॥ अप्पो दीपो भव ॥

महात्मा गांधी मिशन विश्वविद्यालय

MGM UNIVERSITY

Newsletter

(January 2022)

Newsletter January22 Cover page

JNEC's Department of Civil Engineering

❖ Change in Engineering Education

Education is what remains after one has forgotten what one has learned in school.

- Albert Einstein

As per the above statement, the education is nothing but the ability of student which helps them to recall different concepts which they use to learn in their school days. To improve this education process, it is important to introduce good methodology in the teaching which will help to student to recall maximum things from their learned syllabus. One of the good methods is problem-based learning, in which students use to learn different things with correlation of certain problem in that field.

In Civil Engineering Department, NAYEE TALEEM has introduced this concept with more effectively and also suggested it's importance in the student's understanding ability. With the support of NAYEE TALEEM all have used this methodology from all the possible ways, in which problems have selected so that each and every student will be able to understand the problem and will be able to think in all possible directions to solve that problem.

Problem Based Learning (PBL)

The PBL process does not focus on problem solving with a defined solution, but it allows for the development of other desirable skills and attributes. Problem based learning is basically a student focused methodology. In this method students use to think in all possible directions about the application of concepts which they are learning in the curriculum. Students use to involve actively in this method and also like this method. Problem-based learning focuses on engaging students in finding solutions to real life situations and pertinent contextualized problems. The main use of this problem-based learning is that if students are not able to visualize the theoretical concepts, then they can learn those concepts with such kind of methodology.

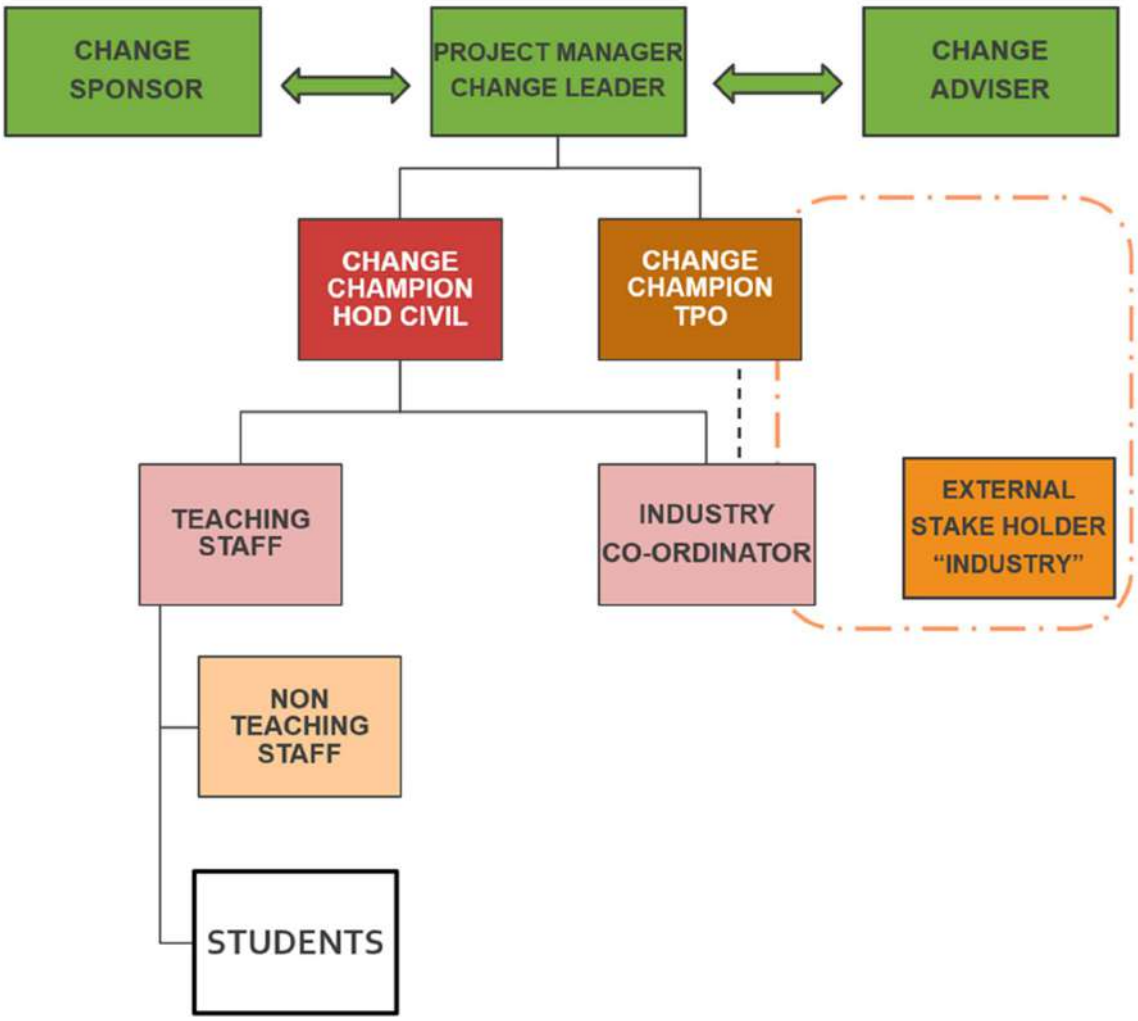
NAYEE TALEEM has modified the curriculum to introduce this methodology in theoretical lecture hours. The curriculum of various subjects such as MOS (Mechanics of Solids), Surveying-I, Hydraulics-I, BCD (Building Construction and drawing) etc. were introduced with different activity-based concepts such as model making, executing a small practical procedure in classroom itself to give a solution for small problem etc. Each subject has introduced some activity-based assignments at the end of each unit so that students will be able to analyse the theoretical concepts. This method is helpful for the students to understand the theoretical things in better manner. Students also use to participate in such activities with more interest.

