	01

**Table No. 10.1.7 Members of Internal Quality Assurance Cell (2020-21)**

Sr No	Category	Post	Name & Designation of Committee members
1	Chairperson	Head of the Institution	Dr Dattatraya Shankar Bormane, Principal
2	Coordinator	Assistant Professor in Mechanical Engineering	Dr Chandrakishor Shrirang Choudhari, Associate Professor in Mechanical Engineering
3	Administrative officers	Head of Department	Dr Sandeep Haribhau Wankhade, Associate Professor in Production Engineering
		Head of Department	Dr (Mrs) Ashwini Avinash Godbole, Professor in Electrical Engineering
		Co-Ordinator, NAAC Steering Committee	Dr Daulappa Guranna Bhalke, Professor in E&TC Engineering
		Administrative Officer	Mr Abhijit Bhawanrao Bhonsle, Administrative Officer
		Registrar	Mr Santosh Prabhakar Pimpale Registrar
4	Faculty	Civil Engineering	Dr (Mrs) Vidya Nitin Patil, Associate Professor in Civil Engineering
		Computer Engineering	Dr (Mrs) Shabnam Farook Sayyad, Assistant Professor in Computer Engineering
		Mechanical Engineering	Dr Avinash Vishvanath Waghmare, Associate Professor in Mechanical Engineering
		Chemistry	Dr Deepak Vitthal Nighot, Associate Professor in Chemistry
5	Management member	Joint Secretary, AISSMS	Mr Suresh Pratap Shinde Honorary Joint Secretary, AISSM Society, Pune



			- 5
6	Industry	Ex. MD, Kirloskar Oil Engines Limited, Pune	Mr R R Deshpande
7	Employer	HR Regional Head, TCS, Pune	Mr Shekhar Kamble
8	Parent	Manager, Quality Assurance, ITW (I), Pvt, Ltd, Pune	Mr Hemant Jadhav
9	Student	General Secretary, General Students Association	

**Table No. 10.1.8 Number of meetings of IQAC**

S.N.	Academic Year	Number of Meetings
01	2021-22	02
02	2020-21	02
03	2019-20	02

### **Service rules, Policies and procedures**

Institute follows all the defined service rules and policies and code of conduct laid down by AICTE, UGC, Government of Maharashtra and SPPU, for recruitment and promotion of staff. Pay scale, annual increments and other benefits to staff are being given as per the AICTE and Government of Maharashtra norms.

- A) For recruitment of faculty, Institute seeks permission from Savitribai Phule Pune University, Pune and reservation cell of Maharashtra State for the advertisement for recruitment of faculty. Interviews are conducted through staff selection committee appointed by university.
- B) For the ad-hoc recruitment, Institute advertises the posts through newspapers and website. Local staff selection committee as per SPPU norms is appointed for selection of faculty through interview procedure.
- C) Every employee of the institute is aware of the service, recruitment and promotion rules and code of conduct. These rules are available with registrar of the institute and also communicated to staff through HODs and published on staff notice boards.

Recruitment norms link: <https://aissmscoe.com/wpcontent/uploads/2022/05/Faculty-Recruitment-Norms-2022-23.pdf>

### **10.1.3 Decentralization in Working And Grievance Redressal Mechanism (10)**

We at AISSMS COE believe in decentralization of activities and delegation of authorities is the key concept in the success achieved by the institute on different platforms. Basically, overall working methodology at institute level is student centric and involvement of each and everyone in the decision-making at their respective levels is ensured through decentralization and delegation of powers. There are various bodies, committees and key administrative positions at institute and department level. In order to ensure transparency in the working of all these committees, code of conduct and process manual is available with all key administrative officers and central library of the institute.

Various portfolio in charges have been delegated powers for taking administrative decisions.

**Table No. 10.1.9 Faculties delegated with administrative powers**

S.N.	Name of Faculty member	Decision Authority
01	Dr D S Bormane	Principal
02	Dr C S Choudhari	Coordinator, IQAC
03	Dr Naniwadekar M Y	H.O.D. (Chemical Engineering)
04	Dr P B Nangare	H.O.D. (Civil Engineering)
05	Dr Athawale S V	H.O.D. (Computer Engineering)
06	Dr (Mrs) A A Godbole	H.O.D. (Electrical Engineering)
07	Dr S B Dhonde	H.O.D. (Electronics and Telecommunications)
08	Dr S V Chaitanya	H.O.D. (Mechanical Engineering)
09	Dr D V Nighot	H.O.D. (First year Engineering)
10	Dr Shekhpure N G	H.O.D. (Production Engineering)
11	Mr A B Bhonsale	Administrative officer

In addition to this, various Institute Level administrative committees have been formed for effective administration.

Details of coordinator and committee members are published on institute website. (<https://aissmscoe.com/wp-content/uploads/2021/01/ILC-for-website-update.pdf>link). Also,

functions and responsibilities of the committees are also available on the institute website. (<https://aissmscoe.com/wp-content/uploads/2022/09/Objectives-and-functions-of-ILCs.pdf>)

Coordinators of all the institute level committees are delegated with administrative powers for effective functioning of respective committee.

**Table No. 10.1.10 Various Institute level administrative committees and coordinators**

Academic Development Cell			
1	Academic Monitoring	Coordinator	Dr. S. R. Parekar
2	Faculty Development and Academic Collaborations	Coordinator	Dr. S. V. Chaitanya
3	Management Information System	Coordinator	Mr. V. B. Gawai
4	Library Development	Coordinator	Dr Mrs. V. B Dandawate
5	NBA/NAAC Preparations	Coordinator	Dr. M. R. Phate
6	Students Association	Coordinator	Dr S. J .Navale
7	Students Chapters(Professional Bodies)	Coordinator	Mr. N. P Mawale
Centre for Information, Training and Placements Head: Dr A V Waghmare			
8	Placements	Coordinator	Placement Officer





9	Training	Coordinator	Mr. V. S. Phonkshe
10	Counselling and mentoring	Coordinator	Mrs. S. R. Lengade
11	Industry Institute Interaction (III)	Coordinator	Dr. P. B. Nangare
12	Entrepreneurship and Skill Development	Coordinator	Mr. S. N. Chiwande
13	Alumni Engagement	Coordinator	Dr. D. V. Wadkar
14	Competitive Examinations	Coordinator	Mr. A. Y. Kazi
<b>Infrastructure and Facility</b>			
15	Infrastructure and Facility	Coordinator	Dr. S. R. Patil
<b>Gymkhana</b>			
16	Cultural In charge	Coordinator	Mrs. K. N. Kulkarni
17	Magazine In charge, Media	Coordinator	Mrs. S. J. Pachouly
18	Physical Director, Sports In charge, Media	Coordinator	Dr. M. M. Kondhare
19	National Service Scheme	Coordinator	Dr. N. N. Shejwal
20	Students Welfare and Development	Coordinator	Dr. A. B. Patil
<b>Administration Cell</b>			
21	Budget Preparations (Purchase and maintenance)	Coordinator	Dr D S Bormane Principal
22	Admissions	Coordinator	Mr V R Patil
23	Examinations	Coordinator	Dr. D. V. Nighot
<b>Media Interface and Outreach Cell</b>			
24	Website	Coordinator	Mr. N. R. Talhar
<b>Research, Innovation and Development Cell</b>			
25	Research, Innovation and Development Cell	Coordinator	Dr D G Bhalke
<b>Grievance and Redressal Cell</b>			
26	Internal Grievance Redressal	Coordinator	Dr. M. S. Deshpande
27	Women Grievance, Vishakha (Internal Complaint Committee)	Coordinator	Dr. P. S. Gajjal
28	Anti-Ragging	Coordinator	Mr V R Patil



Other than the above mentioned committees, at department level, committees are formed for the smooth and efficient management of activities at department level. The committees are constituted by the HOD in consultation with faculty.

