MANAV RACHNA UNIVERSITY

MANAV RACHNA
Vidyanatariksha

MANAV RACHNA UNIVERSITY
Declared as State Private University vide Haryana Act 26 of 2014

STUDENT CENTRIC LEARNING THROUGH EXPERIENTIAL, PARTICIPATIVE AND PROBLEM SOLVING

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

Sample Reports for the Courses & Topics Delivered Through Different Approaches

SCHOOL OF ENGINEERING

Department of Computer Science & Technology

A student-centric learning pedagogies are all about the desire to create a more active learning environment both inside and outside the classroom. Students engage in learning that goes beyond the assimilation of given information to the application of skills and construction of knowledge. Students familiarize themselves with new content at their own pace, compare and contrast it with any prior knowledge, construct new understandings, and prepare for class by formulating and answering critical thinking or problem-solving questions. Students do this work both individually and collaboratively with peers.

To make lectures interesting for the students the following pedagogies have been adopted for content delivery:

- Project-Based Learning (PBL): Teaching and Learning is project-based and students demonstrate progress in mini-projects as continuous assessments.
    - Agile classroom-based learning: To promote interaction via group discussions, and brainstorming sessions with an emphasis on collaboration, communication, self-organization, and social skills.
    - Collaborative Learning: This involves students working on mini projects in groups, teams working together in project-based learning courses, or in courses being run in agile classrooms.
- Flipped classroom teaching: This is achieved via assigning and evaluating students on presentation topics based on the syllabus of the subject.

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

Project-Based Learning (Experiential &Problem Based Learning)

Department of Computer Science & Technology, School of Engineering has implemented Project-Based Learning from the AY 2021-22. For such courses, there is classroom delivery to cover the fundamental concepts related to the course and students would be required to work on a project in a team comprising of 3-4 members. These projects are based on the respective subject that is being offered in PBL mode and preferably on the current societal needs. While working on the project student is expected to apply the knowledge of all the subjects he/she has studied till now or studying during that semester.

Course with L-T-P structure of 3-1-2 or 3-0-2 can be offered in PBL mode. It is proposed to evaluate such courses in five stages as mentioned below:

Stage	Timeline	Weightage	Rubrics
Stage I: Ideation)	After 2 weeks from the commencement of the Semester	10%	1. Presentation (5%): Introducing Problem statement, Objectives of Project Activity & Identification of Team members responsibility. 2. MCQ/Quiz/Group Discussion/Class Test based on modules covered till date (5%)
Stage II: Analysis	During 5th to 6th Week	15%	1. Presentation (10%): Literature review, Technology & tool identified for solving the problem, Knowledge acquired related to project. 2. MCQ/Quiz/Group Discussion/Class Test/Home assignment based on modules covered till date (5%)

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

Stage III: Design	During 10th to 11th Week	20%	1. Presentation (15%): Review the progress in project till design stage and their performance in the question answer session. 2. MCQ/Quiz/Group Discussion/Class Test/Home assignment based on modules covered till date (5%)
Stage IV: Development	During 15th to 16th Week	25%	1. Presentation (20%): Review the progress in project till development stage as per problem statement and their performance in the question answer session. 2. MCQ/Quiz/Group Discussion/Class Test/Home assignment based on modules covered till date (5%)
Stage V: Testing & Integration	End of Semester (During PT3)	30%	1. Presentation (20%): Review the realization of project as per problem statement. Evaluate the performance through its testing and integration. Evaluate the documentation & report submitted. Assess based on quality of work, its timely completion and their performance in the question answer session. 2. MCQ/Quiz/Group Discussion/Class Test/Home assignment based on modules covered till date (10%)

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

Total	100%	

Alignment of Problem statements with UN SDGs

Project Based Learning is a good pedagogy to provide learning skills, competencies, and attitude to the students to help them work towards achieving sustainable development goals.

By incorporating Project-based learning into the classroom, young minds can actually be trained to think logically, investigate unsolved social problems and finding the solutions by integrating science & Technology which can be a contributing factor towards achieving UN SDG Goals.

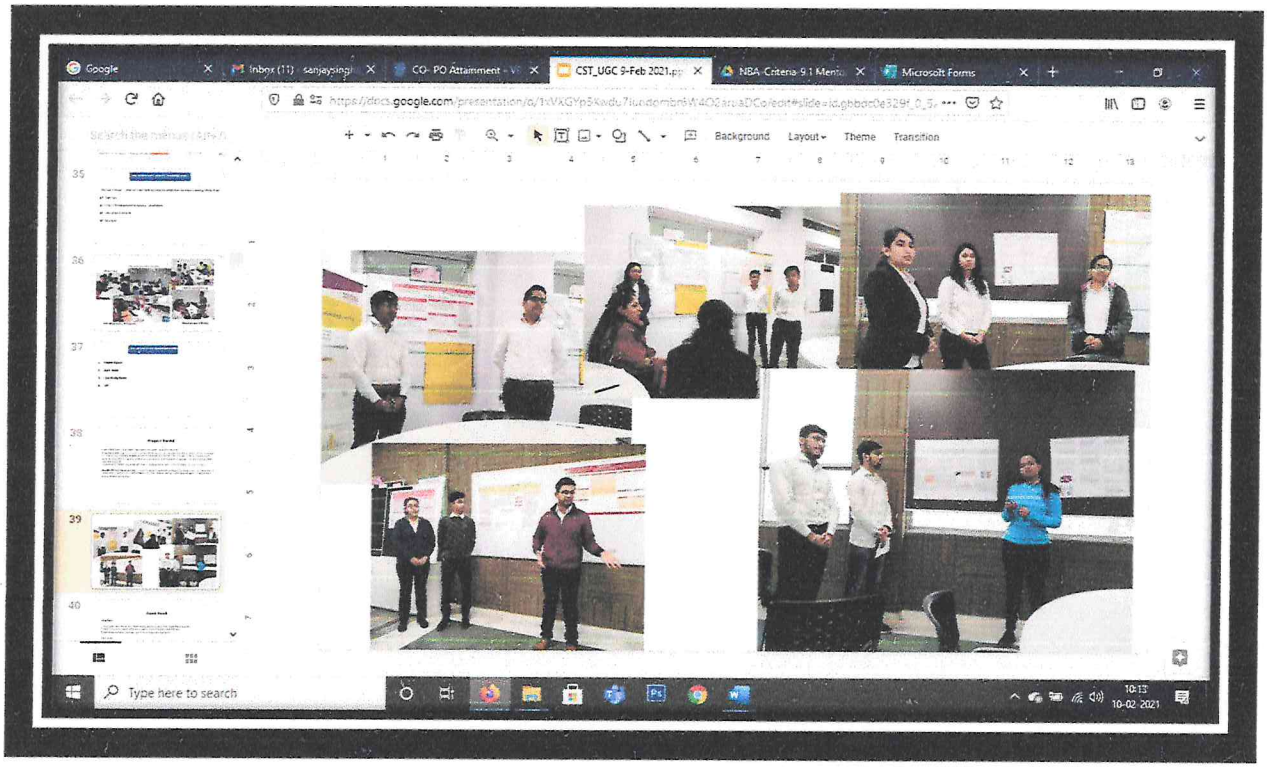
PBL also instill global mindset as working towards UN SDGs is actually taking them ahead to solve global challenges.

Therefore, at the ideation stage only we have designed our rubrics so as to clear the expectation of teacher/mentor to the student which directs and motivates towards finding an unsolved societal problem as the problem statement to progress in their course.

Following grading criteria are used to guide and motivate the students to work towards SDG Challenges at the ideation stage.

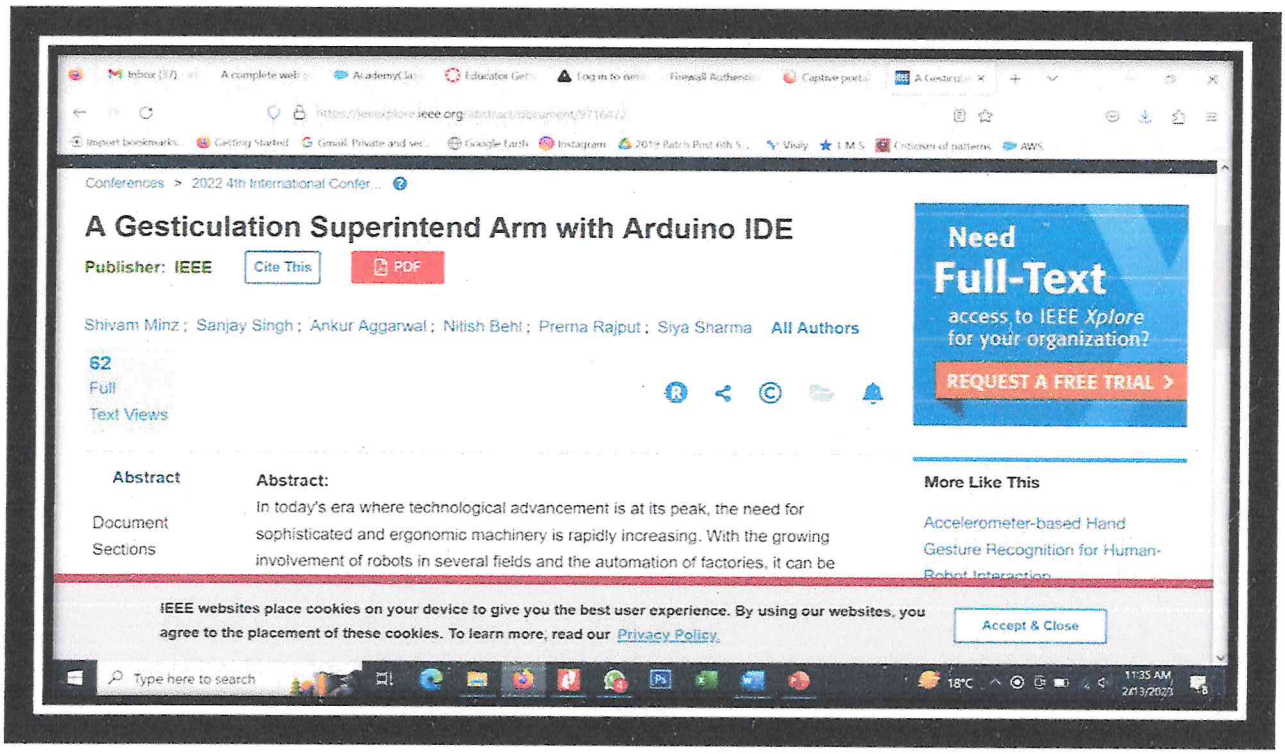
			Stage I:- Ideation		
SNo	Rubrics	Max Marks (15)	Needs Improvement	Meets Expectation	Exceeds Expectations
R1.1	Problem Statement	2	The problem chosen is very common and being solved using fundamental machine learning algorithms	The problem chosen is very common and being solved using latest learning algorithms	The problem chosen is unique and less addressed and being solved using fundamental / advanced learning

					algorithms
		scale	1	1.5	2
R1.2	Holistic Scope of Sustainability	1	Project is not aligned with UN SDGs	Project is aligned with one or more UN SDGs	
		scale	0	1	
R1.3	Region of relevance	1.5	Problem is being addressed at Local Level	Problem is being addressed at national Level	Problem is being addressed at global Level
		scale	0.5	1.5	1.5

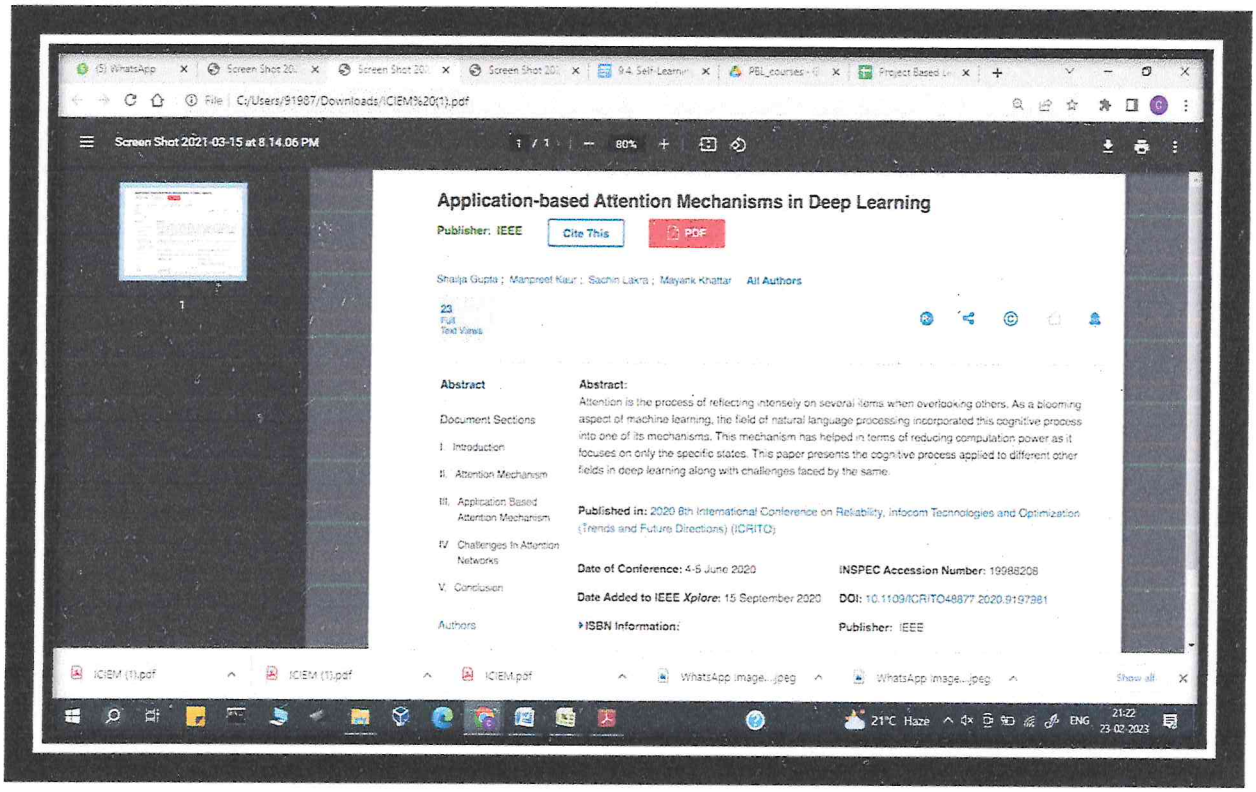


Sample Snapshots of PBL through Presentations

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD



Paper Published in IEEE Scopus indexed Conference through PBL

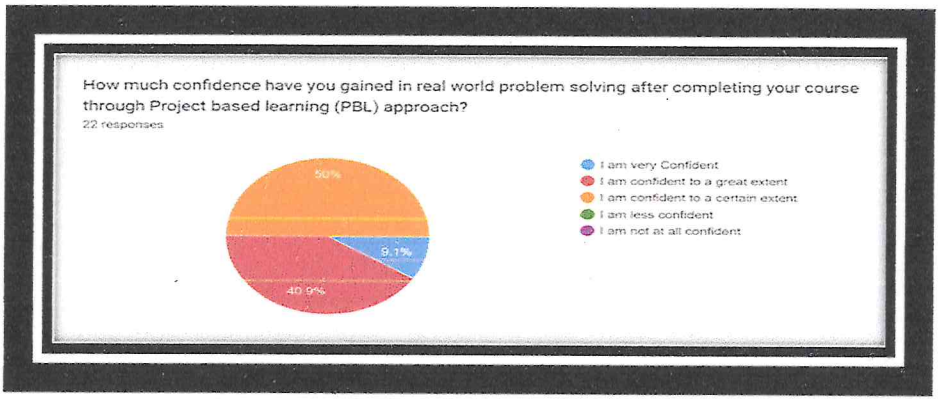


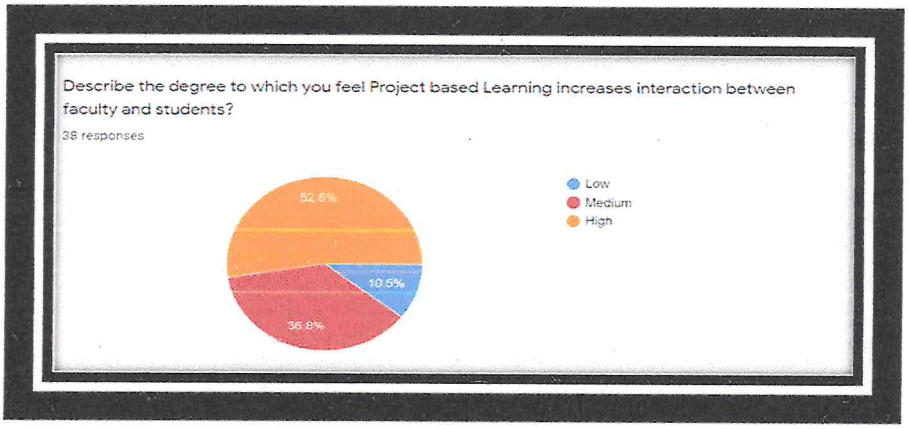
Paper Published in IEEE Scopus indexed Conference through PBL.