Dr. Mohammed Sadeque & Prof. Y. J. Barokar, MGM University

❖ Program kick-off

The program was kicked off on 1st June 2021. The first phase of the program is scheduled for one year and shall continue the set practices from there onwards till June 2024. During the first one year of the program; the second-year students of CIVIL DEPARTMENT admitted for the academic year 2021-22, shall be undergoing the revived & evolving syllabus as per the skills-based lesson plans and pedagogy. **The Project charter** is put in place & circulated among all stake holders for entire overview of the project.

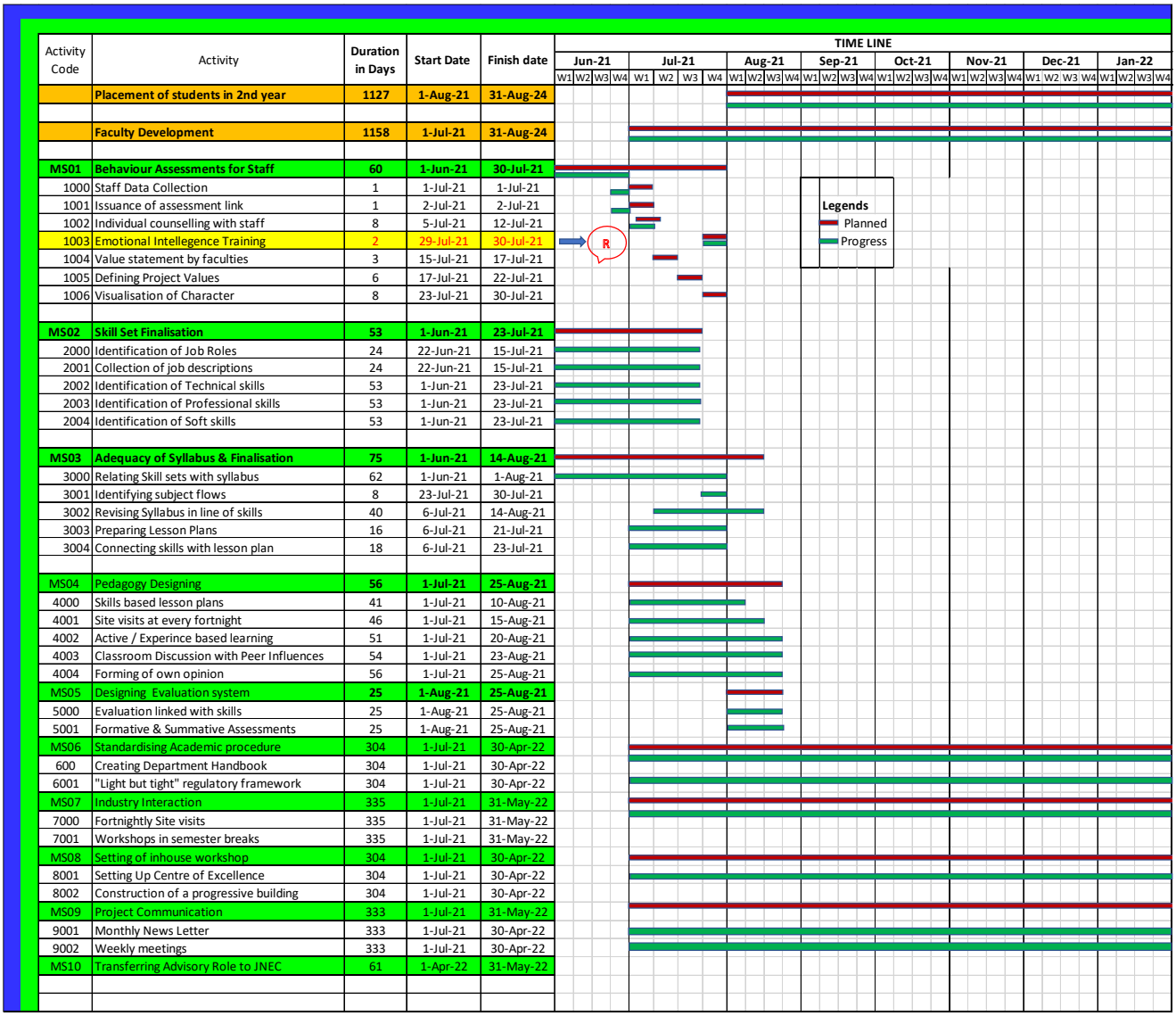
➢ Key Stake Holders:



➢ Project Objectives

- ✓ Transforming behaviour traits of stakeholders to produce synergy of collaboration among.
- ✓ Creating academic leadership which shall handhold & lead students till desired outcome.
- ✓ Adoption of evolving curriculum as demanded by industry & employability skills.
- ✓ Fostering strategic alliance with industries for knowledge sharing, training & employment.
- ✓ To produce self-motivated, employable, and ethical engineers who become torch bearers.

➢ Program Status Updates & Completed Milestones

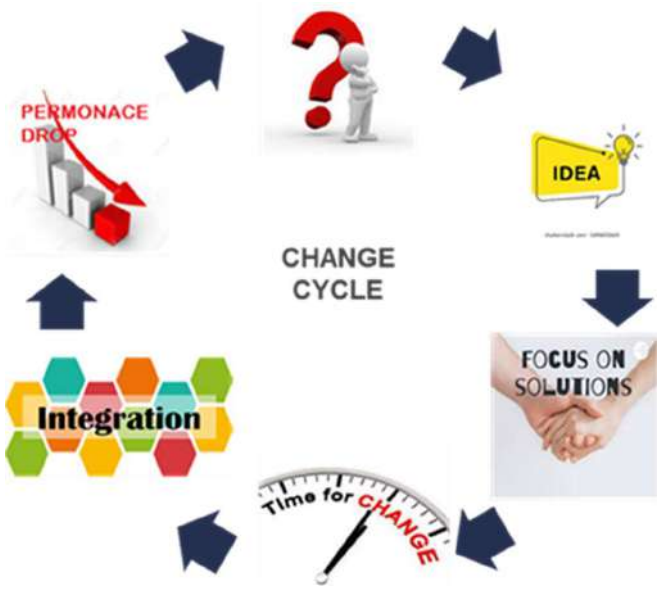


Activity Code	Activity	Duration in Days	Start Date	Finish date
	Placement of students in 2nd year	**1127**	**1-Aug-21**	**31-Aug-24**
	Faculty Development	**1158**	**1-Jul-21**	**31-Aug-24**
MS01	**Behaviour Assessments for Staff**	**60**	**1-Jun-21**	**30-Jul-21**
1000	Staff Data Collection	1	1-Jul-21	1-Jul-21
1001	Issuance of assessment link	1	2-Jul-21	2-Jul-21
1002	Individual counselling with staff	8	5-Jul-21	12-Jul-21
1003	Emotional Intellegence Training	2	29-Jul-21	30-Jul-21
1004	Value statement by faculties	3	15-Jul-21	17-Jul-21
1005	Defining Project Values	6	17-Jul-21	22-Jul-21
1006	Visualisation of Character	8	23-Jul-21	30-Jul-21
MS02	**Skill Set Finalisation**	**53**	**1-Jun-21**	**23-Jul-21**
2000	Identification of Job Roles	24	22-Jun-21	15-Jul-21
2001	Collection of job descriptions	24	22-Jun-21	15-Jul-21
2002	Identification of Technical skills	53	1-Jun-21	23-Jul-21
2003	Identification of Professional skills	53	1-Jun-21	23-Jul-21
2004	Identification of Soft skills	53	1-Jun-21	23-Jul-21
MS03	**Adequacy of Syllabus & Finalisation**	**75**	**1-Jun-21**	**14-Aug-21**
3000	Relating Skill sets with syllabus	62	1-Jun-21	1-Aug-21
3001	Identifying subject flows	8	23-Jul-21	30-Jul-21
3002	Revising Syllabus in line of skills	40	6-Jul-21	14-Aug-21
3003	Preparing Lesson Plans	16	6-Jul-21	21-Jul-21
3004	Connecting skills with lesson plan	18	6-Jul-21	23-Jul-21
MS04	Pedagogy Designing	**56**	**1-Jul-21**	**25-Aug-21**
4000	Skills based lesson plans	41	1-Jul-21	10-Aug-21
4001	Site visits at every fortnight	46	1-Jul-21	15-Aug-21
4002	Active / Experince based learning	51	1-Jul-21	20-Aug-21