For effective implementation of various initiatives and for effective decentralisation, committees such as department advisory board and program assessment and quality improvement committees are formed at department level.

**Table No. 10.1.11 Department advisory board members**

S.N.	Name of member	Representation	Designation and organisation
1	Mr Suresh Shinde	Member (Management)	Hon Joint Secretary, AISSM Society
2	Dr. D S Bormane	Head of Institute	Principal, AISSMS COE
3	Dr. U R Awari	Chairman	HOD, AISSMS COE
4	Mr Ramesh Kulkarni	Member (Industry)	CMD, Soil Tech India Pvt Ltd Pune
5	Dr. C. Krishnaiah	Member (Research)	Ex. Scientist –D/ Chief research officer, CWPRS. Pune
6	Dr. Vinay Kumar	Member (Academics)	Professor, College of Military Engineering, Pune
7	Col Vardam Sachin S	Member (Parent)	Professor, College of Military Engineering, Pune
8	Mr. P G Deokar	Member (Alumni)	Director, The Myriad Group - Engineering & Designing Consultants, Pune
9	Mr. P R Modak	Academic Coordinator	Professor, AISSMS COE
10	Dr. V N Patil	Startup Innovation Cell Coordinator	Associate Professor, AISSMS COE
11	Dr. P B Nangare	I3, Internship Coordinator	Asst. Professor, AISSMS COE
12	Dr. R D Nalawade	NBA Coordinator	Asst. Professor, AISSMS COE
13	Mrs. M V Waghmare	P G Coordinator	Asst. Professor, AISSMS COE
14	Miss. Vaishnavi Chumbalkar	Member -Student	Student, AISSMS COE

**Table No. 10.1.12 PAQIC members**

S.N.	Name of Member	Representation	Designation
1	Dr. U R Awari	HOD	Chairman
2	Mr. P R Modak	Departmental academic Co-ordinator	Coordinator
3	Dr. D V Wadkar	Departmental Project Co-ordinator & Module Co-ordinator	Member
4	Ms. K D Kashid	Department Exam Co-ordinator	Member
5	Dr. P B Nangare	Department Institute Co-ordinator & Module Co-ordinator	Member
6	Dr. S R Parekar	Module Co-ordinator	Member
7	Dr. S D Nagrale	Module Co-ordinator	Member
8	Dr. R D Nalawade	Module Co-ordinator	Member

Grievance redressal is systematically carried out by various team of faculty members acting as

committees under the guidance of Principal of the institution. List of faculty members who are administrators'/ decision makers/committee members for various responsibilities are shown in the tables given below.

A Grievance Redressal Committee (GRC) at the College level is constituted for providing guidance and counselling on the problems related to faculty, staff and students.

The Committee redresses all kinds of grievances, academic or non - academic.

**Table No. 10.1.13 Members of Grievance Redressal Committee (GRC)**

S. N.	Faculty Name and Designation	Post
01	<b>Dr (Mrs) M S Deshpande, Professor in Chemistry</b>	<b>Coordinator</b>
02	Mr P B Nangare, Assistant Professor in Civil Engineering	Member
03	Ms M V Waghmare, Assistant Professor in Civil Engineering	Member
04	Mr S V Chaitanya, Assistant Professor in Mechanical Engineering	Member
05	Ms S S Chauhan, Finance Officer	Member
06	General Secretary (Student Member)	Member

**Grievance Redressal committee** shall meet within a week from the date of receipt of any petition/complaint from anybody and take necessary action as deem fit and initiate necessary action for solving problem.

#### **Mechanism of Grievance Redressal committee**

- An aggrieved stakeholder who has the grievance or grievances shall make a written complaint first to the Head of the Department (HOD). The HOD after verifying the facts, will try to redress the grievance within a reasonable time. If the stakeholder is not satisfied with the solution of the HOD, then the written complaint should be forwarded to the Principal through HOD. The Principal then refers the complaint to the Internal Grievance Redressal Committee.
- On receiving the complaint from the Principal, Internal Grievance Committee meeting is called by the Chairman. The complaint is studied by the Committee. The Committee at all levels observes the law of natural justice.
- The Committee arranges meeting with the aggrieved party first, he/she expresses their views. Similarly meeting with all aggrieved members is scheduled. Thus, all the concerned, are given opportunity, one by one to express their viewpoint. Each one is requested to give their say in writing. The committee gives a patient hearing to both sides and counsels them. The committee also enlightens them based on their SWOC.
- After verifying the facts based on factual data and after deliberations, the report of the committee's findings and remedial measures is prepared and submitted to Principal Sir.
- Final decision is communicated to the both parties through the Principal.



- f) The Committee, if needed, may recommend to the Principal, necessary corrective action as it may deem fit, to ensure avoidance of recurrence of similar grievance.
- g) Note: The staff / student can lodge their grievance through online link available on Institute's website too (<http://aissmscoe.com/academics/online-grievance-redressal/>)

### Anti-Ragging Committees:

With reference to AICTE (Prevention and Prohibition of ragging in Technical Education, Universities including Deemed to be Universities imparting technical education) Regulations 2009 and as per as per the clause No.6(a) of this AICTE Regulations - 2009, Anti-Ragging Committee is formed comprising of experts, faculty members, parents, students, etc to look into any kind of ragging matter reported to them from time to time. The Committee takes immediate action in the matter reported to them, following all the guidelines given in the referred AICTE Regulation - 2009. The Committee also take review of the activities of Anti-Ragging Squad and suggest measures to effectively monitor the anti-ragging activities.

### Anti Ragging Committee for the academic year 2019-20

**Table No. 10.1.12 Members of anti-ragging committee**

Sr No	Name	Designation	Post
1	Dr D S Bormane	Principal	Chairman
2	Shri Suresh P Shinde	Businessman	Civil administration
3	Shri M M Mujawar	P I	Ex Officer Member
4	Shri Harsh Dudhe	Reporter, Maharashtra Times News Papers Ltd, Pune	Media Member
5	Shri V R Patil	Assistant Professor in Mechanical Department	Member
6	Mrs S J Pachouly	Assistant Professor in Computer Engineering Department	Member
7	Mrs Seema Chaudhari	Parent Representative	Member
8	Anjali Chaudhari	Student : GS	Member
9	Shri A B Bhonsle	Administrative Officer	Member

### ANTI RAGGING COMMITTEE (SQUAD)

With reference to AICTE (Prevention and Prohibition of ragging in Technical Education, Universities including Deemed to be Universities imparting technical education) Regulations 2009 and as per as per the clause No.6(a) of this AICTE Regulations - 2009, Anti-ragging Squad is formed to look in to the matters of ragging.

The squad will continuously maintain vigil in the College campus and monitor the activities of the students. If any activity of students is found suspicious then immediate action is to be taken. The squad will conduct patrolling of canteen area, parking area, the College building and Ladies hostel. The patrolling of outside area near to college will also be done.

The students can contact Committee members at any time regarding any kind of problem faced by



them from any students in the Campus or outside the campus. Also, students can personally meet any of the above members in the College during working hours.

**Table No. 10.1.14 Members of anti-ragging squad**

Sr. No.	Faculty Name and Designation	Post
01	Mr V R Patil, Assistant Professor & Head, First Year Engineering	<b>Coordinator</b>
02	Dr M K Nikam, Associate Professor in Engineering Mathematics	Member
03	Dr S K Upasani, Associate Professor in Chemistry	Member
04	Mr A J Kadam, Assistant Professor in Computer Engineering	Member
05	Mr A B Bhonsle, Administrative Officer	Member
06	Dr M M Kondhare, Physical Director	Member

#### **Vishakha (Sexual Harassment Committee)**

**Table No. 10.1.15 Members of Vishakha**

Sr. No.	Faculty Name and Designation	Post
01	<b>Dr (Mrs) P S Gajjal</b> , Associate Professor in Mechanical Engineering	<b>Coordinator</b>
02	Ms S J Pachouly, Assistant Professor in Computer Engineering	Member
03	Ms V S Dandawate, Librarian	Member
04	Mr S S Pimpale, Registrar	Member
05	Mr M D Bhalerao, Senior Clerk	Member
06	Mr D S Kulkarni, Technical Assistant	Member

The complaint received by Principal office from any ladies' staff members or student will be forwarded to the above committee. The said committee will look into the complaint and call the concerned complainant personally for hearing the grievance. The Chairman of the committee will forward their report in the sealed envelope to the Principal within one week from the date of receipt of complaint.