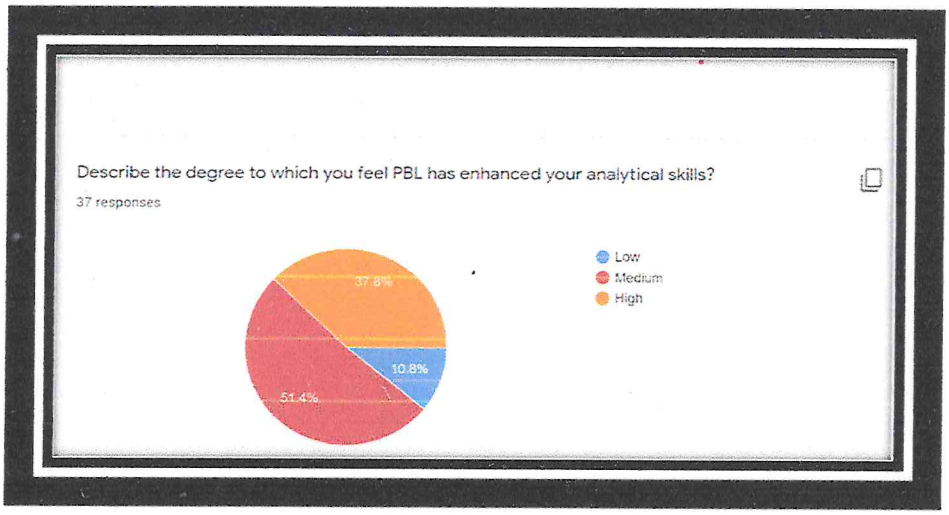
MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

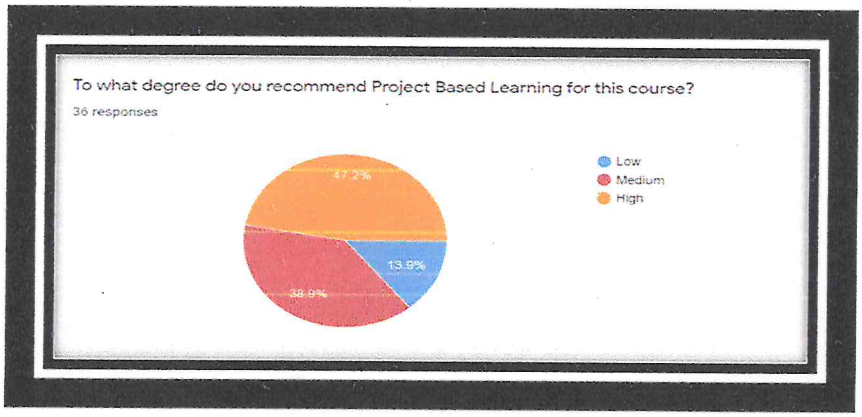
Feedback of project-based learning (By Students):

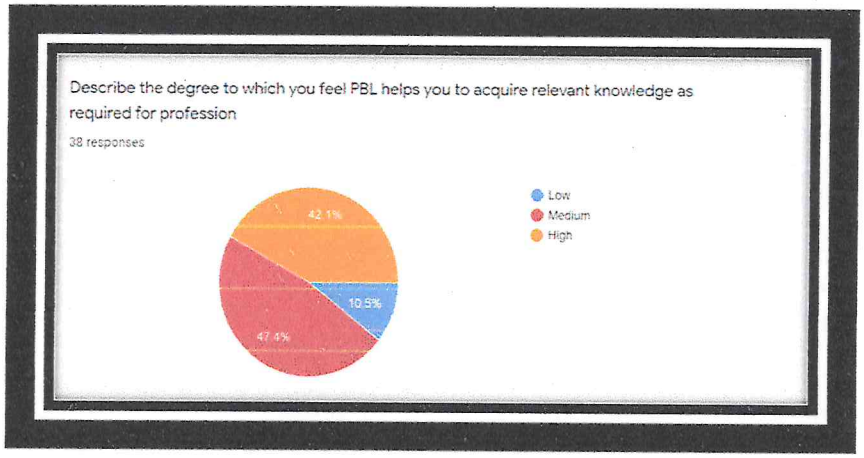
Following feedback was shared by students with respect to a specific course:











Benefits observed and Skills developed by the incorporation of PBL methodology:
Both cognitive and behavioral outcomes are observed in students

- Engages both heart and mind which gives better results
- Acquire Deeper understanding of the algorithms applied while solving the problem
- Increase their confidence in real world problem solving making them more employable
- They feel more satisfied when they see real world impact of their product which encourages them for more innovation in future
- Learns Team work which help develops the attitudes of openess, respect for each other views, curiosity , diversity and moving outside the comfort zone.
- Learn how to communicate their efforts put into that project to the audience
- Increases teacher student relationship
- Investigating a real problem, exploring the data for new insights, critical analysis of results, innovating new techniques & solutions lead to knowledge creation

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

Outcomes of Project Based Learning

1. Publish Research papers
2. Participation in Hackathons
3. Internships at research organizations
4. Better Placements

Challenges faced during the PBL activity

1. Weak students face challenges to adapt to this shift from rote learning to real learning. Therefore, they need to be assisted adequately to build up their confidence to perform in their teams.
2. Mentoring the projects require a lot of time and effort of faculty members from their personal and professional space which become difficult and demand for involvement of more faculty members.
3. Evaluating and monitoring the progress is again an exhaustive process which expects lot of time of faculty members.
4. Assessing the performance of individual members in a team is also a challenge. Suitable rubrics need to be incorporated so that individual performance is judged adequately and doesn't remain hidden behind the group performance.
5. PBL activity need to be aided with certain mind/ relaxations exercises/activities to provide a comfortable ecosystem to a student to innovate to propose novel solutions to societal challenges.

PBL Feedback
2022-2023

SNo	Suggestions	Action Taken
1	Need Industry exposure	Applying Direct Teaching model. Industry Experts will deliver the content and give exposure to industry projects.
2	Students feel difficult to perform as PBL require them to come out of their comfort zones	Plan to integrate Mindfulness sessions. Mindfulness helps us listen to our minds so that students can discover and design what they think and encourages innovation and creativity of students.

2021-2022

Suggestions	Action Taken	Outcomes
They need to work on "Real-life problems"	Problems are taken from SIH and similar sources.	More Participation in Hackathon, Competitions, and Startup grants
"Giving more labs on real-life problems and explaining real-life full applications in class"	Offered Guided projects through Coursera, Infosys Springboard and LinkedIn	Improved practical skills
Start with the basics of the content material instead of just implementing the ideas.	Offered fundamental courses LinkedIn, and Infosys springboard courses	More confident in absorbing and understanding

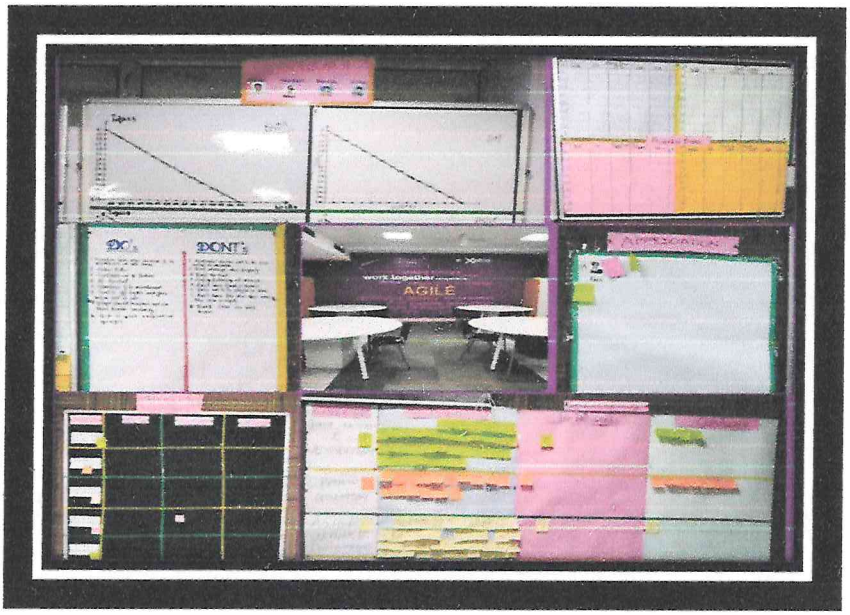
MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

Agile Classrooms- Based Learning (Participative Learning)

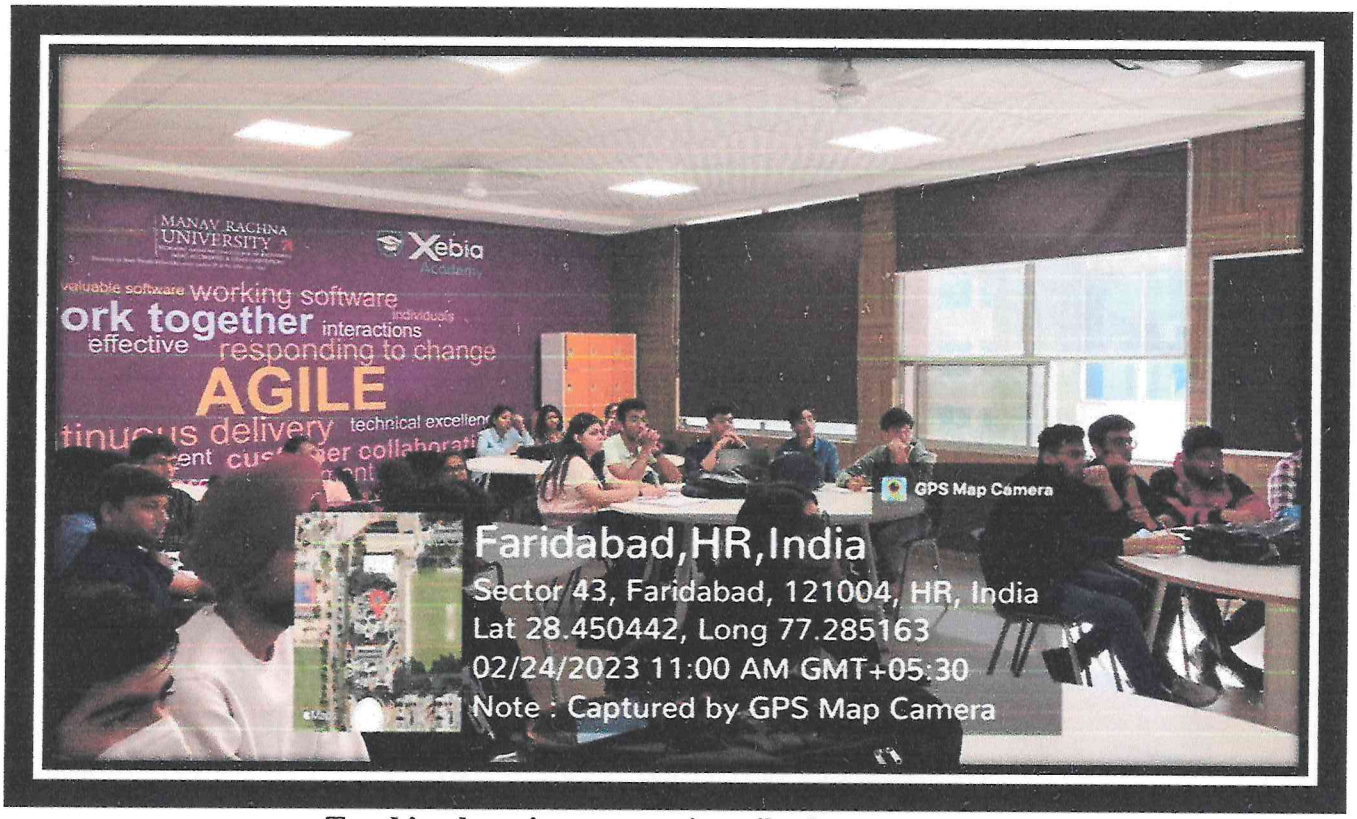
The "Agile Classrooms" subjected to an agile methodology based courses have been designed especially for keeping observable track of courses and student progress, doubt posting by students and its resolution track by the faculty, encouraging group discussions among students.

As per agile practices followed in Industry, students are divided into groups. Following Agile data visualization techniques are being used to monitor the progress of the courses and students:

1. Parking lot for Faculty: To monitor the progress of the course.
2. Parking lot for Students: To put the questions on the board for a particular Course.
3. Progress Board for Students: To monitor the student's progress in terms of attendance & test. It will also monitor punctuality and discipline during the class.
4. Group-wise board: To monitor the course-wise progress of the groups based on the completion criteria.
5. Appreciation Board: To appreciate the students or groups who are performing outstanding and doing extra activities.
6. Working Agreement Board: It is with respect to what to do in class and what not to do.



Working process of Agile classroom-based learning



Teaching learning process in agile classroom

Snapshots of a training session in agile classrooms

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

Flipped classroom- Based Learning

In this pedagogy students are introduced to the learning material and are asked to prepare the topics and apply and reinforce them. They are asked to give presentations to their peers which also allows teachers to spend more time facilitating and supporting student learning, rather than lecturing and delivering. Some faculty have adopted this pedagogy in their subject where the students are provided with

Benefits of Flipped teaching

Increased student engagement and participation

Personalized learning

Improved learning outcomes

Increased confidence

Increased motivation and retention

Department of Electronics & Communication

Participative teaching and learning in Electronics and Communication Engineering (ECE) include:

- Encouraging active learning through hands-on projects and experiments.
- Providing access to up-to-date equipment and software.
- Incorporating industry-relevant case studies and guest lectures.
- Fostering collaboration and teamwork through group projects and peer-to-peer learning.
- Using multimedia tools and resources to support learning, such as online simulations and interactive videos.
- Promoting critical thinking and problem-solving skills through challenging assignments and assessments.
- Providing frequent feedback and opportunities for self-reflection and improvement.
- Encouraging students to participate in professional organizations and attend conferences and workshops to stay up-to-date with industry developments.

E-Waste Management (PBL) Awareness on E-Waste (Experiential & Problem Solving Learning)

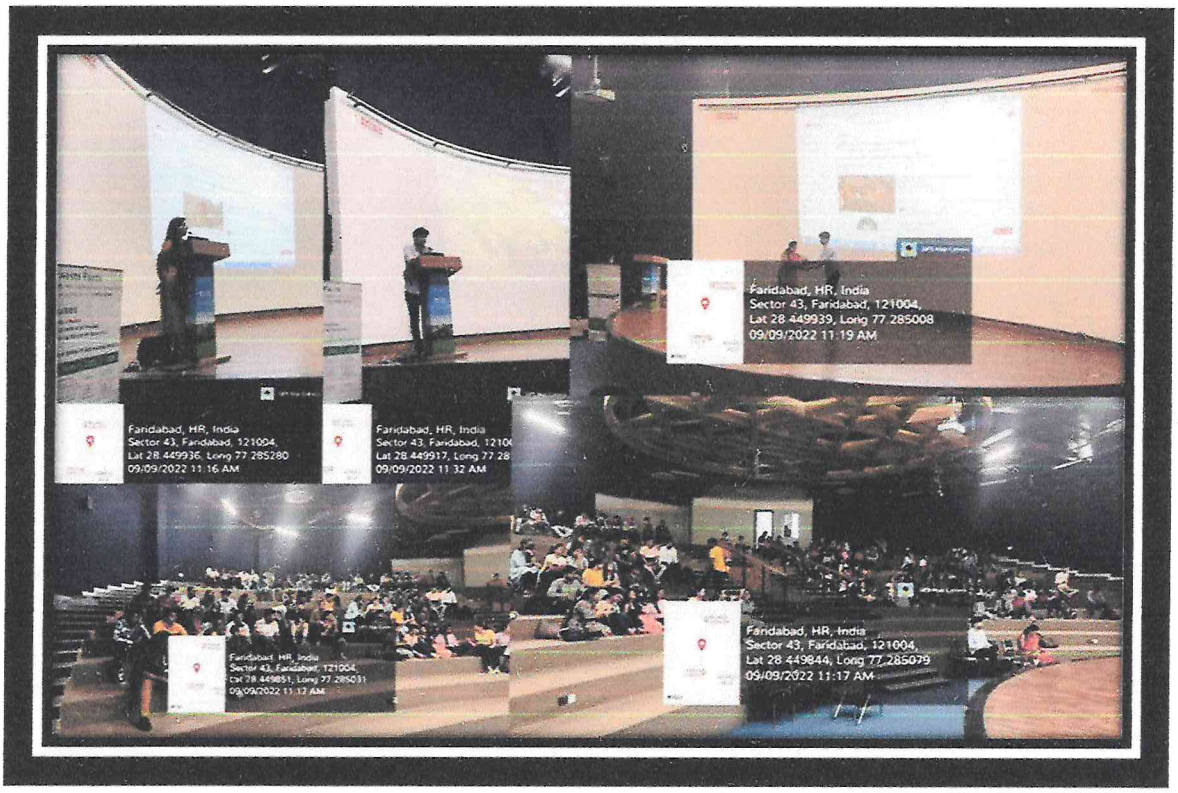
E-waste is one of the major best practices followed by the ECE (Electronics and Communication Engineering) department by raising awareness among students and faculty about the responsible management of electronic waste. The department provides students with opportunities to participate in e-waste collection drives and recycling initiatives.

Additionally, the ECE department implements sustainable practices within the department itself, such as promoting the use of energy-efficient electronics, reducing paper waste, and recycling electronics. By promoting responsible e-waste management practices and sustainable behaviors within the ECE department, students are getting prepared to address the environmental challenges facing the electronics industry and society as a whole.