4003	Classroom Discussion with Peer Influences	54	1-Jul-21	23-Aug-21
4004	Forming of own opinion	56	1-Jul-21	25-Aug-21
MS05	Designing Evaluation system	**25**	**1-Aug-21**	**25-Aug-21**
5000	Evaluation linked with skills	25	1-Aug-21	25-Aug-21
5001	Formative & Summative Assessments	25	1-Aug-21	25-Aug-21
MS06	Standardising Academic procedure	304	1-Jul-21	30-Apr-22
600	Creating Department Handbook	304	1-Jul-21	30-Apr-22
6001	"Light but tight" regulatory framework	304	1-Jul-21	30-Apr-22
MS07	Industry Interaction	335	1-Jul-21	31-May-22
7000	Fortnightly Site visits	335	1-Jul-21	31-May-22
7001	Workshops in semester breaks	335	1-Jul-21	31-May-22
MS08	Setting of inhouse workshop	304	1-Jul-21	30-Apr-22
8001	Setting Up Centre of Excellence	304	1-Jul-21	30-Apr-22
8002	Construction of a progressive building	304	1-Jul-21	30-Apr-22
MS09	Project Communication	333	1-Jul-21	31-May-22
9001	Monthly News Letter	333	1-Jul-21	30-Apr-22
9002	Weekly meetings	333	1-Jul-21	30-Apr-22
MS10	Transferring Advisory Role to JNEC	61	1-Apr-22	31-May-22

Key Activities started:

1. Pedagogy Implementation
2. Designing Evaluation System
3. Standardising Academic Procedure
4. Industry Interaction
5. Setting of in-house workshops
6. Project Communication – Reporting to management
7. Standardising academic procedures
8. Interactive session with Vikas Patil regarding Project Management Body of Knowledge (PMBOK) Guide.

➢ Implementation Roadmap



- Execution of Change

  A first key to unlock that door remains civil engineers' education and training. In order to close the gap between the required skills by industry and what is being offered in degree program, the change is concentrated at three levels.
  First one is **Adequacy of Syllabus** based on skills set identified,
  Second is the way engineering is being taught i.e., **Pedagogy** and
  Third is **Behavioural Aspects** coupled with Value Orientation.
  These changes are being executed stepwise as mentioned in the summary milestones. One of the activities is assigning the group of students to the concerned faculty who in turn will be responsible for the entire period of the project in terms of the objective deliveries.