#### **10.1.4 Delegation of financial powers (10)**

Financial powers are delegated to the Principal of the institute and principal is the one of the signing authorities for financial transactions. Provision of petty cash of Rs. 20,000 is also made with the Principal and head of departments also can make expenses using petty cash with the approval of the principal.

Table No. 10.1.16 Utilisation of petty cash in Rs.

Petty cash utilisation					
2019-2020		2020-2021		2021-2022	
Sanctioned amount	Utilised amount	Sanctioned amount	Utilised amount	Sanctioned amount	Utilised amount
148757.00	148695.00	150543.00	146403.00	127503.00	127441.00

ऑल इंडिया बी शिवाजी मेमोरियल सोसायटी  
१११-१८, शिवाजीनगर, पुणे-४११ ००१

दिनांक- 24 FEB 2011.

क्र. १/१११३/११/८.२०

श्री  
सर्व संलग्नित शाखाप्रमुख  
ऑल इंडिया बी शिवाजी मेमोरियल सोसायटी  
१११-१८, शिवाजीनगर,  
पुणे-४११ ००१

A.I.S.S.M.S.  
College of Engineering  
Pune  
Inward No. 2716  
Date 05/02/2011

१. संस्थेच्या विविध शाखांच्या वेटी कॅश खातेची मर्यादा निश्चित करण्यात आलेली आहे. ४ फेब्रुवारी, २०११ रोजी झालेल्या निवामक मंडळ सभा क्र. ८ /२०१०-२०११ मध्ये माहिती घेण्यात आलेल्या शाखाप्रमुखाने ठराव मंजूर करण्यात आला आहे.

विषय क्र. १८  
संस्थेच्या विविध शाखांच्या वेटी कॅश खातेची मर्यादा निश्चित करण्यात आलेली आहे. माहिती घेऊन निर्णय घेणे.

ठराव क्र. १८  
संस्थेच्या विविध शाखांच्या वेटी कॅश खातेची मर्यादा निश्चित करण्यात आलेली आहे. माहिती घेण्यात आलेल्या शाखाप्रमुखाने ठराव मंजूर करण्यात आला आहे. त्यावेळी संस्थेच्या शाखांच्या वेटी कॅश खातेची मर्यादा निश्चित करण्यात आलेल्या शाखाप्रमुखाने ठराव मंजूर करण्यात आला आहे. त्यावेळी संस्थेच्या शाखांच्या वेटी कॅश खातेची मर्यादा निश्चित करण्यात आलेल्या शाखाप्रमुखाने ठराव मंजूर करण्यात आला आहे.

अ. क्र.	संस्थेच्या शाखांचे नाव	निश्चित करण्यात आलेली वेटी कॅशची लिमिट
१	बी शिवाजी मेमोरियल शिवाजी डे स्कूल अँड ज्युनियर कॉलेज, केवडी रोड, पुणे-१ (शेकडरी विभाग)	₹ ४,०००/-
२	बी शिवाजी मेमोरियल शिवाजी डे स्कूल अँड ज्युनियर कॉलेज, केवडी रोड, पुणे-१ (ठावर शेकडरी (ठावरशरी) विभाग)	₹ ४,०००/-
३	बी शिवाजी मेमोरियल शिवाजी डे स्कूल अँड ज्युनियर कॉलेज, केवडी रोड, पुणे-१ (ठावरशरी विभाग)	₹ २,०००/-
४	इन्टरमीडिएट डॉल्फिन रोड, वॉरी मठक, ता. चौड, जिल्हा पुणे	₹ २०,०००/-
५	कॉलेज ऑफ इंजिनिअरिंग, केवडी रोड, पुणे-१	₹ २०,०००/-
६	कॉलेज ऑफ इंजिनिअरिंग, केवडी रोड, पुणे-१ (विश्व अँडगूट (वी.जी.))	₹ २०,०००/-
७	कॉलेज ऑफ फार्मसी, केवडी रोड, पुणे-१	₹ १०,०००/-
८	कॉलेज ऑफ फार्मसी, केवडी रोड, पुणे-१	₹ १०,०००/-

(कॅप्टन शिवाजी महाडकर)  
ऑनररी सेक्रेटरी

.. २ ..

अ. क्र.	संस्थेच्या शाखांचे नाव	निश्चित करण्यात आलेली वेटी कॅशची लिमिट
९	कॉलेज ऑफ फार्मसी, केवडी रोड, पुणे-१ (एम. फार्मसी)	₹ १०,०००/-
१०	कॉलेज ऑफ फार्मसी, केवडी रोड, पुणे-१ (वीएस. डी. शिराड)	₹ १०,०००/-
११	कॉलेज ऑफ डॉटेल मॅनेजमेंट अँड केटरिंग टेक्नॉलॉजी, १११-१८, शिवाजीनगर, पुणे-१	₹ २०,०००/-
१२	कॉलेज ऑफ डॉटेल मॅनेजमेंट अँड केटरिंग टेक्नॉलॉजी, १११-१८, शिवाजीनगर, पुणे-१ (कॅवडील)	₹ २०,०००/-
१३	कॉलेज ऑफ डॉटेल मॅनेजमेंट अँड केटरिंग टेक्नॉलॉजी, १११-१८, शिवाजीनगर, पुणे-१ [वॉलर ऑफ सायन्स डॉटेलमॅनेजमेंट स्टडीज (वीएस.सी. एम.एस.)]	₹ १०,०००/-
१४	इन्टरमीडिएट ऑफ इन्फॉर्मेशन टेक्नॉलॉजी, केवडी रोड, पुणे-१	₹ २०,०००/-
१५	इन्टरमीडिएट ऑफ मॅनेजमेंट (एम.बी.ए.), केवडी रोड, पुणे-१	₹ २०,०००/-
१६	सेकंड शिफ्ट कॉलेज ऑफ फार्मसी, केवडी रोड, पुणे-१	₹ १०,०००/-

२. निवामक मंडळ सभेत झालेल्या चर्चेला तसेच ठरावाची नोंद घेण्यात आली व आवश्यक ती पुढील कार्यावाही करण्यात आली. ठरावाची नोंद घेण्यात आली व त्याचा कार्यावाही अंदाज सोसायटी कार्यालयाकडे तसेच पाठविण्यात आला.

(कॅप्टन शिवाजी महाडकर)  
ऑनररी सेक्रेटरी

Fig. 10.1.1 Petty cash facility allotted to institutes

### 10.1.5 Transparency and availability of correct /unambiguous information in public domain

1. Unambiguous information is displayed on all general notice boards including department notice boards, Center for information, training and placement cell (CITP), student section, library, and other important areas.
2. Copies of official notices are circulated to the entire faculty, technical and non-technical staff and students.
3. The institute website is continuously updated for disseminating all the information about policies, students, faculty and relevant information. Institute website is [www.aiissmscoe.com](http://www.aiissmscoe.com).