Manav Rachna University, in partnership with the Hazardous Substances Management Division of the Ministry of Environment, Forest, and Climate Change and NAMO E-Waste Management Ltd., organized an awareness session on E-Waste management on September 9, 2022. The session was conducted by Dr. Yogita Gupta and Dr. Meena Kapahi and was led by Mr. Karan Daryani, the

MANAV RACHNA UNIVERSITY Registrar FARIDABAD

sourcing and relationship manager at NAMO E-Waste Management Ltd. The session covered the significance of e-waste and its proper management, including traditional processes like manual sorting and emerging methods like informal recycling



MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

FUN E E-WASTE WEEK

Under the aegis of Manav Rachna University and in collaboration with the Hazardous Substances Management Division of the ministry of environment, forest and climate change along with NAMO E-Waste Management Ltd. ECE department conducted E-WASTE WEEK having participation from Computer Science and applied sciences.

FUN E E-WASTE WEEK was organized from 12th Oct to 19th Oct wherein the event was concerned with E-WASTE collection and its subsequent recycling by the NAMO industry. The event was promoted in various faculties around the college with student volunteering, pamphlet distribution, word of mouth publicity where people were acknowledged about various E-Waste, their harmful effects and their impact on environment and on human health. The E-Waste collection drive was held which attracted enormous E-Waste collection from lower administrative to higher administrative and from students to various faculty members. The E-Waste collected contained not only small earphones but also including huge LED TV, Speakers, and Juicer. The huge E-Waste collection varying from small to higher range and the curiosity amongst students and faculties indicated that the drive was successful not only in E-Waste collection but also in raising awareness among students and faculty.

The E-Waste collected was taken to NAMO E-WASTE INDUSTRY accompanied by Dr. Yogita Gupta and a few students. The E-Waste collected and deposited was meant to be recycled and reused.

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

PROJECT MAKING

Electronic Waste being one of the harmful wastes not only for the environment but also for human health is one of the major concerns of today's generation. To raise E-Waste recycling quotient and awareness among students an E-Waste project making assignment was given to students. The students were required to show their

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

creativity and critical thinking ability combined with scientific knowledge and basis. Students were required to make a working model out of electronic waste and to explain the scientific principle behind the working model. Students used electronic waste like batteries, motors, LED's etc. and made some wonderful projects displays.
Some of the model which acted as center of attention was:

Students were not only able to recycle E-Waste present around them but also presented some wonderful projects with scientific applications and proper working model conditions.

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

RUBRICS E-Waste Management

Problems in E waste Management	10	Excellent	Good	Acceptable	Poor	Unacceptable
		8~10	5~7	3~4	1~2	0
		Exceeds expectation. Identification of the social, environmental and ethical issues of the project problem	Extend expectations in some manner. Problem and its implications well understood and described in viva	Problem and its implications understood but not well described or presented	Weakly meet expectations. Steps to be followed to solve the defined problem are not specified properly	No connection with topic
Project/Activity Scheduling & Distribution of Work among Team members	10	Good	Acceptable	Poor		
		10.0	5.0	0.0		
		Detailed and extensive Scheduling with timelines provided for each phase of project	Scheduling with timelines meets expectations	Poor / No Project scheduling done. No Work breakdown structure provided		
Literature Survey	10	Excellent	Good	Acceptable	Poor	Unacceptable
		8~10	5~7	3~4	1~2	0
		Outstanding investigation in all aspects	Well-researched project, good depth and thoroughness	Moderate study of the existing systems, collects some basic information	Minimal research or cursory coverage , minimal referencing	No survey
Participation in Activities	10	Excellent	Good	Acceptable	Poor	Unacceptable
		8~10	5~7	3~4	1~2	0
		Full Participation in all Activities organized as organizer /volunteer	Full Participation in 70% activities organized as organizer or volunteer or participant	Full Participation in 50% activities organized as organizer or volunteer or participant	Full Participation in 20% activities organized as organizer or volunteer or participant	No Participation
Technical Knowledge/Viva	10	Excellent	Good	Acceptable	Poor	Unacceptable
		8~10	5~7	3~4	1~2	0
		Extensive knowledge and awareness related to project	Fair knowledge and awareness related to the project	Lacks sufficient knowledge and awareness	Poor knowledge and no awareness related to project	No awareness related to project
Appropriateness of Project/Activity	10	Excellent	Good	Acceptable	Poor	Unacceptable
		8~10	5~7	3~4	1~2	0
		Excellent design covering all aspects of the specification, fully appropriate to the project, showing clear thinking	Appropriate design, clear and accurate, satisfactory for the implementation of the project	Limited design, or design not well related to specification or model	Very minimal design	No design
Implementation	10	Excellent	Good	Acceptable	Poor	Unacceptable
		8~10	5~7	3~4	1~2	0
		Excellent use of engineering principles and models both at higher and lower levels of implementation from design cycle.	Project works well, with only some minor functional limitations	Project works well with only some major functional limitations	Project does not work in most parts to requirements specification	No implementation
Technical Knowledge/Viva	10	Excellent	Good	Acceptable	Poor	Unacceptable
		8~10	5~7	3~4	1~2	0
		Extensive knowledge and awareness related to the project	Fair knowledge and awareness related to the project	Lacks sufficient knowledge and awareness	Poor knowledge and no awareness related to project	No knowledge and No awareness related to project
Demonstration of Model working	10	Excellent	Good	Acceptable	Poor	Unacceptable
		8~10	5~7	3~4	1~2	0
		All defined objectives are achieved	70% defined objectives are achieved	40% defined objectives are achieved	20% defined objectives are achieved	No demonstration
Final Presentation	10	Excellent	Good	Acceptable	Poor	Unacceptable
		8~10	5~7	3~4	1~2	0
		Results are presented in very appropriate manner. Project work is well summarized and concluded. Future extensions in the project are well specified	Results are presented in good manner. Project work summary and conclusion not very appropriate. Future extensions in the project are specified	Results presented are not much satisfactory. Project work summary and conclusion not very appropriate. Future extensions in the project are not specified	Results are not presented properly. Project work is not summarized and concluded. Future extensions in the project are not specified	No Presentation

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

MECHANICAL ENGINEERING DEPARTMENT

ROBOTICS-PBL Mode (Experiential & Problem Solving Learning)

In this subject we used a project-based learning approach to teach robotics basics to undergraduate B.Tech-SMA Students. The course coverage includes basic electronics, robot construction and programming using arduino. Students developed and tested a robot prototype. The project was evaluated using a questionnaire. The evaluation result shows that students developed skills in circuit design, problem-solving and robot development for addressing real world problems and team work. The students had challenges of using limited resources for robot detailed design and construction. The results indicate that robotics education through project-based learning motivates students to learn and implement product design that addresses real world problems.

Kits in classroom learning are valuable in classrooms and they help to attain the following:

1) Hand-on learning and engagement: Students of all ages enjoy hand-on construction activities that involve structure, motion, sensors, programming, and manipulation; these bring opportunities for them to find something that suits their particular interests.

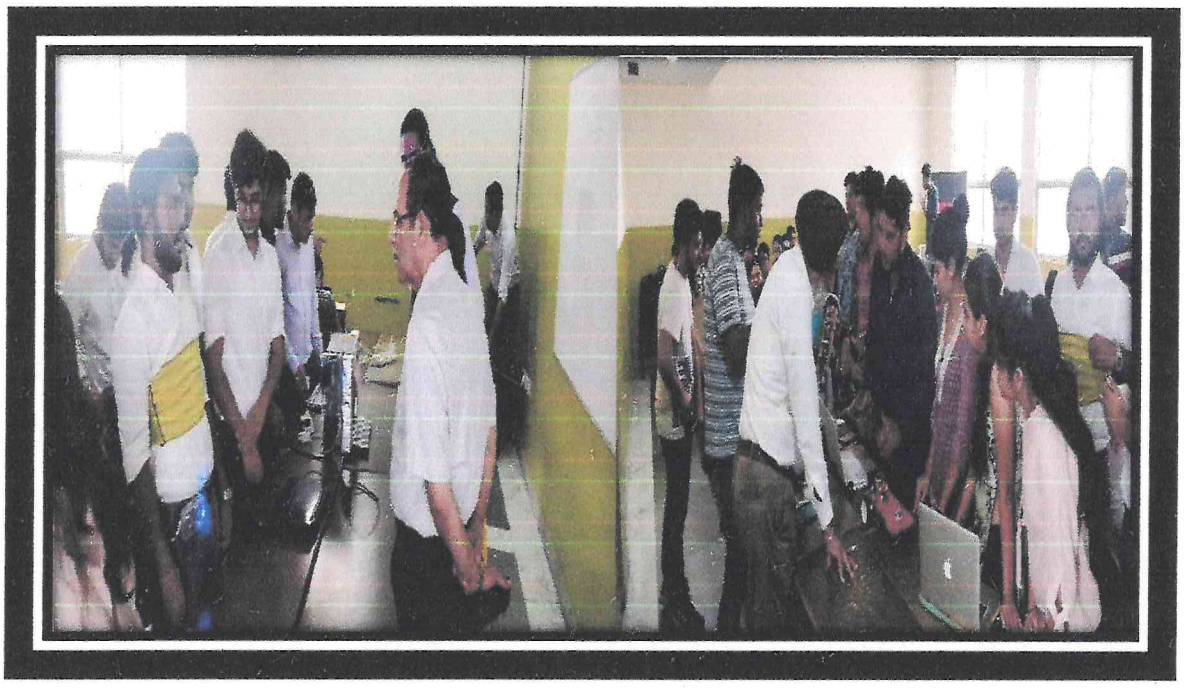
2) Problem solving and training: Robotics enables students to become problem solvers as they develop robots that have well defined tasks to accomplish before the actual construction of the robot begins.

3) The inclusion of a computer programming allows for deeper understanding into issues such as remote sensing, control, and autonomous functioning.

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

ENGINEERING EXPLORATION 2019

Manav Rachna University conducted a one semester course on Engineering Exploration (January-May 2019) followed by Project Expo on 21st June 2019 to display the projects made by B.Tech 1st year students (Computer Science and Engineering, Mechanical Engineering & Electronics and Computer Engineering). This course focused on Engineering Design, Mechanisms, Platform Based Development, Data Acquisition and Analysis, Project Management, Sustainability and Ethics. It followed Project Based Learning Pedagogy.



MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

For the entire semester, students have undergone intensive training on various aspects of project development like problem solving, software and hardware interface, report writing etc. and finally developed projects in teams. It was indeed a remarkable moment that the 1st year displayed their projects right in 1st year. A total of 32 projects by 210 B.Tech 1st year students were exhibited. Out of these 32 projects, top 10 projects were selected. These 10 project teams were invited to defend their innovation in front of around 120 faculties and students. Among these 10 team, 4 teams (Top 3 and 1 jury choice) were finally selected and prizes were distributed accordingly. The exhibition was judged by Dr. B.S. Gill Director MRIIC, Mr. Nikhil Dalmia, Techno Planet Labs and Dr. Abhiruchi Passi HoD ECE MRIIRS.

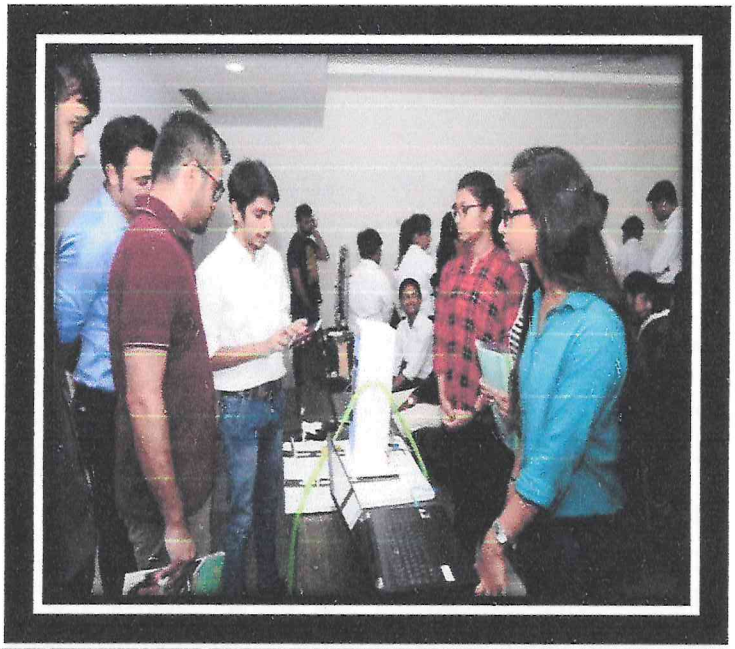
MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

Engineering Exploration 2018

Manav Rachna University conducted a one semester course on Engineering Exploration (January-May 2018) followed by Project Expo on 20th June 2018 to display the projects made by B.Tech. Computer Science and Engineering & B.Tech Mechanical Engineering 1st year students. This course focused on Engineering Design, Mechanisms, Platform Based Development, Data Acquisition and Analysis, Project Management, Sustainability and Ethics. It followed Project Based Learning Pedagogy.

At the end of this course, Students had undergone intensive training for 2 weeks on various aspects of project development like problem solving, software and hardware interface, report writing etc. and finally developed projects in teams. It was indeed a remarkable moment that the 1st year students displayed their projects right in the 1st year. A total of 45 projects were developed and exhibited by 260 B.Tech students of various discipline. Out of these 45 projects, top 6 projects were selected. These 6 project teams were invited to defend their innovation in front of approx 120 faculties and students. Among these 6 teams, 4 teams were finally selected and prizes were distributed accordingly. 20 students were also awarded with 3 months internship with Techno Planet Labs. The exhibition was judged by Dr. B.S. Gill Director MRIIC, Mr. Mohit Bahl Founder Technoplanet Labs and Mr. Rahul Hans Director Adelantos Technology.

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD



MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

SCHOOL OF LAW

Participative Learning at Department of Law

LEGAL AID AND AWARENESS CAMP HELD ON FEBRUARY 21 and 23, 2022 (Experiential & Participative Learning)

Report on visits to Village (Anangpur and Ankheer) as a legal aid camp.

To recognize and provide a solution for the issues faced by the people residing in the villages mentioned above situated in Faridabad, the District Legal Service Authority (*hereinafter* DLSA) was directed by the Haryana State Legal Services Authority, Panchkula to spread Legal Awareness. DLSA further issued a notice dated February 08, 2022 to the School of Law, MRU, to arrange the program. In consonance with the notice, Legal Aid Committee, SoL, MRU, took the initiative to organize the village visits on two dates, i.e., February 21, 2022 (Monday) and February 23, 2022 (Wednesday).

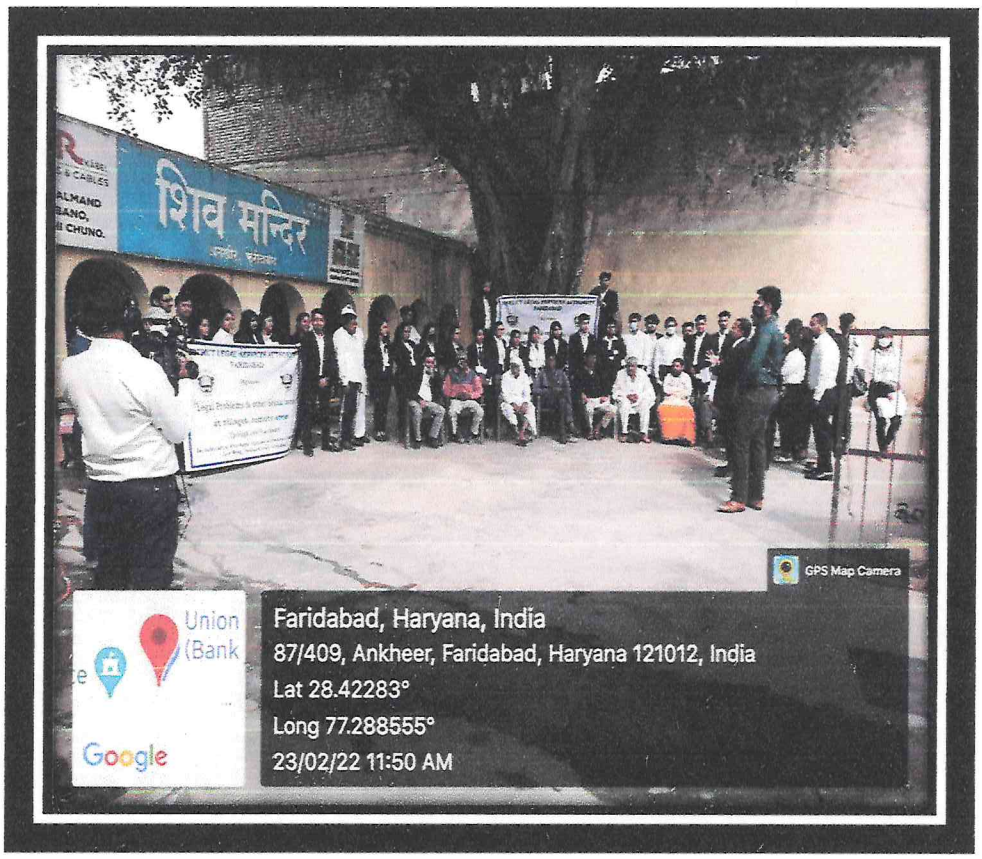
A questionnaire consisting of 20 (Twenty) questions related to the issues that were provided in the letter shared by DLSA was prepared by the Legal Aid core-committee members. The major topics on which questionnaire was based were education, sanitation, caste, unorganized labor, health, transportation, gender inequality, drug abuse, domestic violence, sexual assault, child abuse, and human trafficking.