- Reinforcing Change

  While making a change is difficult, sustaining a change can be even more difficult. Therefore, reinforcement is such a critical component of successful change. It encompasses the mechanisms and approaches so that the new way stays in place. Successful reinforcement shall be taken up through celebrations of achievements, rewards and recognition, feedback system for staff & students, corrective actions, grievance redressal, visible performance measurement& accountability mechanisms.

- People Management

  A formal approach for managing change beginning with the leadership team (Change Leaders/ change champions) and then engaging key stakeholders (change agents) is being adopted through Behaviour assessments, Counselling sessions, Faculty

development Programs, Training need Analysis, Leadership Trainings. Ownership is often best created by involving people in identifying problems and crafting solutions.

➢ Heads-up / what's next

In February 2022 we have planned for

1. Pedagogy Implementation
2. Designing Evaluation System
3. Standardising Academic Procedure
4. Industry Interaction
5. Setting of in-house workshops
6. Interactive session with Vikas Patil regarding Project Management Body of Knowledge (PMBOK) Guide.
7. HR Interventions

➢ Moments of the Month

➢ #1 Civil Engineering Exploration

"Engineering Exploration" course is the outcome of one effort to focus on engineering problem solving, multi-disciplinary engineering skills, engineering design process, team work and collaboration. Ethics and sustainability are also essential part of this course. Civil Engineering department of JNEC wish to further extend its reach and results to core branch. The motive is characterized by a number of unique features:

1. It promotes students' learning through exploration and learning by doing.
2. It is headed by a mentor faculty
3. Learning is facilitated by open elective environment by MGM University
4. It follows PBL pedagogy with focus on both engineering design process and the product.

Looking towards the academic knowledge of second year students we are more interested in developing their interests in one of the future trends of civil engineering. We shall be giving them a problem statement in each area and shall guide them to explore the solutions.

To start with 4th semester these are 27 topics we are going ahead with:

- Building Information Modelling (BIM)
- Cloud And Mobile Technology
- Drones Or Unmanned Aerial Vehicles (UAVs)
- Virtual Reality
- Augmented Reality
- 3D Printing
- Artificial Intelligence
- Robotics
- Exoskeletons
- The Connected Jobsite
- Autonomous Vehicles
- Advanced Materials
- The Intelligent Built Environment

- Machine Learning
- Prefabrications
- Predictive Analytics
- Construction Software And Data Ecosystem
- Self-Healing Concrete
- Advance Uses Of GPS
- New Effective Scanning Solutions
- Timber Constructions
- Wearable Technology
- Smart Building
- Modular Construction And 3D Printed Dwellings
- Smart Buildings
- Connected Homes
- Home Analytics

➢ #2 Feedback about TEEM Project after 6 months

Performance feedback about whether responses are correct or incorrect provides valuable information to help guide learning. Feedback can produce subjective feelings similar to "rewards" and "punishments." Therefore, feedback can play both an informative and a motivational role. Feedback reflects goal achievement, whether learners are oriented toward the informative versus evaluative aspect of feedback, and whether individual learners are motivated to perform well relative to their peers. With this objective, feedback for TEEM project is collected from Civil Engineering Department. Suggestions, learnings and shortfalls shall be accommodated to improve for better service & results.

FEEDBACK ABOUT TEEM PROJECT: JNEC CIVIL DEPARTMENT JAN 22 NAME:

Project Objective: Transforming behaviour traits of stakeholders to produce synergy of collaboration among.			
1	Have you understood this concept with regards to employability?	YES ☐	NO ☐
2	Do you think it is necessary?	YES ☐	NO ☐
3	Are you satisfied with the Behaviour assessments and counselling sessions held for transforming your behaviour traits?	YES ☐	NO ☐
4	Please mention any other specific way, which can make significant difference to bring this change?		
5	Please mention your opinion / experience (positive or negative) particularly about "behaviour traits" after we started this exercise. (in terms of personal and professional dealings)		
Project Objective: Creating academic leadership which shall handhold & lead students till desired outcome.			
6	Have you understood this concept of taking ownership of student's career planning?	YES ☐	NO ☐
7	Do you think it is necessary?	YES ☐	NO ☐
8	Are you satisfied with the mentorship you have done towards second year students with regards to this project?	YES ☐	NO ☐
9	Please mention any other specific way, which can make significant difference to bring this change?		
10	Please mention your opinion / experience (positive or negative) particularly about the mentorship you carried out, in the TEEM format.		
Project Objective: Adoption of evolving curriculum as demanded by industry & employability skills.			
11	Have you understood this concept with regards to changing requirements?	YES ☐	NO ☐
12	Do you think it is necessary?	YES ☐	NO ☐
13	Are you satisfied with the revised curriculum we have done with regards to TEEM project?	YES ☐	NO ☐
14	Please mention any other specific way, which can make significant difference to bring this change?		
15	Please mention your opinion / experience (positive or negative) particularly about the curriculum revision after you carried out in the TEEM format.		

Project Objective: Fostering strategic alliance with industries for knowledge sharing, training & employment.			
16	Have you understood this concept of knowledge sharing, training and employment?	YES ☐	NO ☐
17	Do you think it is necessary?	YES ☐	NO ☐
18	Are you satisfied with the site visit activities we have done with regards to TEEM project?	YES ☐	NO ☐
19	How do you think this exercise will benefit you to enhance your competence level?		
20	Please mention your opinion / experience (positive or negative) particularly about the site visits and presentations after you got involved in this activity.		
Project Objective: To produce self-motivated, employable, and ethical engineers who become torch bearers.			
21	Have you understood this concept with regards to value system?	YES ☐	NO ☐
22	Do you think it is necessary?	YES ☐	NO ☐
23	Are you satisfied with the motivation you have created??	YES ☐	NO ☐
24	Do you think of any other way which can make significant difference to bring this change?		
25	How confident you are (in terms of percentage) that the students under your mentorship will get employed after completion of the course?		

USE THIS SPACE IF YOU REQUIRE

Please Turn to Next Page.

FEEDBACK ABOUT TEEM PROJECT EXECUTION: JNEC CIVIL DEPARTMENT JAN 22 NAME:

Project Initiation:			
1	Have you received Project Charter?	YES ☐	NO ☐
2	Have you received Project schedule?	YES ☐	NO ☐
3	Have you received Guidelines for Milestone 02 & 03?	YES ☐	NO ☐
4	Were you well informed about this project at the beginning?	YES ☐	NO ☐
5	Were you able to identify your role in the project charter?	YES ☐	NO ☐
6	Do you think there was a better way to start the project than the way it was started?		
Project Planning			
7	Have you received the project schedule?	YES ☐	NO ☐
8	Do you think it is necessary?	YES ☐	NO ☐
9	Do you think the mile stones in the TEEM project are correctly ordered?	YES ☐	NO ☐
10	Do you think of any other milestones, which can make significant difference to the schedule?		
11	Please mention your opinion / experience (positive or negative) particularly about the sequence of works in the TEEM Project.		
Project Execution			
12	Are you comfortable with adequacy of syllabus?	YES ☐	NO ☐
13	Are you comfortable with pedagogy adopted?	YES ☐	NO ☐
14	Do you think the mentorship will make any difference to the delivery of objectives?	YES ☐	NO ☐
15	At any point do you think you need to upgrade yourself to deliver these objectives?		
16	Which values do you think are required to be there in your mentees to deliver the objectives?		
17	Which values do you think are required to be there in mentor to deliver the objectives?		
18	Do you find the Change Advisors are advising enough for this project?	YES ☐	NO ☐
19	Which values do you find in your change advisors?		

➢ #3 Total Station Training for faculty members

In order to keep the faculties updated with recent trends, training for faculties in operations of Total Station with site-based situations.


➢ #4 National Voter's Day Oath on 25th January 2022

On the occasion of National Voters Day on 25th January 2022in order to inculcate the motives of Voting Right in right spirit, a oath was taken by faculty members of civil engineering department.

Oath:

"We, the citizens of India, having abiding faith in democracy, hereby pledge to uphold the democratic traditions of our country and the dignity of free, fair and peaceful elections, and to vote in every election fearlessly and without being influenced by considerations of religion, race, caste, language or any inducement."