### 10.1.17 URLs for information available on institute website

S.N.	Name of document	URL of document on website
1	Vision, mission, goals and core values of the institute	<a href="https://aiissmscoe.com/about-us/college-profile/">https://aiissmscoe.com/about-us/college-profile/</a>
2	Admissions	<a href="https://aiissmscoe.com/admission/admission-enquiry/">https://aiissmscoe.com/admission/admission-enquiry/</a>
3	AICTE Approval Letters	<a href="https://aiissmscoe.com/aicte-approvals/">https://aiissmscoe.com/aicte-approvals/</a>
4	Mandatory disclosure	<a href="https://aiissmscoe.com/mandatory-disclosure/">https://aiissmscoe.com/mandatory-disclosure/</a>



5	Stakeholders feedback	<a href="https://aiissmscoe.com/stakeholders/">https://aiissmscoe.com/stakeholders/</a>
6	AICTE essentials	<a href="https://aiissmscoe.com/aicte-essentials/">https://aiissmscoe.com/aicte-essentials/</a>
<b>Faculty Profile</b>		
7	Department of Chemical Engineering	<a href="https://aiissmscoe.com/chemical-engineering/faculty/">https://aiissmscoe.com/chemical-engineering/faculty/</a>
8	Department of Civil Engineering	<a href="https://aiissmscoe.com/civil-engineering/faculty/">https://aiissmscoe.com/civil-engineering/faculty/</a>
9	Department of Electrical Engineering	<a href="https://aiissmscoe.com/electrical-engineering/faculty/">https://aiissmscoe.com/electrical-engineering/faculty/</a>
10	Department of Electronics and Telecommunication	<a href="https://aiissmscoe.com/electronics-engineering/faculty/">https://aiissmscoe.com/electronics-engineering/faculty/</a>
11	Department of First Year Engineering	<a href="https://aiissmscoe.com/first-year-engineering/faculty/">https://aiissmscoe.com/first-year-engineering/faculty/</a>
12	Department of Mechanical Engineering	<a href="https://aiissmscoe.com/mechanical-engineering/faculty/">https://aiissmscoe.com/mechanical-engineering/faculty/</a>
13	Department of Production Engineering	<a href="https://aiissmscoe.com/production-engineering/faculty/">https://aiissmscoe.com/production-engineering/faculty/</a>
<b>Annual Reports</b>		
14	Department of Chemical Engineering	<a href="https://aiissmscoe.com/chemical-engineering/annual-reports/">https://aiissmscoe.com/chemical-engineering/annual-reports/</a>
15	Department of Civil Engineering	<a href="https://aiissmscoe.com/civil-engineering/annual-reports/">https://aiissmscoe.com/civil-engineering/annual-reports/</a>
16	Department of Electrical Engineering	<a href="https://aiissmscoe.com/electrical-engineering/annual-reports/">https://aiissmscoe.com/electrical-engineering/annual-reports/</a>
17	Department of Electronics and Telecommunication	<a href="https://aiissmscoe.com/electronics-engineering/annual-reports/">https://aiissmscoe.com/electronics-engineering/annual-reports/</a>
18	Department of First Year Engineering	<a href="https://aiissmscoe.com/first-year-engineering/annual-reports/">https://aiissmscoe.com/first-year-engineering/annual-reports/</a>
19	Department of Mechanical Engineering	<a href="https://aiissmscoe.com/mechanical-engineering/annual-reports/">https://aiissmscoe.com/mechanical-engineering/annual-reports/</a>
20	Department of Production Engineering	<a href="https://aiissmscoe.com/production-engineering/annual-reports/">https://aiissmscoe.com/production-engineering/annual-reports/</a>



Fig. 10.1.2 Best Professional College of SPPU



Fig. 10.1.3 Best Principal Award by ISTE

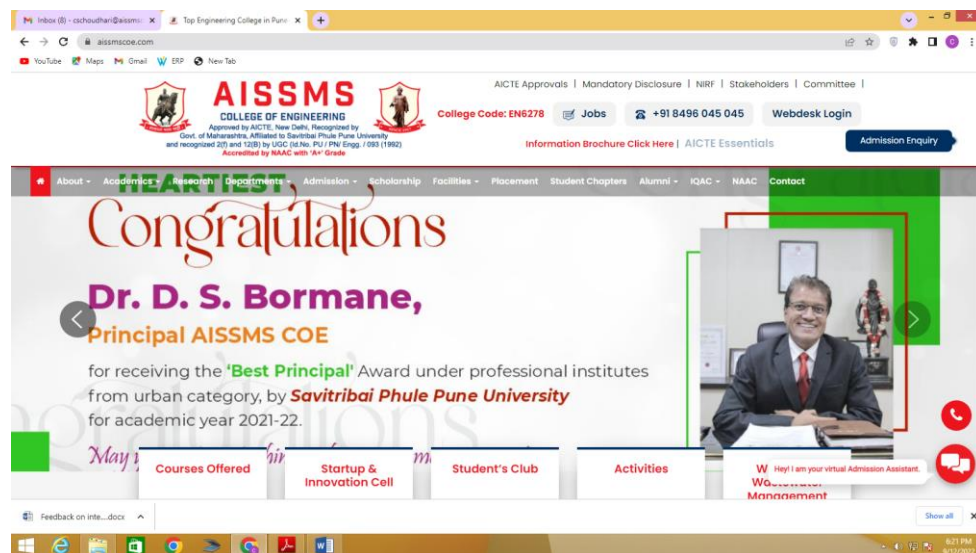


Fig. 10.1.4 Best Principal Award by SPPU



Fig. 10.1.5 Winner of prestigious “Firodiya Trophy 2022”



<b>10.2</b>	<b>Budget Allocation, Utilization, and Public Accounting at Institute level</b>	<b>30</b>
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### 10.2.1 Adequacy of budget allocation

The college has a well formulated financial policy which ensures effective and optimal utilization of finances for academic, administrative and development purpose which help ultimately in realizing the institute's vision and mission.

Institute has made the necessary provision in the books of account towards efficient use of available fund for each academic year. As per the guidelines of the management and Principal, Variance report of sanctioned budget and actual expenditure are regularly maintained.

The Institute has a well-defined procedure to monitor effective and efficient utilization of available financial resources for infrastructure development and academic processes. Every year, the budget is prepared well in advance after taking into consideration the requirement of every Department. Each Department prepares the budget based on the requirement such as equipment, computer as well as consumable required for next academic session. Principal puts up the budget in Governing Body meeting and after discussion and necessary corrections/modifications; Governing Body recommends the budget for approval. The budget is reviewed by the management and approved after necessary changes. As and when required, the institute makes a provision for advance additional fund. The Principal and the Head of Departments discuss the requirement and decide the priorities while allotting financial resources for various purposes; and also ensure optimum use of available financial resources. The Governing body studies the annual expenditure, scrutinizes the budget and provides feedback for efficient use of financial resources. The Institute has standardized procedure for sanctioning of funds for various activities and also for settlement of advance and passing of bills for payment.

The Management has given complete support to Principal for organization of various co-curricular & extracurricular activities like technical events, sponsoring of faculty & staff for various skill development programs, providing financial support for attending conferences, workshops, pursuance of higher education etc. Financial support is also provided for participation of students at various national and international level events like Baja, Supra, Effi-cycle, Go-Kart, Aero-design and different clubs like Robotics and Drone.

The Society has constituted a separate purchase Committee comprising of Management representative, Principal & college concerned staff. The purchase procedure such as calling quotation, technical bid, preparing comparative statement, negotiation meetings are followed for effective and efficient use of available financial resources. The committee ensures that suitable equipment with right specification is procured at competitive and optimal prices.

Financial audits are conducted by a chartered accountant every financial year to verify the compliance with established processes.



Apart from this the college also provides financial assistance to student for participation at various national & state level cultural & Sports competition. We are very proud to say that due to the financial freedom given by the management in organization of various sports & Cultural events at institute level and participation of our student in various national & State level culture & Sports competition our students have shown excellent performance in these events.