On February 21, 2022, a team of 31 law students visited Anangpur village, students assembled at the chaupal along with the DLSA members, Panel Advocates, and the head of the village. Thereafter the DLSA members introduced the reason for the survey and the issues that would be dealt with after it. After a warm welcome by the villagers, students conducted the survey by going door to door throughout the village. The teams of the students successfully collected the data from 180 families. The villagers were really welcoming of the students and tried to take maximum help from them by informing them about the issues that they were facing. The teams got back around 2 PM, along with the data.

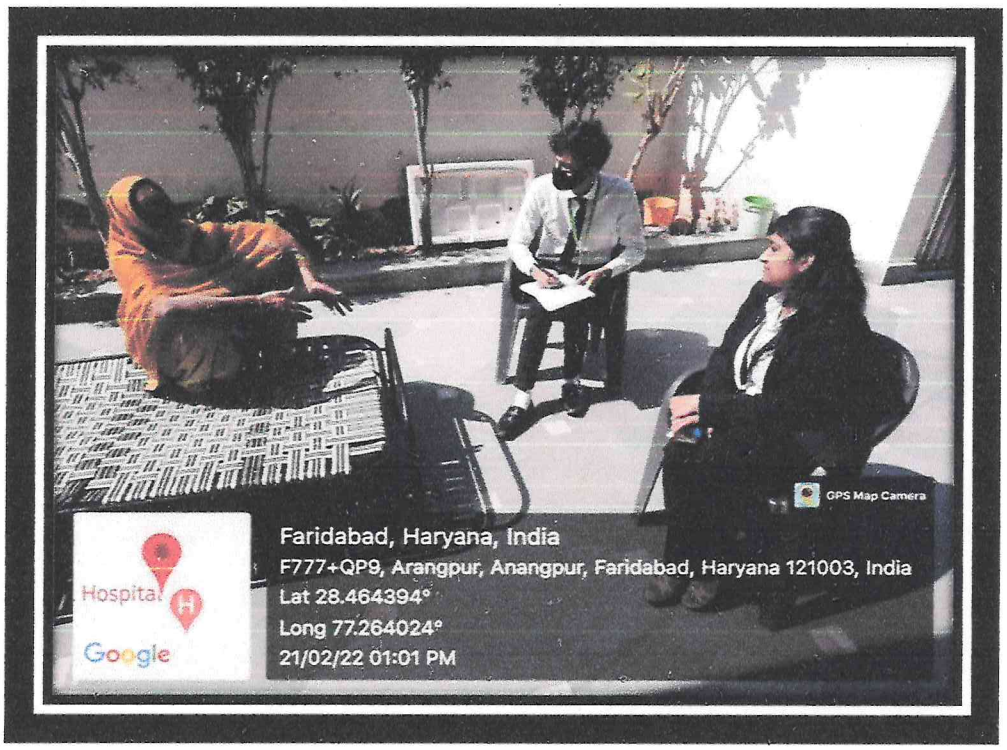
For the next camp, organized on February 23, 2022, a team of 44 students visited Ankheer village. The students assembled at a Shiv temple which they considered to be a meeting point with the head of the village and the DLSA members. After the introduction, the students went on for the survey and collected data from 150

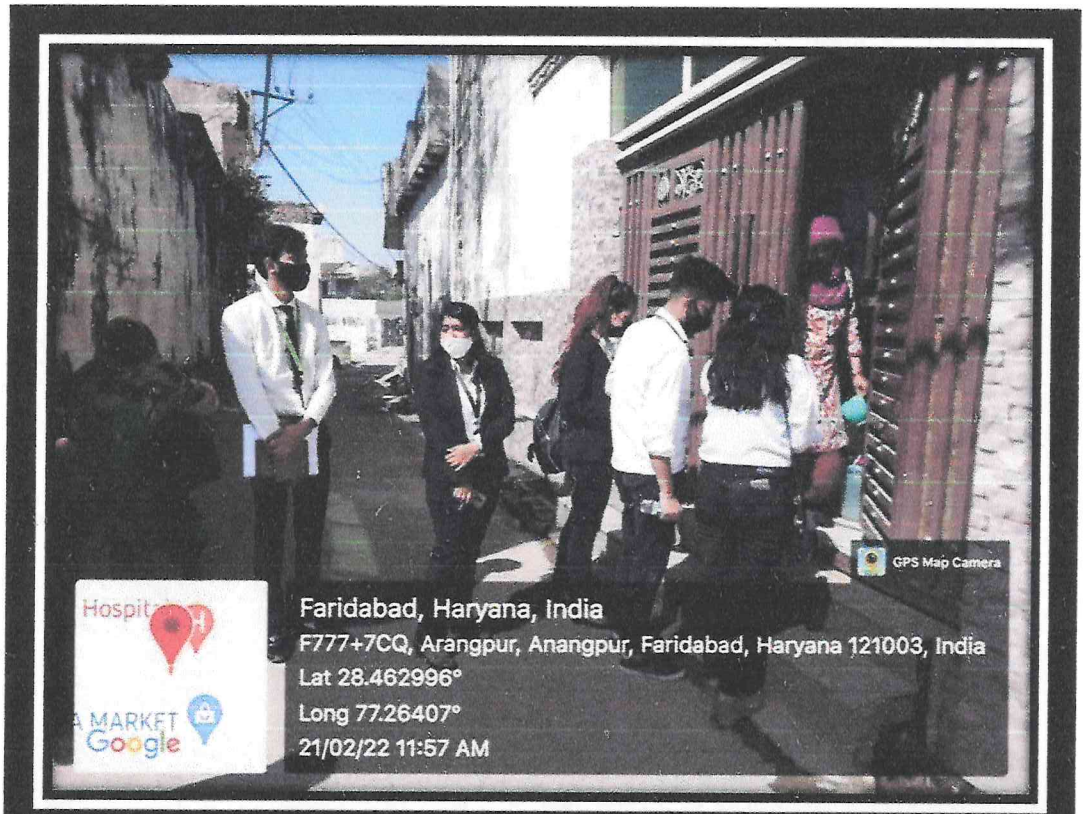
families. People of this village were welcoming of the students and informed them about the major issues that they were facing and would require help about. The teams got back at 1:30 PM after the completion of the survey. These responses would form as the base for the legal aid that could be provided to the people in need and ultimately would help in the betterment of society.

The legal Aid Committee and DLSA have mutually decided to collect data from these two villages as both the villages are adopted by Manav Rachna University, and it was convenient to establish trust while obtaining responses.

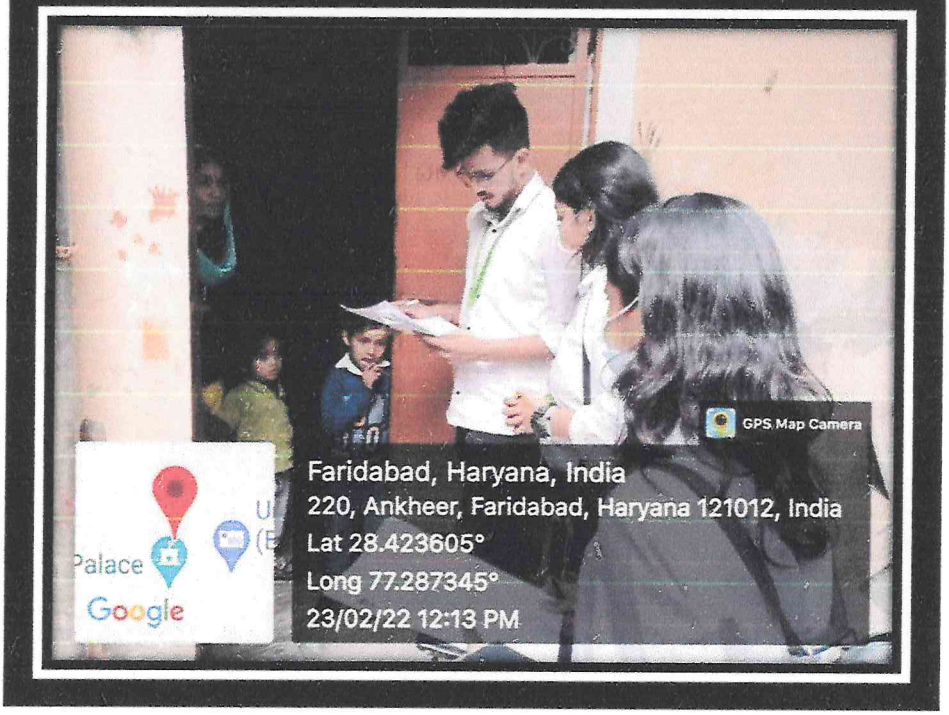


MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

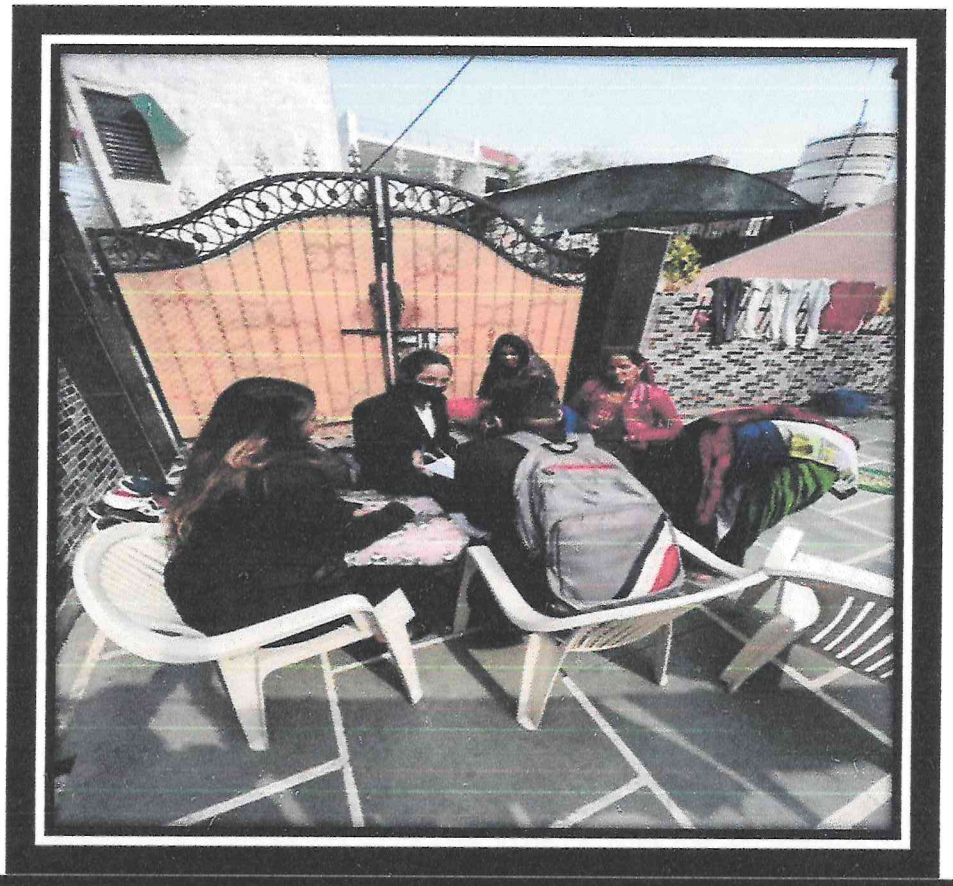

GPS Map Camera
Faridabad, Haryana, India
F777+QP9, Arangpur, Anangpur, Faridabad, Haryana 121003, India
Lat 28.464394°
Long 77.264024°
21/02/22 01:01 PM
Hospital
Google



MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD



MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD



Mandeep

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

Legal Aid Camp at Neemka Jail In March 2020 (Experiential & Participative Learning)

Twenty Seven Students & faculty under the Legal Aid Clinic of Faculty of Law, Manav Rachna University visited the Neemka Jail to assist District Legal Service Authority (hereinafter DLSA), Faridabad in March 2020. The basic objective of this visit was to know the kind of environment provided to the prisoners and help them legally. Students were briefed by the authority of the Jail before entering into jail premises. The Students performed Nukkad Natak to spread awareness among the prisoners. Further, students interacted with the prisoners and tried to provide solutions to their problems. Students who had an interest in criminal law were really curious about the visit and certainly gained a new edge in understanding the real-time scenario.

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

SCHOOL OF EDUCATION & HUMANITIES

Experiential, Participative & Problem Based Learning at Department of Education

CONCEPT MAPS CREATION (Experiential & Participative Learning)

PEDAGOGY OF PHYSICAL SCIENCES -II

B.Sc. B.Ed SEM 6

Concept maps is an interesting way of presenting content to students so that learning is constructive and experiential. Pedagogy of Physical Sciences in Sem 6 and the learners are required to understand the meaning and types of concept maps and learn to use various types of concept maps while teaching their future students. The logic behind each map, proper use of arrows and colors to make a topic easy to understand are important pointers. is the reason why it has been included in the syllabus.

Students were asked to select a topic they would teach at any class of secondary level and prepare a concept map and teach a simulated class using the same.

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

Activity- Group Discussion (Participative Learning)

B Ed Sem II

Group Discussions are important activities that develop team building skills among students with developing confidence and listening skills. Such activities allow the participants to ponder over the views provided by each other. It leads to an accommodation and acceptance of the view points of others. The activity is conducted in the language labs to improve and enhance the speaking and speaking skills of the students. A group discussion was conducted for B.Ed students on the topics:

- Social Media: Boon or a Bane
- Online vs. Offline Education

The students participated in the activity and relevant points were discussed. It helped the students to build up their confidence and improve their communication skills.

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

Collaborative Learning through Clan Activities (Participative Learning)

Faculty of Education, Manav Rachna University organised Wall Magazine presentation under the aegis of Manav Rachna Life Skills Program and Research Committee, Department of Education in order to sharpen the research and presentation skills among the future facilitators. During the presentation, students explored education systems of Finland, Croatia, Sweden and China. Wall Magazines and Clan group presentations were given.

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

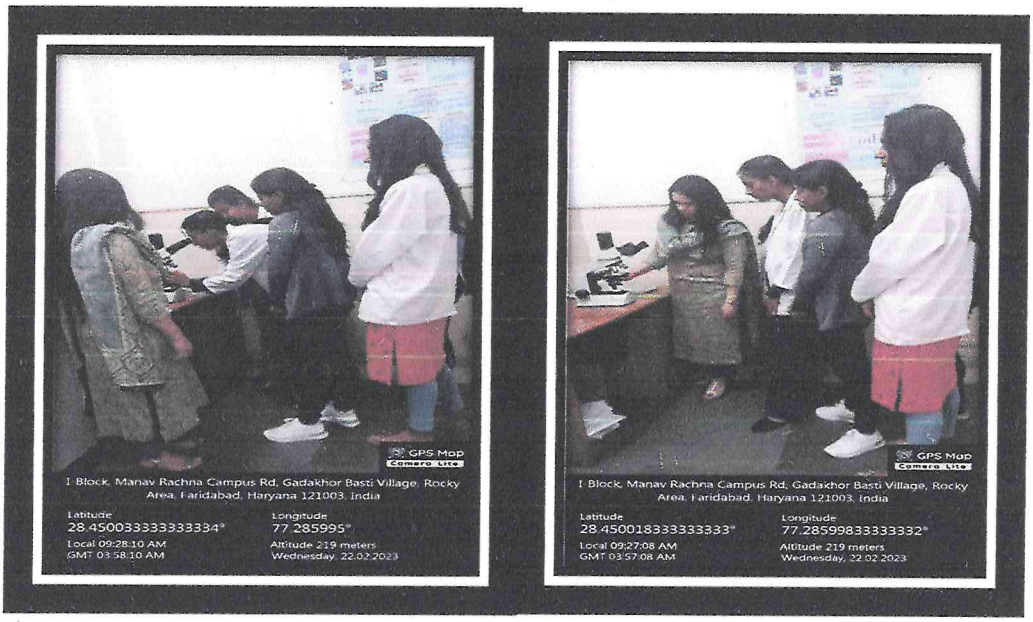
Use of innovative pedagogies for curriculum transaction (Experiential learning)

Program: Integrated B.Sc. Ed Sem II & IV

Experiential learning allows the student to construct meaning of concepts easily. Science (Zoology) learners (Integrated B.Sc. B. Ed) for providing hands-on learning for developing better understanding. Giving the learners hands-on and real field experience offers the learners the opportunity to acquire skills and knowledge through first hand experiences, reflect upon those experiences to develop new skills, new attitudes, new ways of thinking and allowing them to develop a better understanding of the concepts at hand.

To bridge the gap between theory and practice, the syllabus was mapped to identify the different practical that can be undertaken for developing better insights of the topic in hand.

The students of semester 2 Integrated B.Sc. B Ed program were given specimens to study the morphology of organisms under different phylums. They prepared the observation tables based on their studies of the specimens. They prepared temporary slides in the lab to study the stages of mitotic divisions in the roots of the onion and observations were recorded as seen under the electron microscope. Students were asked to share their observations and conclusions were drawn thereafter.



