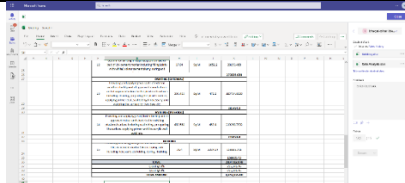

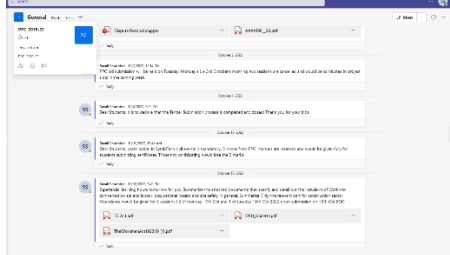
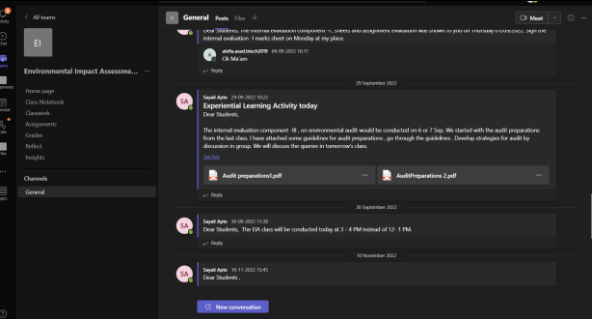
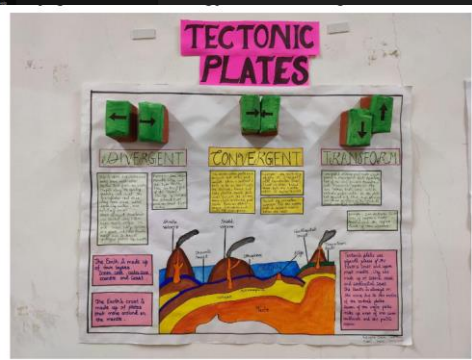



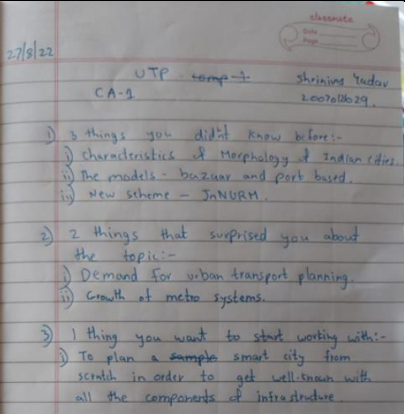

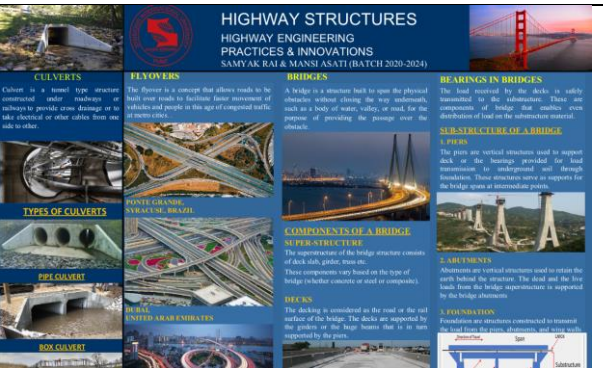
DEPARTMENT OF CIVIL ENGINEERING

INNOVATIVE PEDOGOGY IN TEACHING LEARNING FOR AY 2020-21, 2021-22, 2022-23

Details of the Innovation in Teaching and Learning by Faculty during AY 2022-23

Sr. No.	Faculty name	Course Name	Sem	Innovative Evaluation component	Details of Innovative pedagogy	Proofs
1	Dr Sayali Sandbhor	Professional practices in construction	VII	Moot bidding	This evaluation component was conducted as standard bidding process for a common construction (details were given beforehand including BOQ and drawings) project wherein the students' teams (as contractors) submitted their bids in Professional Practices in Construction Course. The bidding process was held with the same decorum as done for construction projects and teams were given ranks based on their quality of bids.	 
2	Dr Sayali Sandbhor	Quantity Surveying and Valuation	V	Project Estimate Case Study Mini Project	The students' teams collected data of real construction sites in terms of drawings (preferably on G+1 structure to limit the scope). The teams worked on the mini project throughout the semester under Quantity Surveying and Valuation Course to prepare complete project estimates from excavation to handover.	

3	Dr Sayali Apte	Environmental Impact Assessment	VII	Role play : Internal Environmental Audit (in accordance with ISO 14001)	The course is for assessment and mitigation of the environmental impact of industrial activity. Role play was planned by dividing the student groups into teams of auditors and project proponents for preparing final audit report	
4	Mrs. Mugdha Kshirsagar	Geology and soil mechanics	IV	Poster Making	Students prepared models for concepts in Geology and soil mechanics. The students reviewed and prepared posters on various geological events and formations.	
5	Ms Mugdha Kshirsagar	Computer Aided Civil Engineering Drawing	III	Building models	Group project demonstrating application of building design and drawing (the problem statement will be given). The project submission included drawings followed by a model of the same.	