### 10.2.2 Utilization of allocated funds

Each department HOD after receiving the approved budget convene a meeting and discuss the step-by-step procedure for procuring the equipment and consumables required for the department Faculty who are in charge of the laboratories and course coordinators are nominated to involve in the purchase of equipment's. The nominated faculty members identify the companies/ agencies to receive the quotations and then prepare a comparative statement. The comparative statement will be submitted to the purchase Committee to get approval from the management and then place orders to procure the items. The HOD periodically monitor and take necessary efforts to see that the purchase of items is complete in all respects and the allocated funds are fully utilized.

### 10.2.3 Availability of the audited statements on the institute website

Audited statements are uploaded on institute website and are available for public.

<https://aissmscoe.com/mandatory-disclosure/> (<https://aissmscoe.com/mandatory-disclosure/>)

Summary of current financial year's budget and actual expenditure incurred (for the institution exclusively) in the three previous financial years

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

CFY: (Current Financial Year),

CFYm1: (Current Financial Year minus 1), CFYm2: (Current Financial Year minus 2) and

CFYm3: (Current Financial Year minus 3)

**Table 1 - CFY 2021-22**

Total Income 384514955.00				Actual expenditure (till): 337150209.65			Total No. of Students 3030
Fee	Govt	Grants	Other sources (specify)	Recurring including salaries	Non- Recurring	Special Projects/Any other, specify	Expenditure per student
38358 1137.0 0	0	0	1132586.00	32954309 4.65	7607115. 00	0	111270.70




**Table 2 - CFYm1 2020-21**

Total Income 374544068.00				Actual expenditure (till): 337150209.65			Total No. of Students 3112
Fee	Govt .	Grants	Other sources (specify)	Recurring including salaries	Non-Recurring	Special Projects/Any other, specify	Expenditure per student
373411482.00	0	0	933818.00	291096339.43	9852519.00	0	96705.93

**Table 3 – CFYm2 2019-20**

Total Income 319073736.52				Actual expenditure (till): 337150209.65			Total No. of Students 2815
Fee	Govt .	Grants	Other sources (specify)	Recurring including salaries	Non-Recurring	Special Projects/Any other, specify	Expenditure per student
317338255.0	0	0	1735481.52	330815515.52	26120926.11	0	126798.03

**Table 4 – CFYm3 2018-19**

Total Income 311756516.00				Actual expenditure (till): 337150209.65			Total No. of Students 2916
Fee	Govt .	Grants	Other sources (specify)	Recurring including salaries	Non-Recurring	Special Projects/Any other, specify	Expenditure per student
310308435.0	0	0	1448081.00	317150317.48	42205830.11	0	123235.99

Items	Budgeted in 2021-22	Actual Expenses in 2021-22 till	Budgeted in 2020-21	Actual Expenses in 2020-21 till	Budgeted in 2019-20	Actual Expenses in 2019-20 till	Budgeted in 2018-19	Actual Expenses in 2018-19 till
Infrastructure Built-Up	33535208.00	32066113.00	32312734.00	29716580.00	51005208.00	49970510.11	69365208.00	69395393.11
Library	4325000.00	4099379.00	5510000.00	5500268.00	3925000.00	3296066.00	4325000.00	4399036.00
Laboratory equipment	5950000.00	4805267.00	8000000.00	7864601.00	6100000.00	5202903.00	8100000.00	6548410.00
Laboratory consumables	700000.00	231398.00	700000.00	542036.00	1000000.00	935167.00	1400000.00	1300678.00
Teaching and non-teaching staff salary	227150000.00	226611240.00	208550000.00	207828775.00	205000000.00	204913144.00	203488000.00	203408950.00
Maintenance and spares	4200000.00	3419956.60	2750000.00	2591638.00	5450000.00	5312396.00	4900000.00	4878388.00
R&D	4200000.00	1723831.00	1400000.00	392884.00	3700000.00	1136690.00	4600000.00	1496623.42
Training and Travel	2850000.00	2750408.62	6020000.00	5330814.00	8300000.00	8328591.00	8065202.00	7763844.00
	580000.00	184210.00	280000.00	58504.00	5430000.00	5331466.00	3580000.00	3792752.00

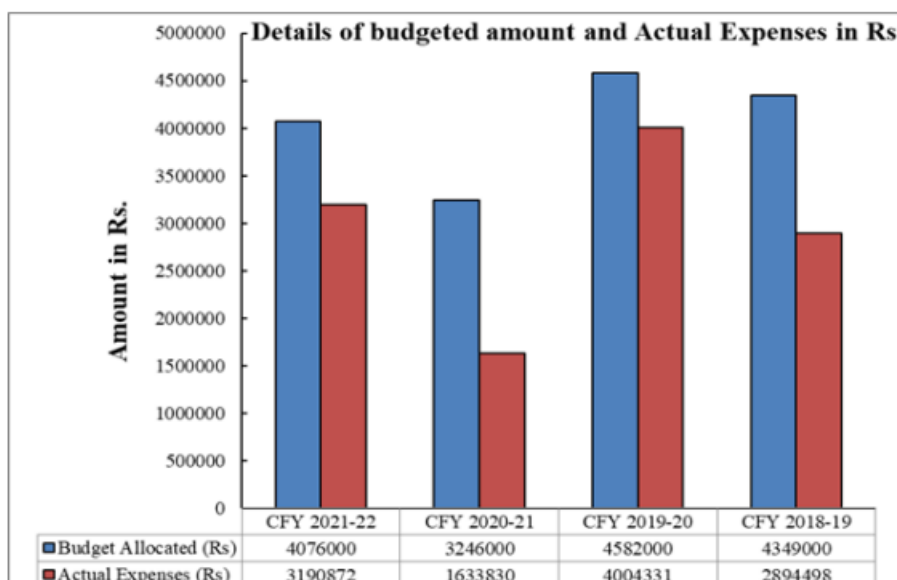


Others, specify	46577240.88	46296208.49	33143792.00	25400338.23	51789792.00	51947991.84	44676590.00	40778027.36
Total	330067448.88	322188011.71	298666526.00	285226438.23	341700000.00	336374924.95	352500000.00	343762101.89

**10.3**
**Program Specific Budget Allocation, Utilization**
**30**
**10.3.1 Adequacy of budget allocation**

- As per the regular purchase process of the financial year, requirement of the department is considered for the preparation of the annual budget.
- Before the commencement of the financial year details of the purchase requirement (recurring and non-recurring details) are collected from the laboratory in-charge of the department.
- Budget proposal is finalized by the Head of the Department by considering annual intake of the students, university curriculum, industry requirement, laboratory & infrastructure development. The requirement Budget of the equipment, computers, software, consumables, maintenance & furniture etc. is finalized. Apart from this, budget proposals are prepared for co-curricular, extra-curricular and extension activities for the overall development of students.
- Head of the Department submits the proposal of the budget to the Principal and the same is put up in the College Development Committee (CDC) and Governing Body (GB) meeting and after discussion and necessary corrections/modifications, College Development Committee and Governing Body recommends the budget for approval.
- The budget is reviewed by the management and approved after necessary changes.
- The budget allocated by the institute to the department is adequate to cater the need of the department to upgrade the laboratory in terms of equipment,
- Consumables, software, computers, maintenance-spare and furniture etc. and for conducting curricular and extra-curricular activities.





### 10.3.2 Utilization of allocated funds

The Funds allocated to the department are effectively utilized and are adequate as per the departmental academic requirement. As per the requirement of the University curriculum and industry needs, all the laboratories of the department are being upgraded regularly by purchasing new equipment and accessories and upgrading existing equipment.

Allocated budget for the department is properly utilized in the financial year as per requirement.