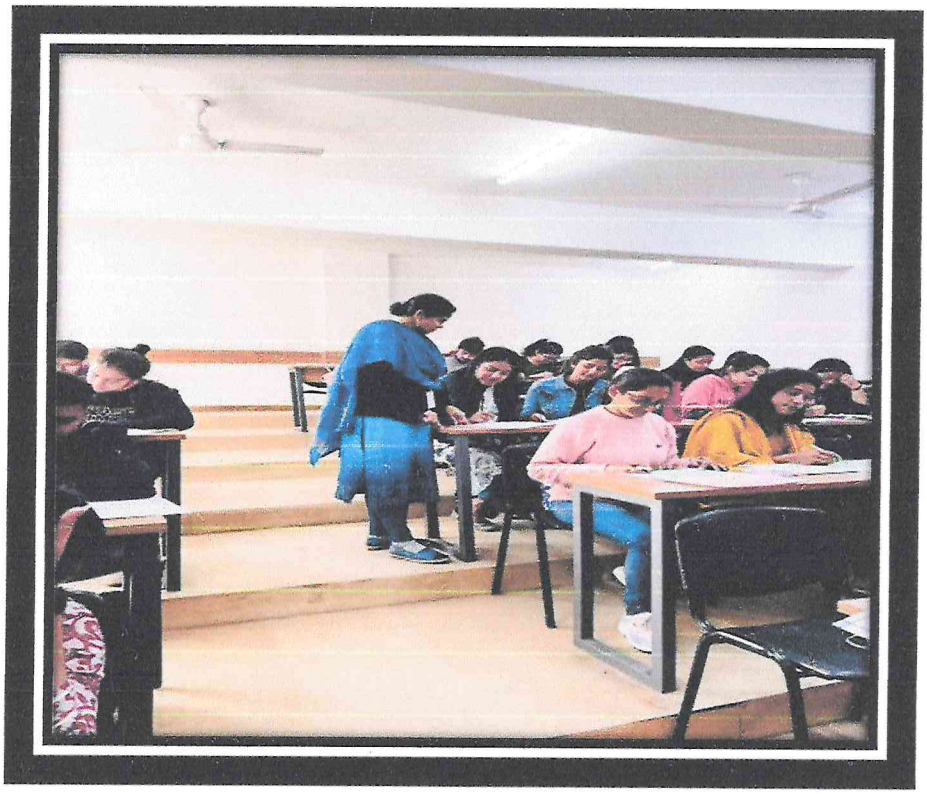
MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

Activity- Poster/ Collage Making (Experiential & Participative Learning)

B.Ed. students of the School of Education and Humanities participated in a two hour poster and collage making activity. Students were instructed to bring their own colouring material and papers for the activity, which was conducted during the practical class in the classroom.

The theme of the activity was to focus on the representation of the Preamble of the Indian Constitution, and participants were to use their creativity by creating collages and posters. About thirty students participated enthusiastically in the activity.

The primary goal was to inculcate a sense of patriotism. The students' enthusiasm was evident in their presentation. The main goals of this activity were to engage the students and encourage their creativity while giving them a platform to showcase their skills. It inspired them to use their critical and inventive thinking skills to advance artistic beauty.



MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

Video Link

https://drive.google.com/drive/folders/16hCBYQJ3C9DhZqJqlvsKLlbTGc9D8VCh

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

Best Lab Practices (Experiential Learning)

Subjects Taught- Botany in BSc BEd Semesters II, IV and VI Following best practices are followed-

- Giving proper orientation about the subject and the syllabus to be studied in the semester.
- Periodic and time bound coverage of portions as per syllabus including the practical works.
- Providing notes and additional study materials on all the topics to be covered in the syllabus.
- Encouraging students to be punctual and regular in taking classes
- Conducting periodic assignments, presentations, and viva for evaluation the student's progress.
- Providing constructive feedback to students for improvement and enhancement of their learning.
- Conducting remedial classes for clarification of students' doubts.
- Extensive use of ICT-based teaching learning resources.
- Discussing students' subject related issues and mentoring them to improve their learning strategies.
- Maintaining a continuous communication with all the students.
- Conducting demonstration-based practical classes for better understanding of the practical concepts.

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

• Providing hands-on training to students to use scientific equipments like dissecting microscope, compound microscope, apparatus, specimens, and chemicals for experiential learning.

• Making students practice the art of writing answers with diagrammatic representations and flowcharts for scoring better marks in the exams.

• Periodic motivational classes for students to help them manage stress.

• Fortnightly rotation of duties of class representative among students to develop leadership skills in each student.

Babita

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

Role Play (Participative Learning)

Coordinator- Dr Arvinder Kaur

Activity was organized by Dr. Arvinder Kaur for class B.A.B.Ed. Sem 8 for subject Guidance and Counselling. They were asked to perform a short role play describing the importance of guidance and counseling in an individual's life.

Students were divided into different groups.

Topics taken by students were:-

1. Relationship issues
2. Discrimination
3. Career choice
4. Monologue on Depression

Students were so enthusiastic to perform the role play as they were practicing a lot to give their 100 percent. Watching the students perform like professionals was so rewarding as it brought out their aesthetic hidden artistic talents so beautifully.

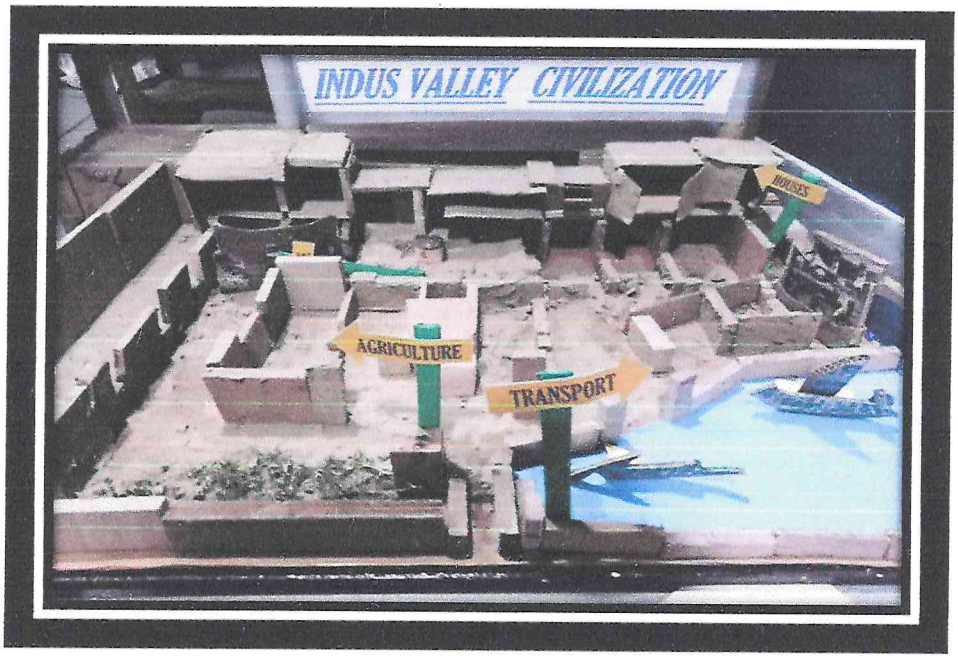
MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

Indus Valley Civilization (Experiential Learning)

Dr. Rashee Singh

Project Based Learning is a teaching method in which the students gain knowledge and skills by working for an extended period of time to investigate and respond to an authentic, engaging, and complex question, problem, or challenge. I shared some examples of the projects that can be taken up by students, and then they shared the possible areas in which they wanted to work.

They were given time of about a semester, students worked on their projects that were engaging them in solving a real-world problem or answering a complex question. They demonstrated their knowledge and skills by creating a public product or presentation for a real audience like videos, podcasts, model, did surveys to work on research paper. As a result, students developed deep content knowledge as well as critical thinking, collaboration, creativity, and communication skills.



Model on Indus Valley Civilization

Rashee

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

The Economics of Valentines (Participative Learning)

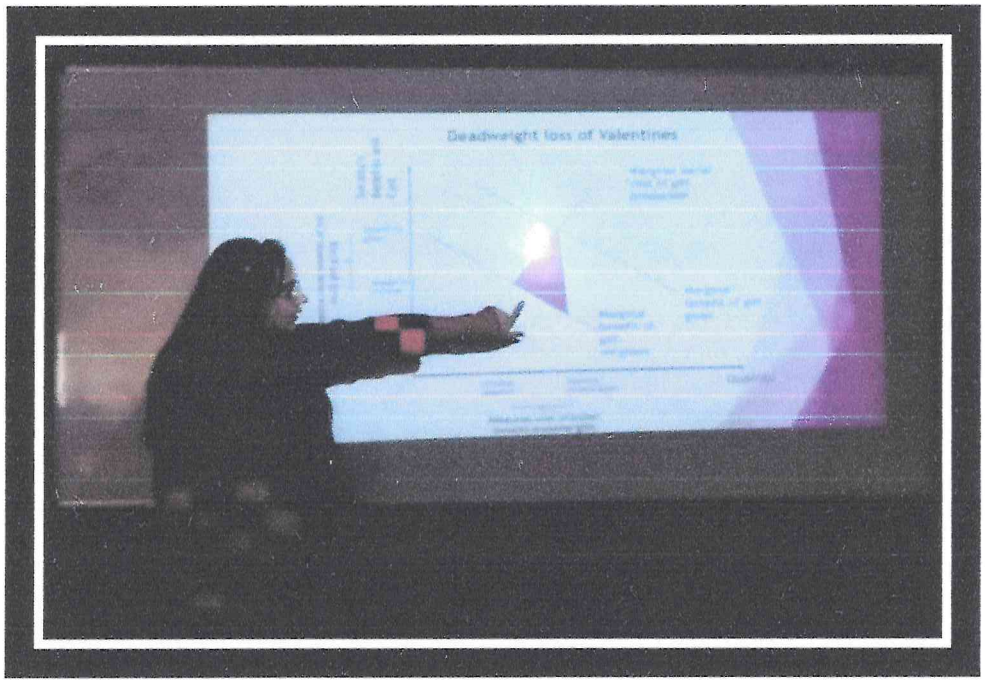
Session Expert: Ms. Kriti Dagar

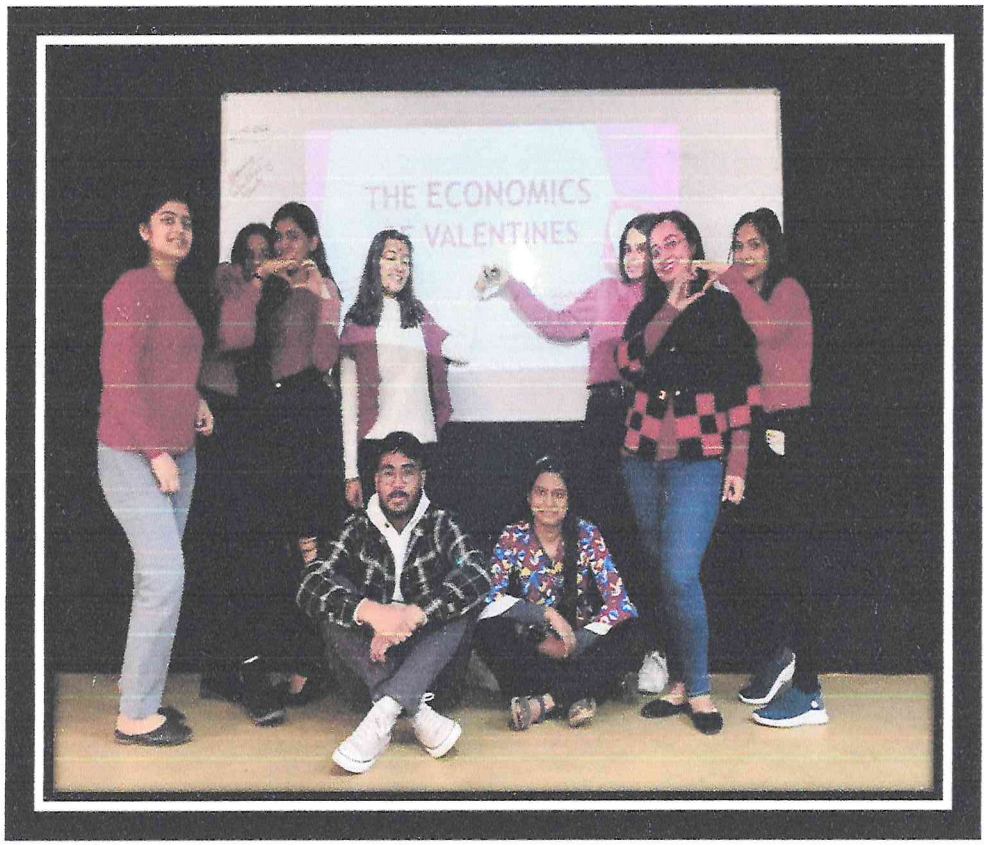
Activity: Keeping in view the popularity of Valentines among students, an interesting activity was organised to portray the dynamics of the money market through economic tools such as the free market, wealth creation, and the marginal benefit-marginal cost approach.

The demand-supply market activities of the producers and consumers during valentines week were taught to students reflecting the deadweight loss of valentines day purchases.

The outcome of the activity was that it helped students understand the market approach to money creation by producers rather than the boring bookish teaching method. And the perks included distribution of chocolates as a token of love.

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD





MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

Subject: Education in Contemporary India (Participative Learning)

Faculty: Ms Ridhi Khanna

Activity: Types of Schools

Through collaborating learning the topic of types of schools was taught. Under this the learners were divided into groups of 4-5. Each group representative has to pick one chit in which a type of school was written. Each group was given 10 minutes duration to develop content on respective school and relevant question attached to it. After preparation of content and questions, each group need to present the topic and have to ask relevant question from the audience on the basis of content shared with them. A matrix was developed beforehand and scoring was given for every correct answer to the group. Through this activity, a major topics related to specific school was covered; learners were actively involved, healthy competition was prevailed. At the end of the activity total scoring was given and ranking of group is done which bring a sense of accomplishment to learner belonging to higher rank and motivation to do well to learner belonging to lower rank.

The types of school are as follows

- Public Schools
- Private Schools
- Boarding Schools
- CBSE and ICSE Schools
- Magnet schools
- Charter schools
- Montessori Schools
- Religious Schools
- IB and CIE Board School
- Special Schools
- Kindergarten School

In continuation of activity, the videos clips are shown of different school system like Montessori School, Magnet School, Private School, Public School, Religious School, Boarding School, etc to provide concept clarity and interest based learning. A reflection exercise and critique about different school culture is provided through these videos.

Riddhi

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

School of Management & Commerce

Department of Management

GD session on the Union Budget 2022-23 (Participative Learning & Experiential Learning)

Department of Management and Commerce organized a GD session on the Union budget 2022-23 recently. The session was chaired by Prof. Parul Jhajharia, Dean DMC; Dr. Pragati Chauhan, HOD, DMC, faculty members, and students.

The students and the faculty enthusiastically shared their opinions about the same. Students discussed the following points:

1. This year's Budget has a significant focus on PM Inclusive Development, Productivity Improvement, Sunrise Opportunities, Energy Transition, Climate Action, Investment Financing
2. According to the Budget, productivity-linked incentive schemes in 14 industries have remarkably responded, with investment intentions totaling Rs 30 lakh crore.
3. Economic recovery provisions that benefit from public investment and capital spending were reviewed.
4. The question of whether the Budget would boost growth is being debated.

Overall, it was a very informative and knowledge-sharing session for all.

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

Market Place Business Simulation Workshop (Experiential Learning)

School of Management & Commerce, in association with Innovation and Incubation MRU, organized a three-day Market Place Business Simulation workshop for BBA students. The Marketplace is the most realistic strategic planning and management simulation available in the world. The Marketplace lets you build an entrepreneurial firm, experiment with strategies, and compete with other firms in a virtual business world. A total of 40 students participated in the workshop, divided into 8 teams of 5 members each who had to compete in a market for the Carbon Fiber Bike Challenge. This Simulation Workshop was an enthralling insight into the world of business development, sales, manufacturing, and the intricacies of creating and selling a product through four quarters. In these four decision rounds representing a year of compressed time, the students had to evaluate the market opportunity, choose a business strategy, refine marketing tactics, hire new employees, assess the tactical options, and make a series of decisions with profitability in mind. The decisions taken by the teams by each team were combined with the decisions of their competitors and run through a marketplace simulator. The results were then fed back to the players for the next round of decision-making.

The last day had all the 8 teams presenting their entire product line with the performance in allquarters and the amount of money they would like to pitch for investment.

The entire simulation game was led by Master Simulation Coach- Dr. Bindu Agrawal, who is a certified coach in the area of business simulation. Dr. Bindu Agrawal, along with Dr. Pragati Chauhan- Hod SMC, handheld the students to submit and present each quarter's results and finally make a final submission. The

students shared their feedback which expressed their satisfactory learning experience that they went through the simulation exercise and received Marketplace US certifications.

The team that performed the best in the simulated market was awarded winner certificates by Dr. Parul Jhajharia-Dean SMC.

Parul

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

SCHOOL OF SCIENCES

Workshop on Good lab Practices (Experiential & Participative Learning)

Department of Chemistry organized a One-Day workshop on "Good Lab Practices GLP" recently.

Professor Dr. Sangita Pandita from Zakir Hussain College, Delhi University was the guest of honor. She has more than 3 decades of experience in sustainable Chemistry. The workshop started with a lecture and theoretical aspects of GLP, why GLP is necessary, and what factors are there for laboratory practice. She mentioned the importance of MSDS, TLV, Lab record file, KYA etc.

The session was followed by GLP demonstration in MG02, Dr. CNR RAO Laboratory where students were trained to isolate or extract caffeine from different tea samples (including green tea, brown tea, kahwa etc) and Trimyristin from nutmeg following GLP practices in microscale.