6	Ms Humera Khanum	Urban Transportation Planning	V	CA-1 - 3-2-1 Countdown	<p>The course is for honours program of Infrastructure Engineering and Management. Based on the case study reports presentations in the class, They are required to respond to three separate statements:</p> <ul style="list-style-type: none"> 3 things you didn't know before 2 things that surprised you about this topic 1 thing, you want to start doing with what you learned 	
7	Mr Vinay Jatti	Structural Analysis-II	V	Reflective Learning	<p>After completion of each Course Outcome (CO), students were asked to solve the problem based on the contents taught.</p>	
8	Ms. Humera Khanum	Highway Engineering practices and Innovation	V	Poster making	<p>Multiple topics on highway engineering's latest development were given to students. Students' posters were evaluated based on the designed rubrics.</p>	


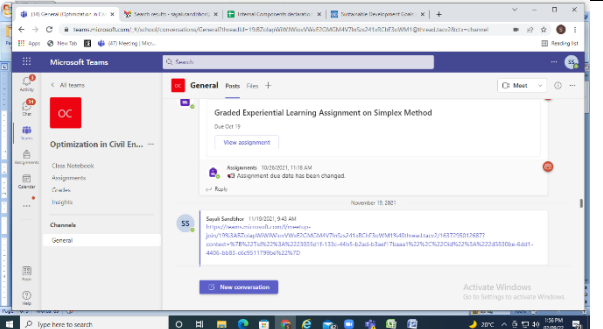

9	Dr Sayali Sandbhor	Innovations in Construction Project management (ICPM flexi course)	VI	Open book test	Open book test was conducted for the students of 2020-24 batch. The open book test was conducted in the SIT library.	
---	--------------------	--	----	----------------	--	---

Table 5.6.2 Details of the Innovation in Teaching and Learning by Faculty during AY 2021-22

Sr. No.	Faculty name	Course Name	Sem	Innovative Evaluation component	Details of Innovative pedagogy	Sample Proofs
1	Dr Sayali Sandbhor	Optimization in Civil Engineering	VIII	Flipped classroom - Simplex method assignment	Students are provided with link of the swyam module for simplex method. The video was discussed in the class and the queries are resolved. Assignment was given on this activity to evaluate the student understanding.	

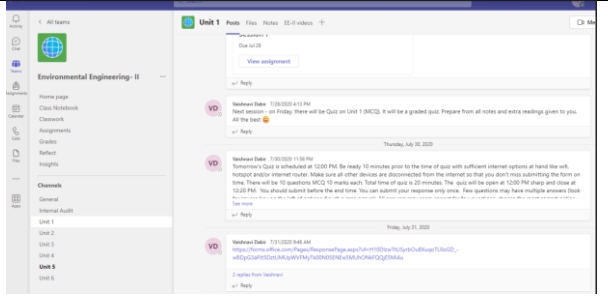
2	Dr Sanjay Kulkarni	Prestressed Concrete Structures		Field visit - Report	Students visited a prestressed concrete site to understand the advanced construction process and submitted report.	
---	--------------------	---------------------------------	--	----------------------	--	---

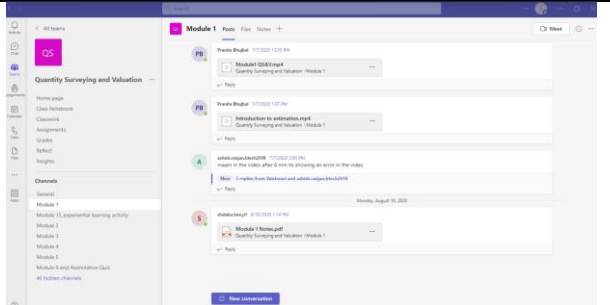
Innovation in teaching learning during 2020-21

The classes conducted during the AY 2020-21 were conducted online through Microsoft teams. The following innovative teaching learning pedagogies were planned and implemented


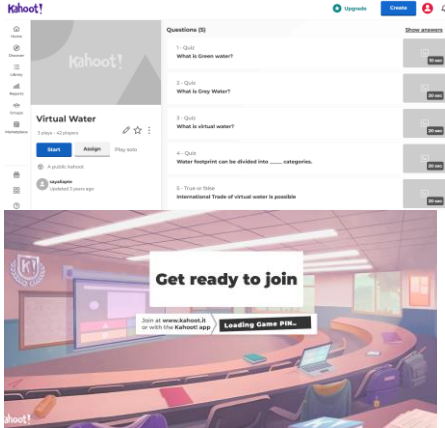
Table 5.6.3 Details of the Innovation in Teaching and Learning by Faculty during AY 2020-21