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

CFY: (Current Financial Year),

CFYm1: (Current Financial Year minus 1), CFYm2: (Current Financial Year minus 2) and

CFYm3: (Current Financial Year minus 3)

**Table 1 - CFY 2021-22**

4076000.00		Actual expenditure (till): 3190872.00		Total No. of Students 577
Non-Recurring	Recurring	Non-Recurring	Recurring	Expenditure per student
600,000.00	3,476,000	582,920	2,607,952	5530.11

**Table 2 – CFYm1 2020-21**

3246000.00		Actual expenditure (till): 1633830		Total No. of Students 587
Non-Recurring	Recurring	Non-Recurring	Recurring	Expenditure per student
600,000.00	2,646,00	358319	1275511	2783.36

**Table 3 – CFYm2 2019-20**

4582000.00		Actual expenditure (till): 4004331		Total No. of Students 587
Non-Recurring	Recurring	Non-Recurring	Recurring	Expenditure per student
300,000.00	4,282,00	181240	3823091	7820.96


**Table 4 – CFYm3 2018-19**

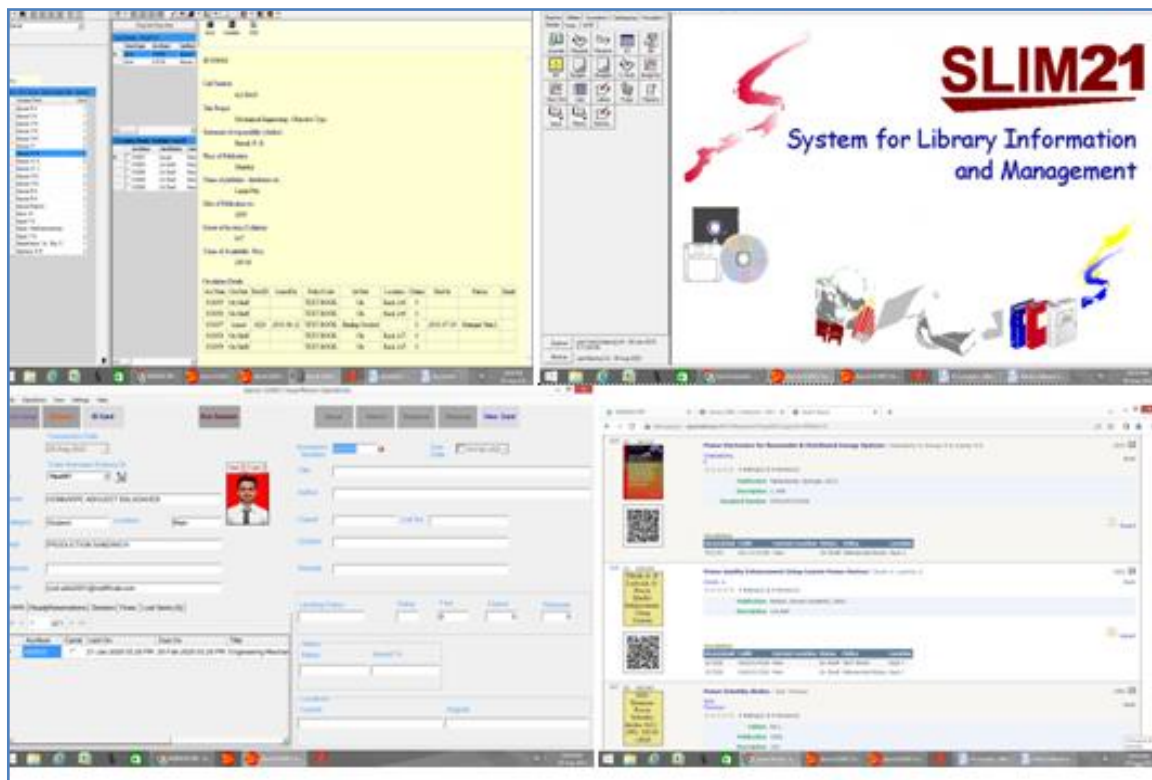
4349000.00		Actual expenditure (till): 2894498		Total No. of Students 587
Non-Recurring	Recurring	Non-Recurring	Recurring	Expenditure per student
1,000,000.00	3,349,000	330300	2564198	5380.11

Items	Budgeted in 2021-22	Actual Expenses in 2021-22 till	Budgeted in 2020-21	Actual Expenses in 2020-21 till	Budgeted in 2019-20	Actual Expenses in 2019-20 till	Budgeted in 2018-19	Actual Expenses in 2018-19 till
Laboratory equipment	600000	582920	600000	358319	300000	181240	1000000	330300
Software	2000000	2031998	1000000	85818	1100000	1089118	200000	168564
Laboratory consumable	100000	21288	100000	77477	100000	422895	75000	59293
Maintenance and spares	200000	172626	200000	134016	200000	129078	400000	446341
R&D	600000	0	300000	0	600000	0	750000	0
Training and Travel	480000	423140	1000000	969200	1382000	1382000	1344000	1290000
Miscellaneous expenses	96000	30000	46000	9000	900000	800000	580000	600000
Total	4076000	3261972	3246000	1633830	4582000	4004331	4349000	2894498

**10.4**
**Library and Internet**
**30**
**10.4.1 Quality of learning resources**

The Learning Resource Center, the Central Library of AISSMS College of Engineering with its state-of-the-art facilities and excellent resources plays proactive role in providing excellent user services, optimal use of resources supporting quality enhancement in teaching-learning, research and extension. keeping pace with the developments in the ICTs, Institute library works as a digitized knowledge Center for accessibility with print and e-resources and provides focused services to the students and faculty. The Library has significant collection of books, journals, e-books, e-journals, secondary sources, databases, digital primary sources.

Integrated Library Management System (SLIM21) is used to manage different functions of library for improving accessibility to students. Institute Central Library is using commercial software as well as Open Source software for Automation of Library Services. With SLIM21 retrieval of information becomes easy and even a catchy phrase in the description of the catalogued item can be used for searching. SLIM21 supports flexible workflow to cover activities related to acquisition of books, serials control, and funds monitoring.



**Figure 10.4.1: SLIM Software Screenshots**

With the growing popularity of e-resources, library is gradually migrating from print documents to e-resources. Qualified and experienced staff plays important role in providing easily accessible and cost-effective information services. Institute library has subscribed / implemented learning and e-learning resources as shown in below tables.

**Table 10.4.1: Learning resources available in Library**

Learning Resources	Number of resources
Books	36942
E Journals	1014
e-Journals/e-Books	15000
List of print journals/Magazine	91
List of Newspapers	12
CD/DVD	867


**Table 10.4.2: Expenditure in last three years on learning resources**

Year	No of New Titles added	No of new Editions added	No of new volumes added	Expenditure
CFY -2019-20	17	9	99	96197.00
CFY-2020-21	428	314	1324	650064.00
CFY- 2021-22	87	36	277	199492
CFY- 2022-23	12	12	20	25926

**Table 10.4.3: Expenditure in last three years on E-Journals Subscription**

Year	Number of E Journals	Expenditure
CFY 2019-20	612	2624635
CFY 2020 -21	1016	2493007
CFY 2021-22	1016	2810777
CFY- 2022-23	1016	3041158

Institute Library has made following online resources available to the staff and students.