The last experiment was really fun where students made BOUNCY Balls in chemistry lab with boric acid and PVA.

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

MANAV RACHNA UNIVERSITY

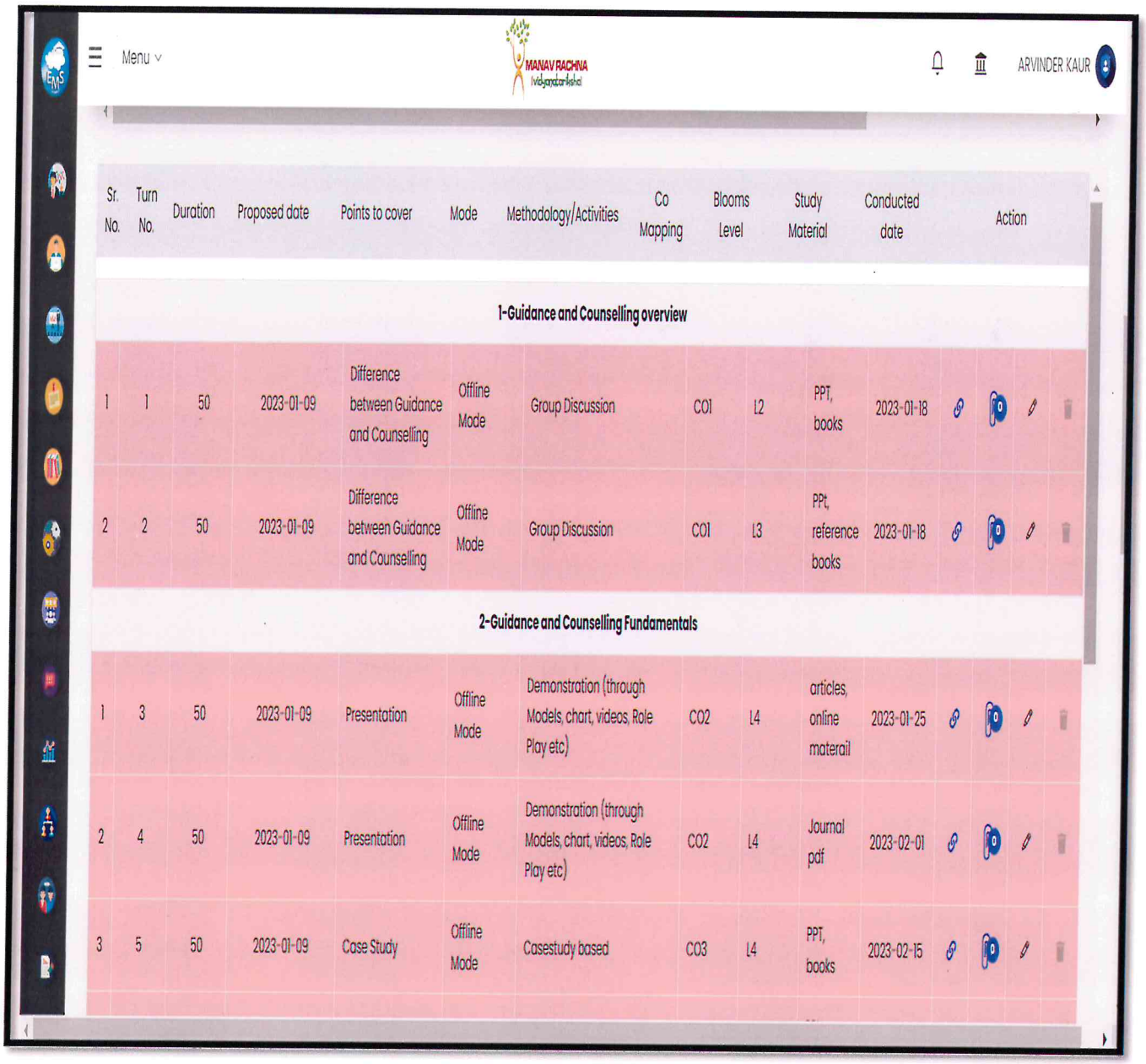
MANAV RACHNA
Vidyanatarikshat

MANAV RACHNA UNIVERSITY
Declared as State Private University vide Haryana Act 26 of 2014

SAMPLE SESSION PLANS INDICATING STUDENT CENTRIC LEARNING THROUGH EXPERIENTIAL, PARTICIPATIVE AND PROBLEM SOLVING METHODS

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

Faculty Name	**Dr. Arvinder Kaur**
Designation	**Assistant Professor**
Session Plan	**B.A.B.Ed. Sem 6 and B.A.B.Ed Sem 8**
Subject	**Professional Ethics for Teachers Guidance and Counselling**
Department	**Department of Education and Humanities, Manav Rachna University**



Menu

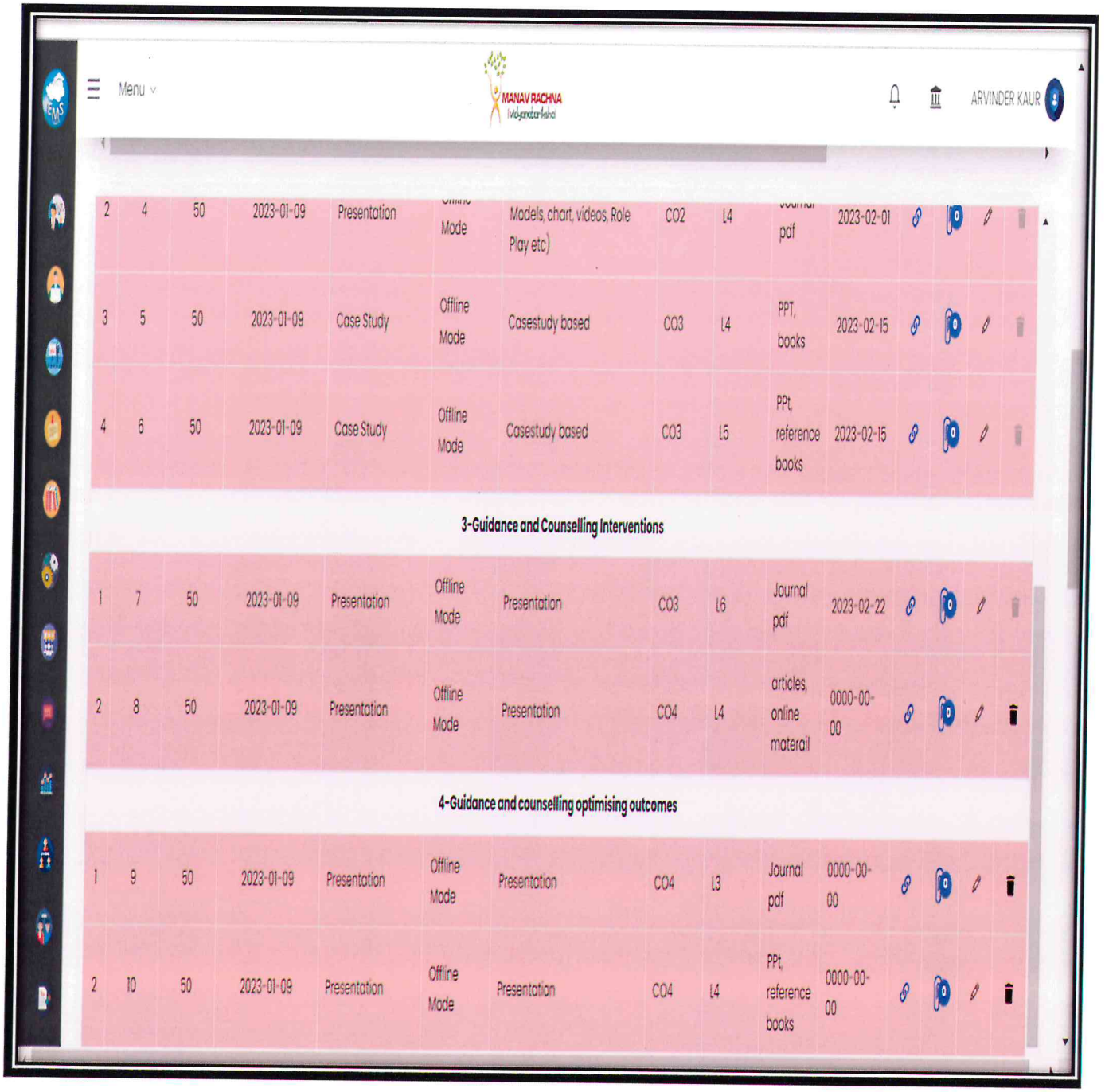
MANAV RACHNA
Vidyanidarshini

ARVINDER KAUR

Sr. No.	Turn No.	Duration	Proposed date	Points to cover	Mode	Methodology/Activities	Co Mapping	Blooms Level	Study Material	Conducted date	Action
1-Guidance and Counselling overview											
1	1	50	2023-01-09	Difference between Guidance and Counselling	Offline Mode	Group Discussion	CO1	L2	PPT, books	2023-01-18	
2	2	50	2023-01-09	Difference between Guidance and Counselling	Offline Mode	Group Discussion	CO1	L3	PPt, reference books	2023-01-18	
2-Guidance and Counselling Fundamentals											
1	3	50	2023-01-09	Presentation	Offline Mode	Demonstration (through Models, chart, videos, Role Play etc)	CO2	L4	articles, online materail	2023-01-25	
2	4	50	2023-01-09	Presentation	Offline Mode	Demonstration (through Models, chart, videos, Role Play etc)	CO2	L4	Journal pdf	2023-02-01	
3	5	50	2023-01-09	Case Study	Offline Mode	Casestudy based	CO3	L4	PPT, books	2023-02-15	

Arvinder

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD



2	4	50	2023-01-09	Presentation	Mode	Models, chart, videos, Role Play etc)	CO2	L4	pdf	2023-02-01			
3	5	50	2023-01-09	Case Study	Offline Mode	Casestudy based	CO3	L4	PPT, books	2023-02-15			
4	6	50	2023-01-09	Case Study	Offline Mode	Casestudy based	CO3	L5	PPt, reference books	2023-02-15			

3-Guidance and Counselling Interventions

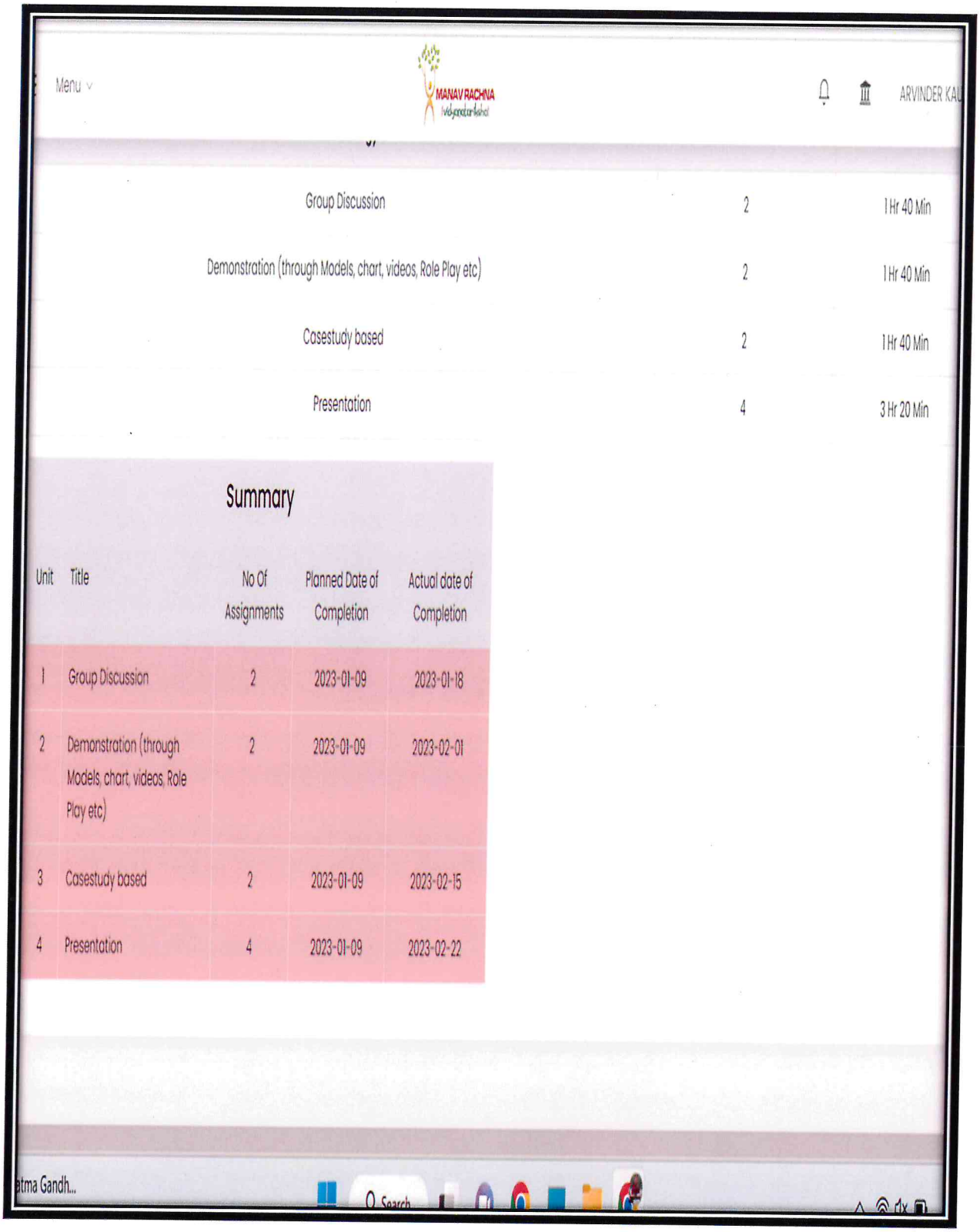
1	7	50	2023-01-09	Presentation	Offline Mode	Presentation	CO3	L6	Journal pdf	2023-02-22			
2	8	50	2023-01-09	Presentation	Offline Mode	Presentation	CO4	L4	articles, online materail	0000-00-00			

4-Guidance and counselling optimising outcomes

1	9	50	2023-01-09	Presentation	Offline Mode	Presentation	CO4	L3	Journal pdf	0000-00-00			
2	10	50	2023-01-09	Presentation	Offline Mode	Presentation	CO4	L4	PPt, reference books	0000-00-00			

Arvinder

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD



Arvinder

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

7	7	50	2023-01-09	Importance of Professional Standards	Offline Mode	Group Discussion	CO2	L2	online material	2023-02-01		
8	8	50	2023-01-09	Meaning and Importance of Professional Standards	Offline Mode	Group Discussion	CO2	L3	online material	2023-02-06		
9	9	50	2023-01-09	Meaning and Importance of Professional Standards	Offline Mode	Lecture with interaction	CO2	LI	Reference material	2023-02-08		
10	23	50	2023-01-09	Revision	Offline Mode	Lecture with interaction	CO4	L2	Books	0000-00-00		

2-Professional Ethics for Teachers

1	10	50	2023-01-09	Revision of Unit I	Offline Mode	Lecture with interaction	CO2	L2	PPT	2023-02-13		
2	11	50	2023-01-09	Meaning of Ethics and Professional Ethics.	Offline Mode	Lecture with interaction	CO2	L3	Reference material	2023-02-15		
				Meaning of Ethics	Offline							