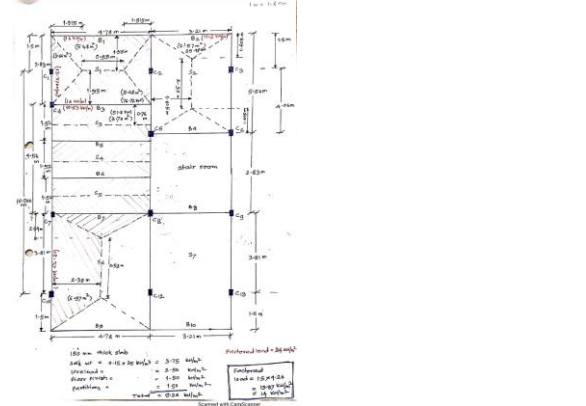
I. Asynchronous courses with innovative pedagogy

Sr. No.	Faculty name	Course Name	Sem	Innovative Evaluation component	Details of Innovative pedagogy	Sample Proof
1	Dr Vaishnavi Dabir	Environmental Engineering -II	VI	Quiz and projects + self paced learning	Environmental Engineering-II was conducted asynchronously for a batch of 17-21 in which pre-recorded video modules were launched in a pre-allocated slot for the subject. One of the mini projects involved students making a lysimeter using home compost with a record log of pre-decided additives. The daily visual observations were recorded, and the result of leachate recirculation was noted by the students.	

2	Dr Sayali Sandbhor	Quantity Surveying and Valuation	VI	Quiz and projects + self paced learning	QSV was conducted asynchronously for a batch of 17-21 in which pre-recorded video modules were launched in a pre-allocated slot for the subject. Students submitted the activity at the end of the hour allotted for the subject. The formative assessment of the course involved 6 quizzes (1 on each unit) and three mini projects. The course got very good verbal feedback during the final online session of interaction with the students. The conduction was hybrid and provided the students with flexibility of learning.	
---	--------------------	----------------------------------	----	---	--	---

II. Synchronous courses with innovation in teaching

Sr. No.	Faculty name	Course Name	Sem	Innovative Evaluation component	Details of Innovative pedagogy	Sample Proof
1	Dr Sayali Apte	Environmental Impact Assessment	VII	Experiential learning through Case Study	Students were provided with list of industries from which, they selected the industry and worked in the group of 2. The students studied the impact of various activities in the industry on environment and wrote a report on the impact of various project activities on air, water, soil and noise environment. The activity was a experiential learning activity using case study.	
2	Dr Sayali Apte, Dr Vaishnavi Dabir	Integrated Water Resource Development and Management (IWRDM) Town and country planning	VI	Use of interactive online tools like Kahoot, menti-meter	During the online sessions to make the sessions more interactive and increase the student participation in teaching -learning interactive tools like Kahoot , Mentimeter, team forms were used.	

3	Dr Kanchan Khare	Town planning	VI	Planning Studio	Students were involved in planning development plan 2023-43 and submit the report having following: Process for development plan, Challenges faced, opportunities, Survey carried out , Financial planning, Facilities planned for the citizens of tomorrow.	
4	Dr Sanjay Kulkarni	Structural Design-I (RCC)	V	Preparation of detailed structural Drawing	Instead of giving regular assignments, students will be asked to mark the position of columns, beams and slabs. Students will get exposure to design drawing.	
5	Humera Khanum	Highway Engineering lab	VI	Virtual labs (sample shown here)	Experiments were conducted in virtual mode by using under the National mission on Education through ICT , an initiative by Ministry of Education.	

Some additional pedagogies adopted are Innovative assignment (Crossword quiz, mind map, competition , reflection dairy, infographics, site visit report) . Learning by doing, Video making. The outcome of the innovative pedagogy is assessed by submissions of the activities conducted during the implantation of innovative pedagogy and are evaluated as internal evaluation components for the subject.

Other interesting pedagogy adopted by the faculty are as follows. Project based learning, Internship and Service learning are also part of course structure.

- 1. Project Based learning** - The project and problem-based learning is also one of the commonly used pedagogies by faculty. In addition, the curriculum of Civil Engineering has a dedicated credit subject on project-based learning in semester III and semester V. During PBL 1 and PBL 2 the students gain knowledge and skills by working on various problem statements and learning while doing under the faculty supervision. The faculty are encouraged to make students understand the concept and complex problems through project-based learning.
- 2. Participation in Technical events and conferences:** Faculty encourage students to participate in various technical events and competitions, resulting in learning outside the classroom and development of soft skills.

- 3. Value added certificate programs** are made available to the students at concessional rates from recognized training agencies such as AUTO-DESK & STAAD-PRO, EDU CAD etc. The courses certifications offered are STAD_PRO, REVIT, AUTOCAD and CIVIL 3D , Primavera, AUTOSTEEL. The training duration varies from 20 -120 hours. Periodically online quizzes are conducted to test the understanding of the students. In addition to value added courses short term software trainings are also provided for Revit, STAAD pro, Revit structure and Revit Architecture, Associate Course in Building Design & Drafting, Civil Software , Associate Course in Building Design & Drafting, iTWO costX Fundamentals v6.9 Training, Fundamentals of GIS, Microsoft Project.