**Table 10.4.4: Various online resources available in AISSMS COE Library**

AISSMS E Resource	Contents	Link
Science Direct	275 E Journals Access	<a href="https://www.sciencedirect.com/">https://www.sciencedirect.com/</a>
IEEE	169 eJournal Backfile Access- Since 2000)	<a href="https://ieeexplore.ieee.org/Xplore/home.jsp">https://ieeexplore.ieee.org/Xplore/home.jsp</a>
ASME Digital Library	27 E Journals	<a href="https://www.asme.org/">https://www.asme.org/</a>
ASCE Digital Library	35 E journals	<a href="https://www.asce.org/">https://www.asce.org/</a>
Access Engineering	365 E journals/ E Books Access	<a href="https://www.accessengineeringlibrary.com/user/login">https://www.accessengineeringlibrary.com/user/login</a>
SPRINGER	149 E Journals	<a href="https://link.springer.com/">https://link.springer.com/</a>
DELNET	Access Millions of Networked Library Resources through DELNET, 2,20,00,000+	<a href="http://164.100.247.26/">http://164.100.247.26/</a>



	Books available for loan, 5,000+ Full-text E- journals, 1,00,000+ Thesis/Dissertations	
Knimbus	25000+ ebooks	<a href="https://aissms.knimbus.com/user#/home">https://aissms.knimbus.com/user#/home</a>
NDL	Includes all disciplines	<a href="https://ndl.iitkgp.ac.in/">https://ndl.iitkgp.ac.in/</a>
List of Open Access Resources	Access to all open access resources	<a href="https://aissmscoelibrary.weebly.com/open-access-resources.html">https://aissmscoelibrary.weebly.com/open-access-resources.html</a>
S Chand Ebooks	Access to 112 E-Text Books	<a href="https://ebooks.schandgroup.com">https://ebooks.schandgroup.com</a>
New Age Ebooks	Access to 50 E Books	<a href="https://digital.elib4u.com/">https://digital.elib4u.com/</a>
Person E books	Access to 104 E -Text Books	<a href="https://elibrary.in.pearson.com/">https://elibrary.in.pearson.com/</a>
Calibre Digital Library	Access to 1012 Free Ebooks	Available in LAN

For the easy access, all the online resources are subscribed as IP Based access subscription. This helps users to access any resource from any computer connected in the AISSMSCOE Campus LAN and also through WiFi enabled devices. This helps users for searching multiple database at a stretch. Remote off campus access facility is created and this can be used by students from home.

### **Library user tracking students and faculty**

Library user tracking for students and faculty is done through ERP system. daily visit to library reports can be download through ERP system

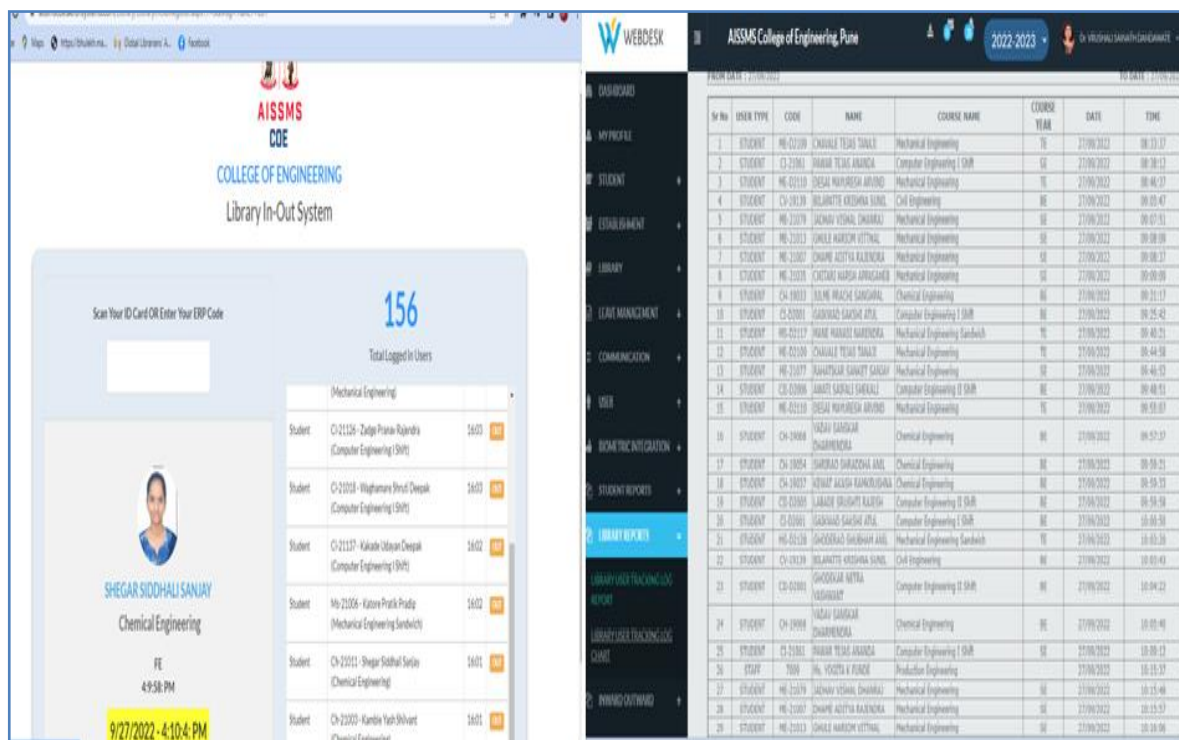


Figure 10.4.2: Screenshot of Library user tracking system

## Book Purchase System Process

Library books requirement is collected through a book requisition form which is made available to all faculty through the google drive link. List of books requested by faculty are sent for quotation to the supplier, after that purchase order is placed to the supplier with Head of Department and Principal approval.

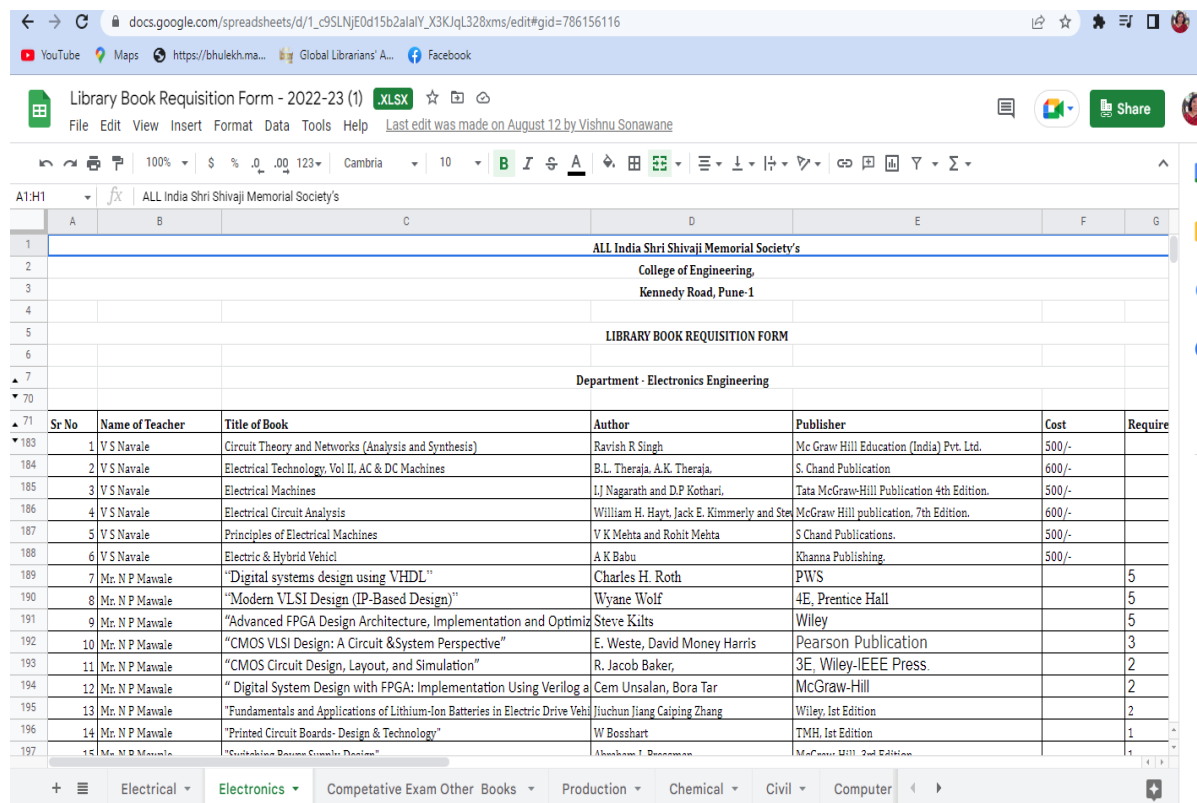


Figure 10.4.3: Screenshot of Library book requisition form



### **Support to students for self-learning**

Institute Library supports students for self-learning activities by creating and making available various platforms for learning. Following resources are accessible to the students:

- 9000 + NPTEL Videos
- 100+ Subjects NPTEL Text Content
- 1500+ E-Books
- Access to previous year question papers
- Access to Ekeeda Learning platform
- Access to IIRS training programs
- Access to Coursera (During Covid pandemic period)
- Access to Edx platform (During Covid pandemic period)
- Organization of book exhibitions, Author meets, E resources training program for students
- Use of SLIM webopac for book search and reissue and reservation process

Digital library has been established by library for the effective use of these self-learning resources. Question point service, “Ask a Librarian” is a unique online service available where queries and reference questions from students are responded within 24 hours. Additional facilities created in the library for improving accessibility and support to students for self-learning.