Arvinder

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

Menu

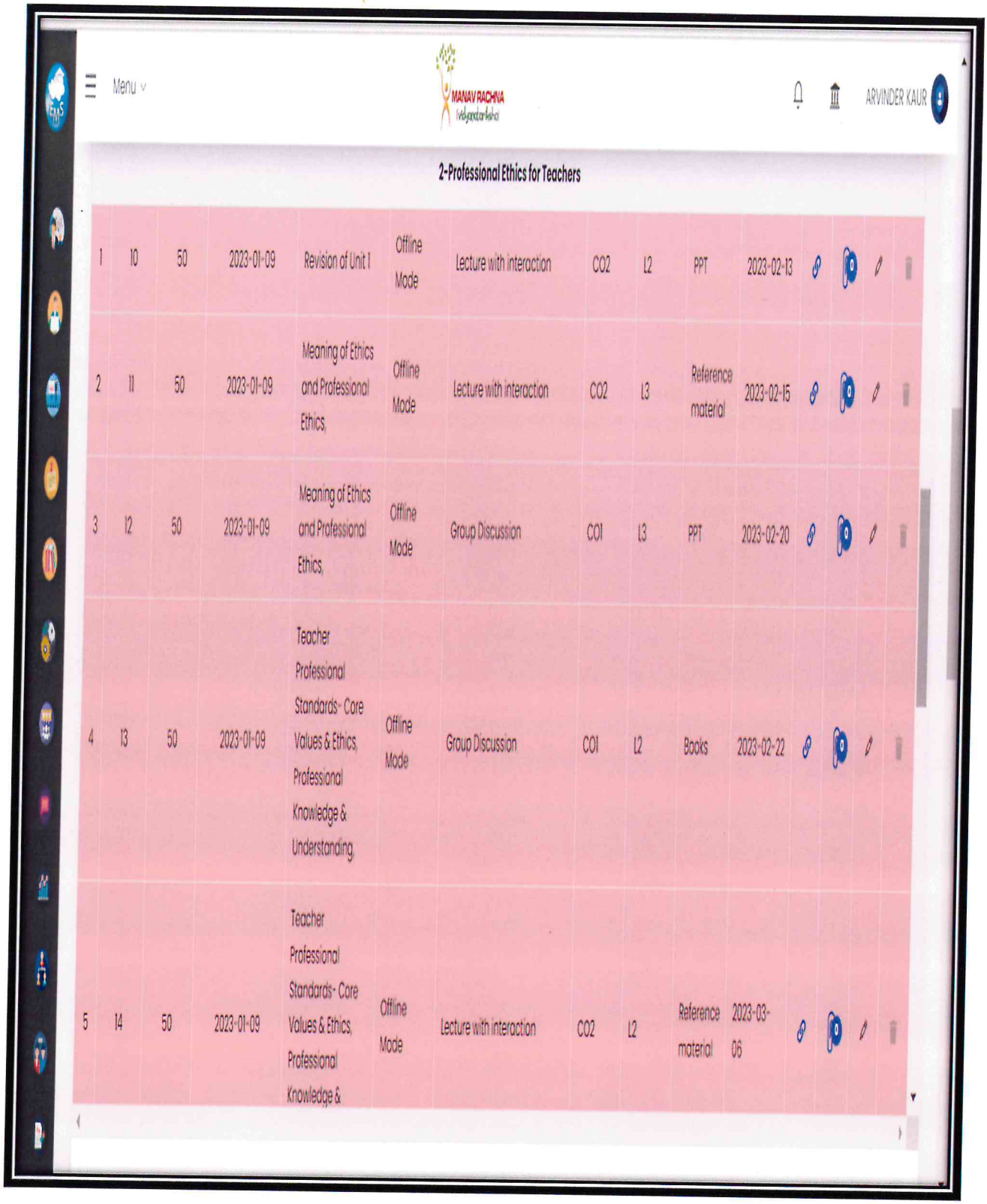
MANAV RACHNA

ARVINDER KAUR

8	17	50	2023-01-09	National Professional Standards For Teachers (NPST)	Offline Mode	Projects/Competition	CO3	L2	Reference material	0000-00-00			
9	18	50	2023-01-09	National Professional Standards For Teachers (NPST)	Offline Mode	Projects/Competition	CO3	L2	PPT	0000-00-00			
10	19	50	2023-01-09	National Professional Standards For Teachers (NPST)	Offline Mode	Presentation	CO2	L3	Books	0000-00-00			
11	20	50	2023-01-09	Relevance of NPST: NEP, 2020	Offline Mode	Presentation	CO3	L3	Books	0000-00-00			
12	21	50	2023-01-09	Relevance of NPST: NEP, 2020	Offline Mode	Presentation	CO4	L5	PPT	0000-00-00			
13	22	50	2023-01-09	Relevance of NPST: NEP, 2020	Offline Mode	Revision	CO4	L2	PPT	0000-00-00			
14	24	50	2023-01-09	Revision	Offline Mode	Group Discussion	CO4	L3	Books	0000-00-00			

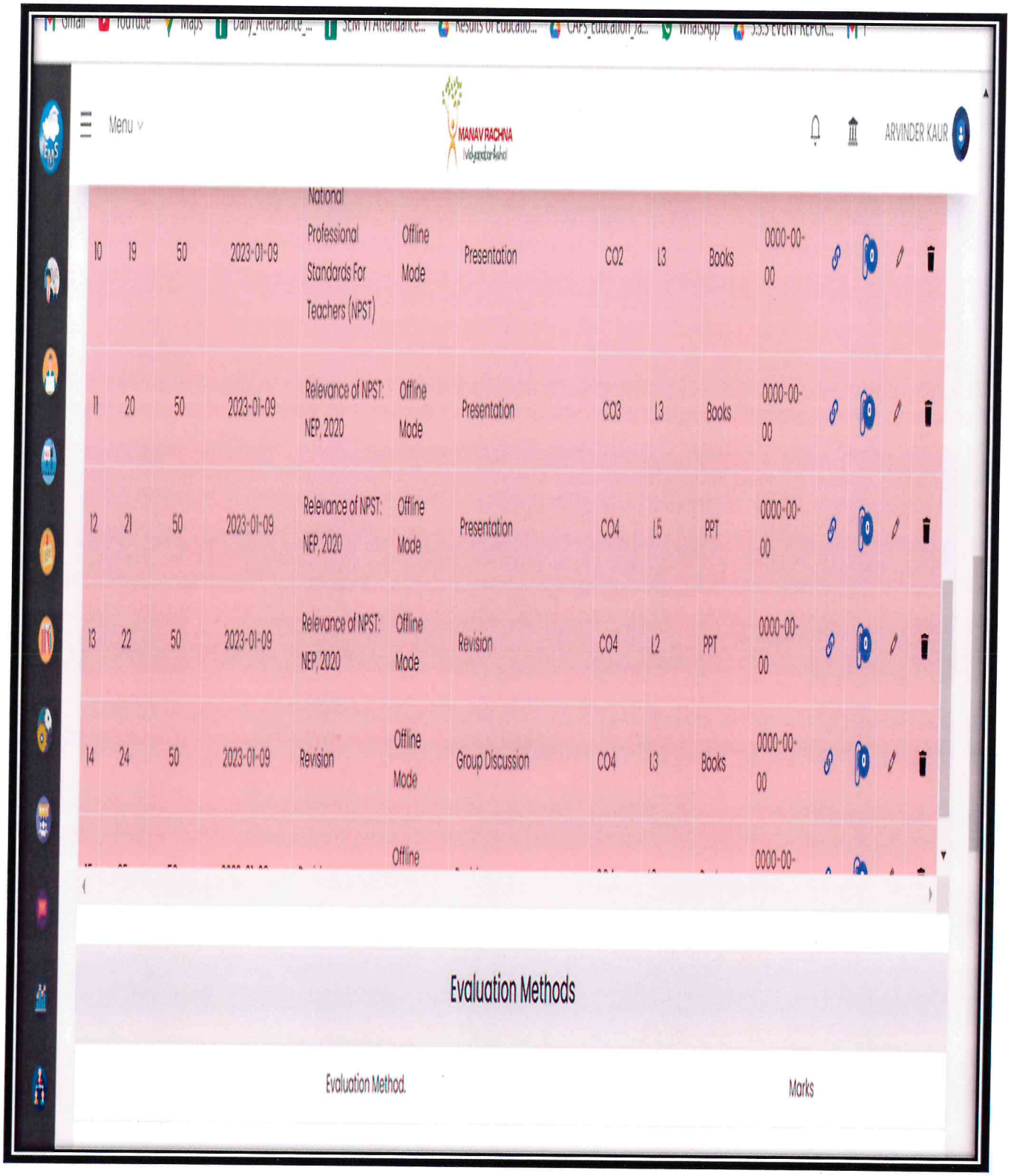
Arvinder

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD



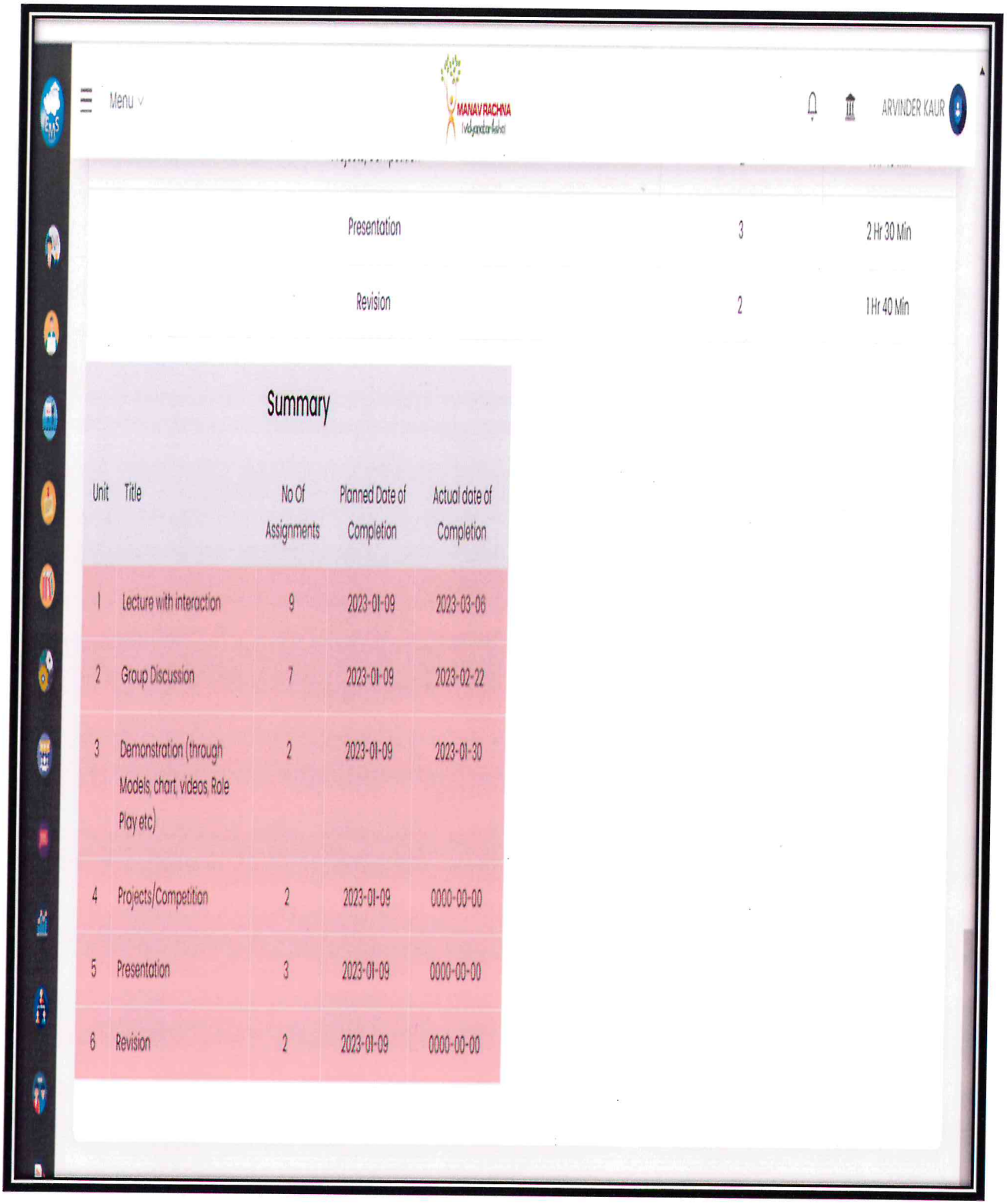
Arvinder

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD



Arvinder

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD



Arvinder

MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD

Use of Role Play as a teaching Strategy

Name of the Faculty – Dr. Savita Sharma

Name of the Course- Knowledge and Curriculum Lab (EDH206-P)

Class- B.Sc. B.Ed. (Semester III)

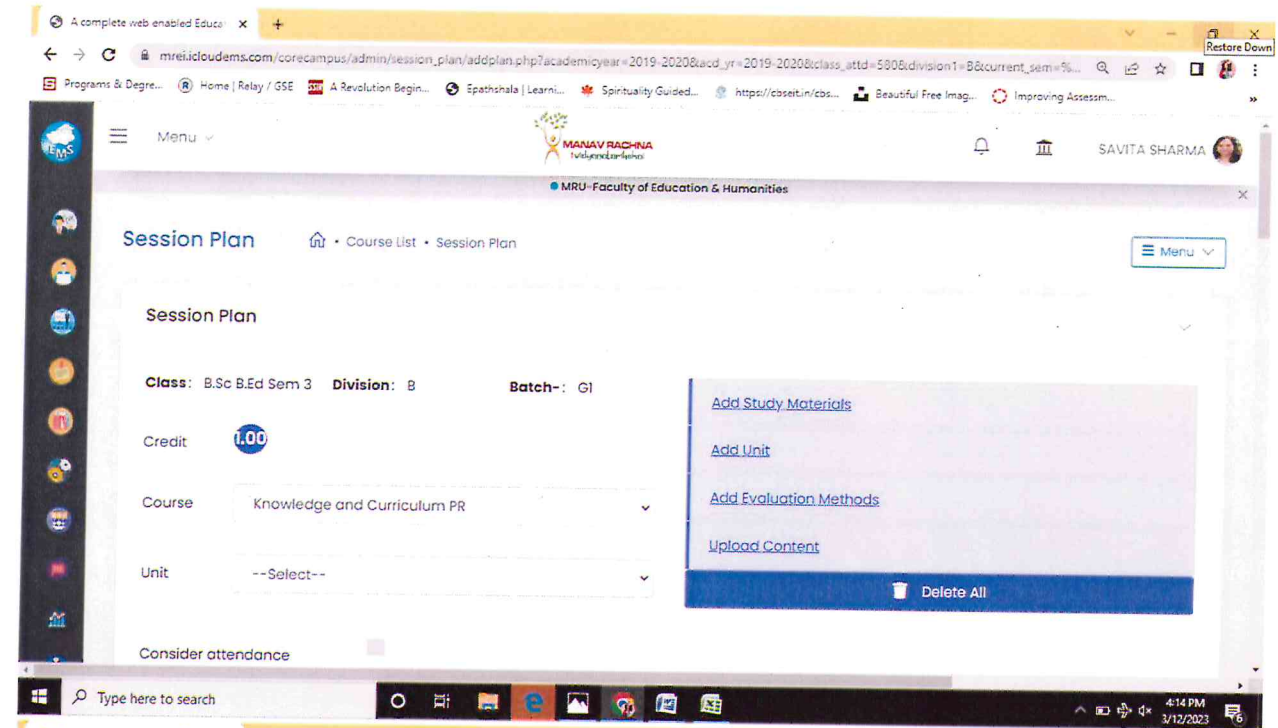
Semester - Odd

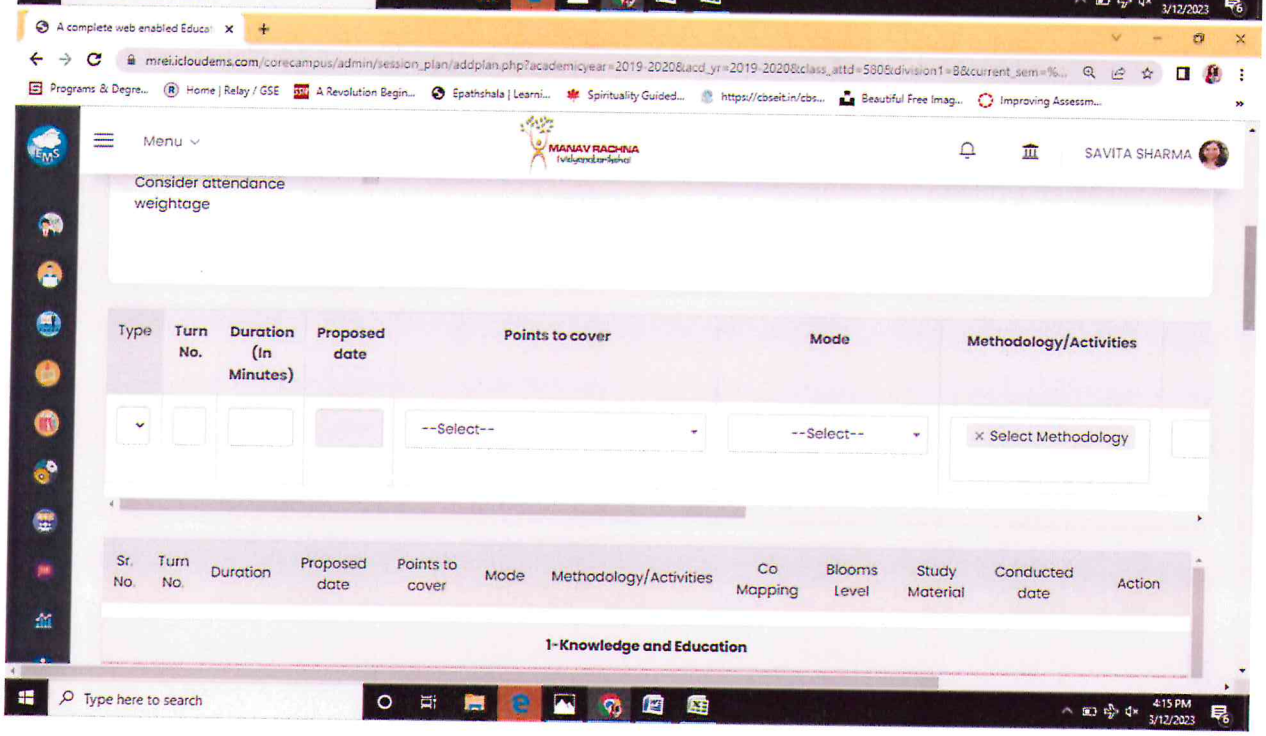
Unit Name- Social Systems and Education

Date of Lesson Transaction -27th September 2019

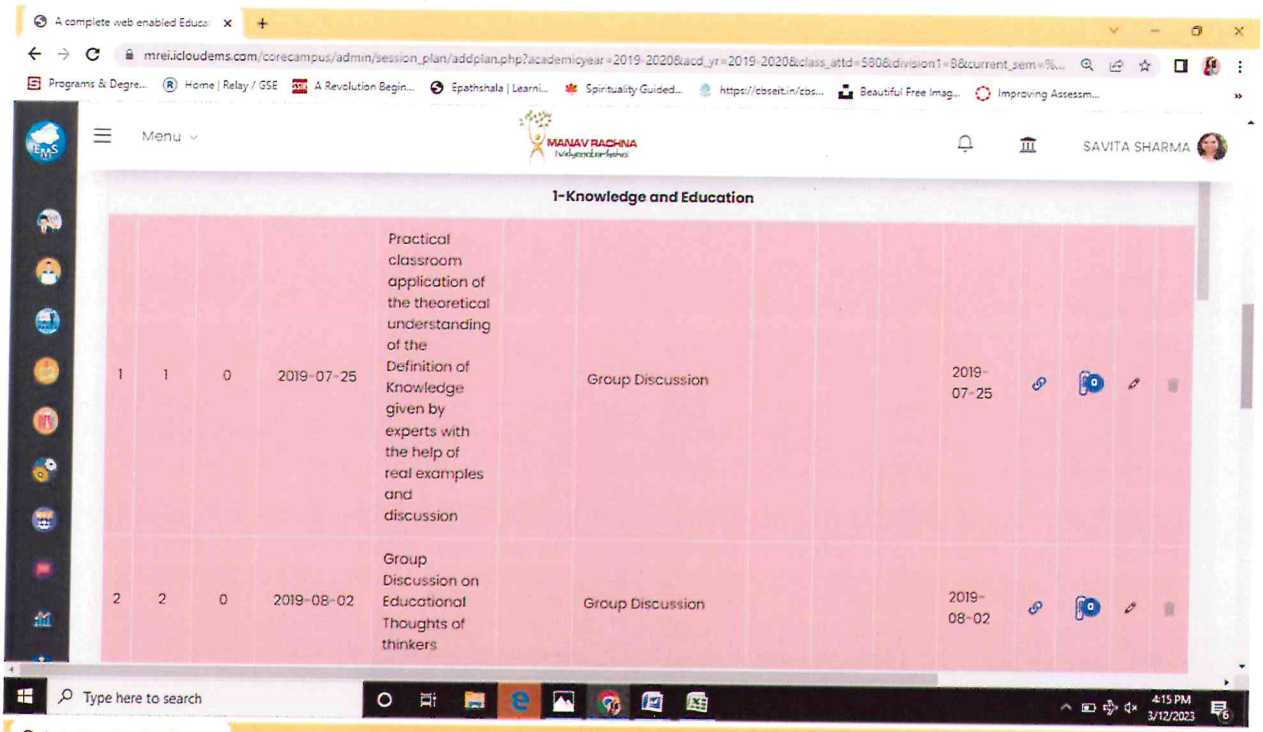
Screen Shot of ERP Session Plan

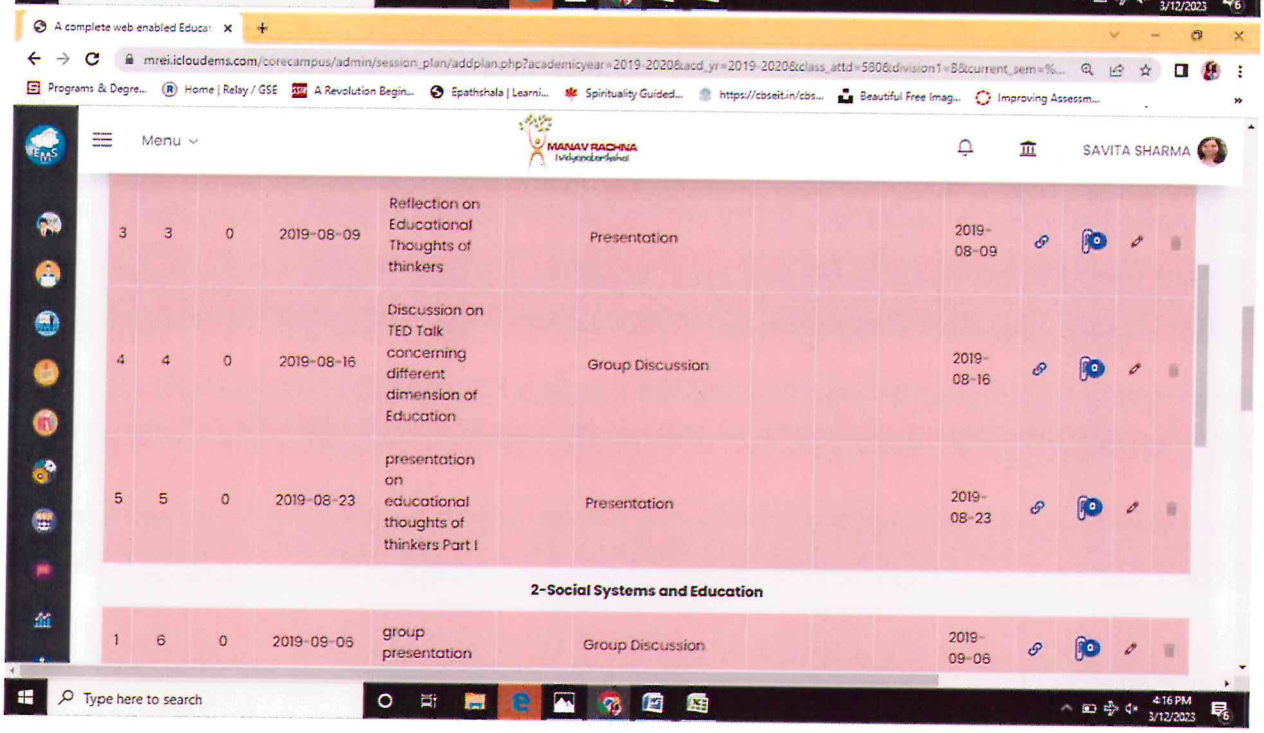
MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD



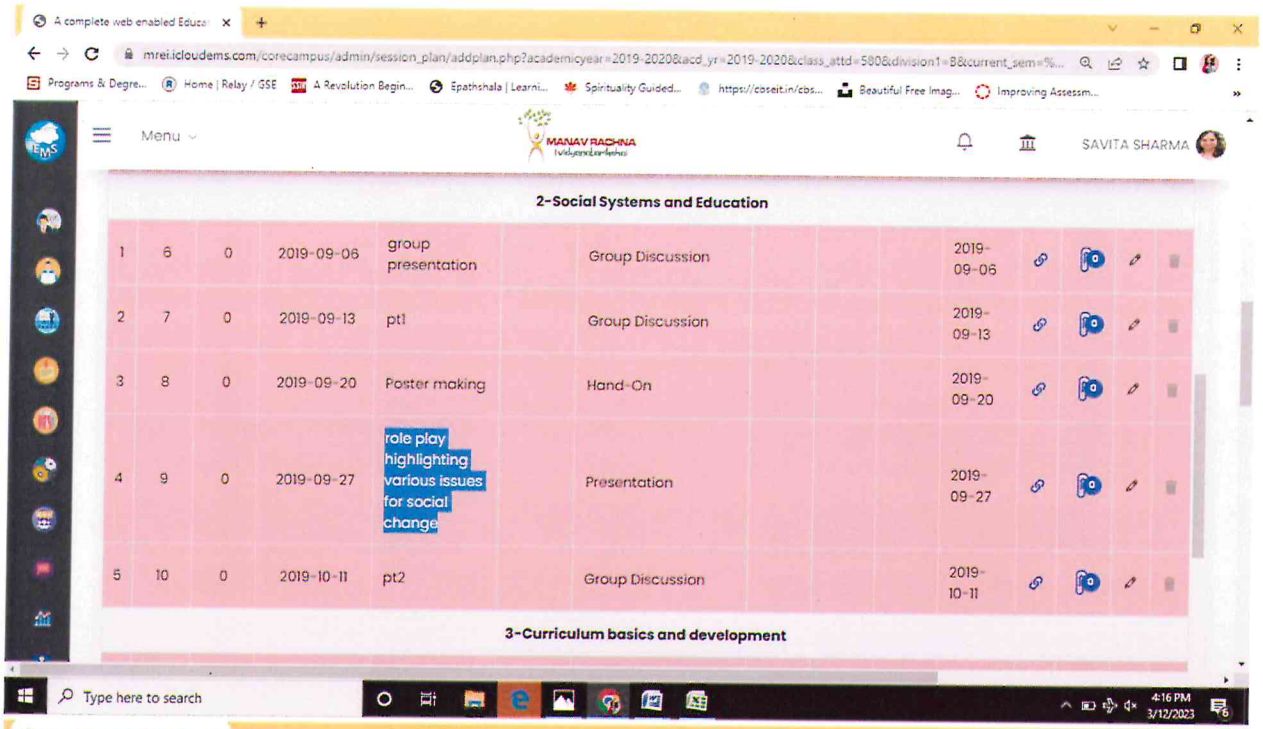


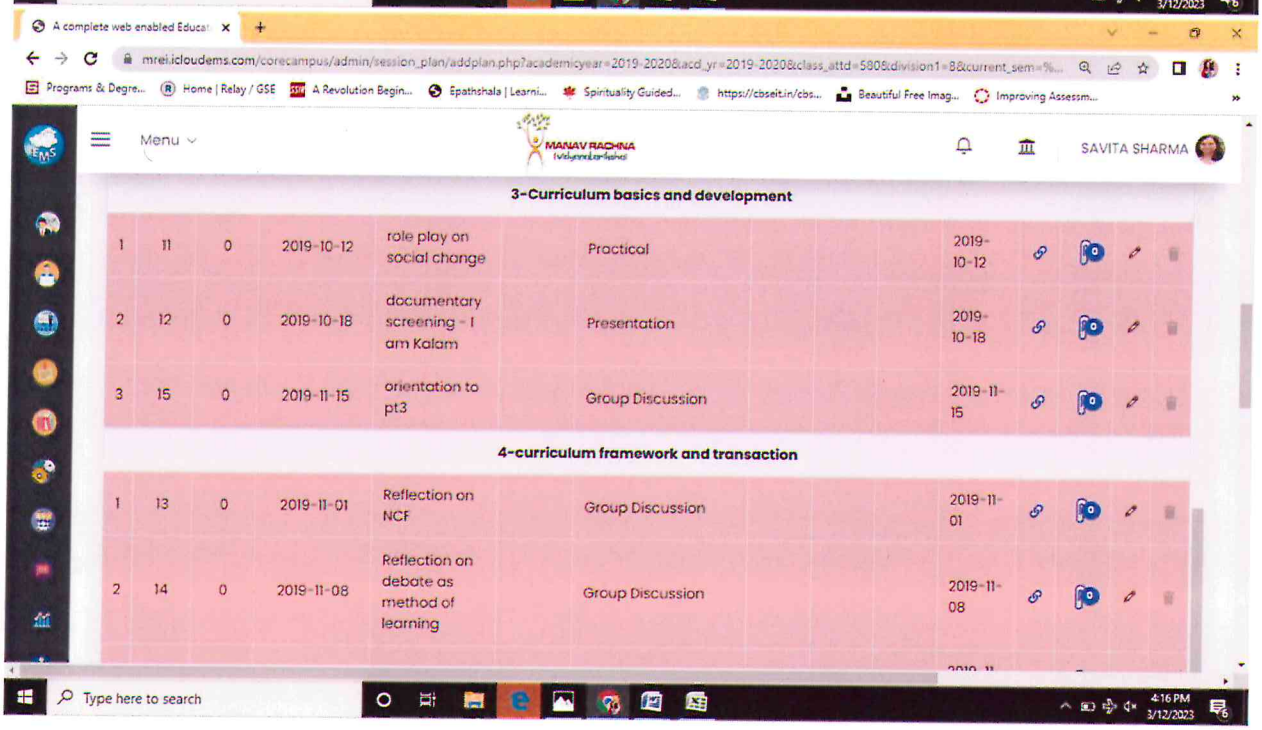
MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD



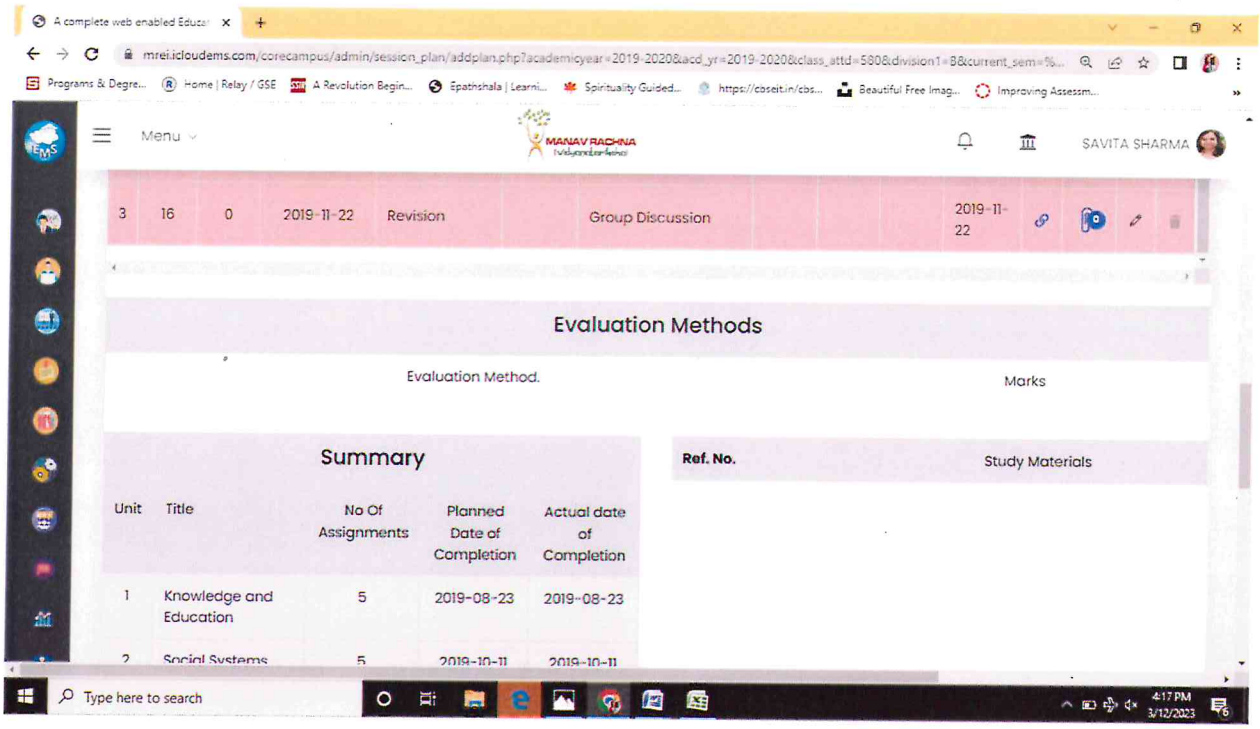


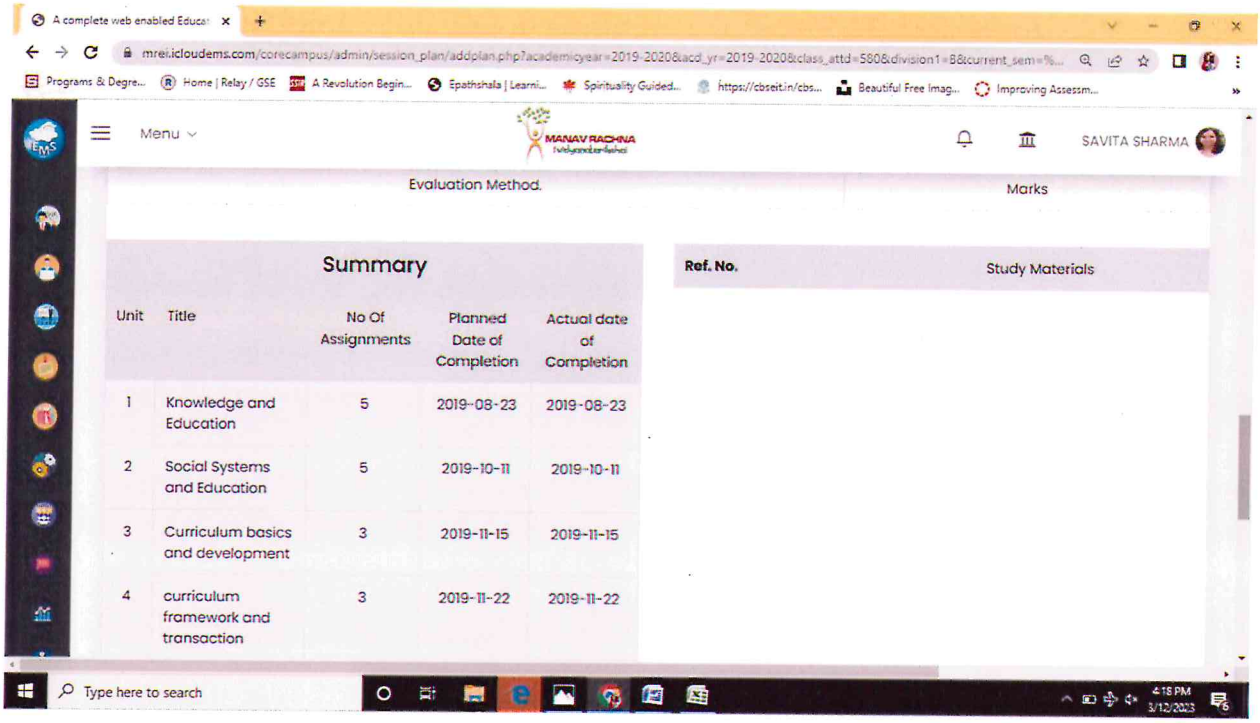
MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD





MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD





MANAV RACHNA UNIVERSITY
Registrar
FARIDABAD