- Ask-A-Librarian - Question Point Online Reference Service.
- Wi-Fi accessible across the library.
- Library e-resources Remote Access (off-campus access) through Knimbus remote access platform.
- User Training, Sensitization and Information Literacy programs.
- Research Data Management, Publishing support, Style Manuals.
- Workshops/Programs on research methods Tools.
- Plagiarism Check tools (Turnitin) and services.
- Institutional Repository Dspace for faculty publication
- Faculty publication platform Vidwan
- Print, Scan Services.
- Access to previous year question papers and syllabus
- Mobile App facility available

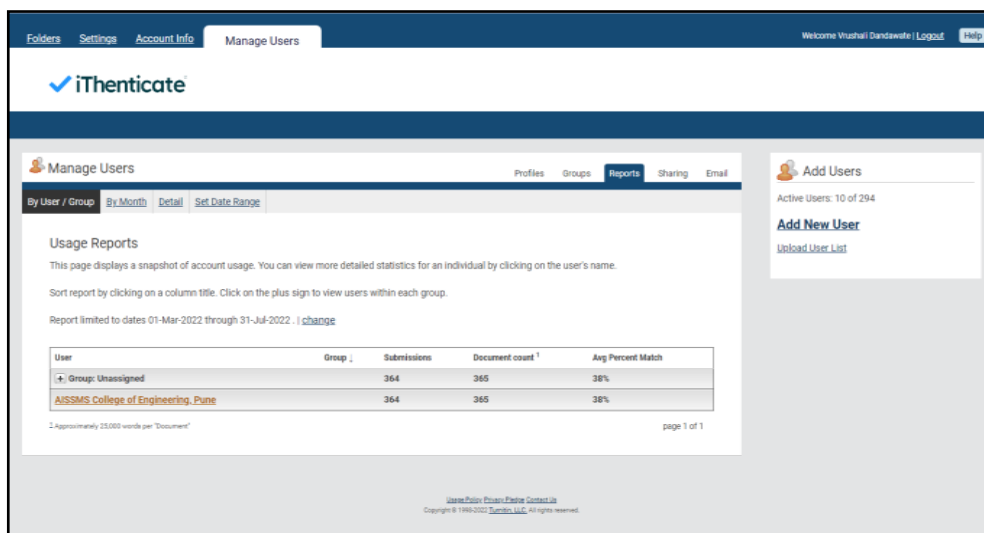


Figure 10.4.4: Plagiarism Software Screenshots



Figure 10.4.5: Library WebOPAC Screenshots

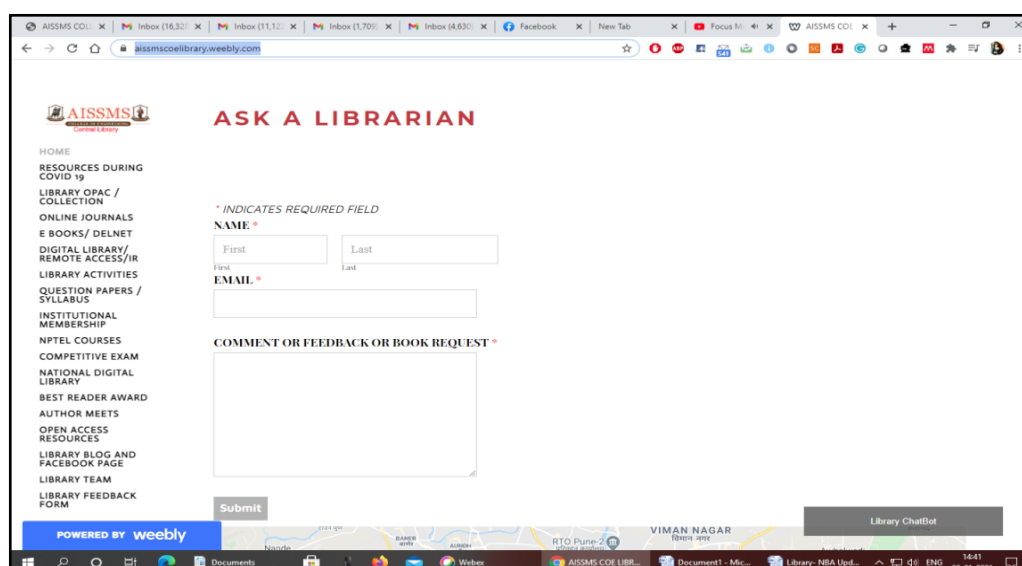
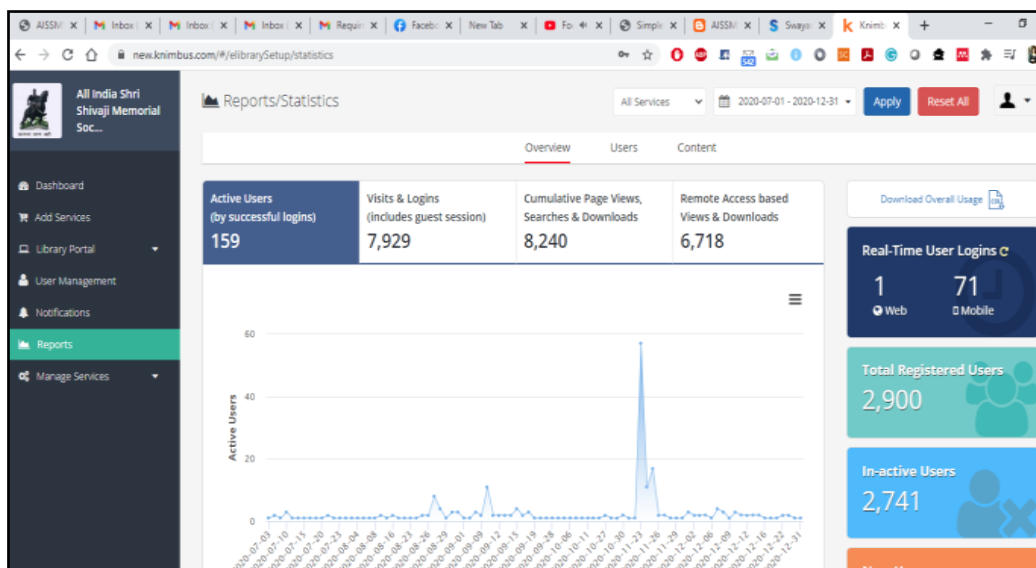


Figure 10.4.6: Ask A Librarian service



**Figure 10.4.7: Use of remote access facility**



**Figure 10.4.8: Reprography Machine and I card printing facility Information Kiosk**

#### 10.4.2 Internet

Name of internet provider	Tata Tele Services Ltd
Available bandwidth	500 Mbps
Wi fi availability	Yes
Internet access in labs, classrooms, library and offices of all departments; yes	Internet access is available in all the labs, classrooms, library and offices of all departments and administrative office.
Security arrangements	Layer 3 Firewall (SOPHOS XGS 3300 HW APPLIANCE WITH 8GE). Each user is assigned with user id and password. Antivirus software is installed on all computers and laptops of the institute.