



ASHOKRAO MANE GROUP OF INSTITUTIONS, VATHAR

Mechanical Engineering Department

Innovative By Faculty in Teaching and Learning

Innovative Teaching Methods

In teaching, new methods and technologies are adapting to bring change in existing system for fulfillment of predetermined educational objectives. Information and communication technology (ICT) can make the teaching learning process more effective and efficient

Sr.No.	Different ICT tools that Used by Faculty	No. of Students benefited
1	Chart and Model Based Learning	100-120 Students (TY, Final Year)every year
2	Flipped Class room	150-180 Students (FY)every year
3	Group Discussion	60-70 Students (TY, Final Year)every year
4	Lecture Methods and Interactive Learning: YouTube Channel, Animations	275-300 Students (SY, TY, Final Year)every year
5	Smart Class room	250-280 Students (SY, TY, Final Year)every year
6	Snap Talk	100-120 Students (TY, Final Year)every year
7	Think Pair And Share	100-120 Students (FY)every year

Student - Centric learning

Student-centric learning is very important to inculcate the subject knowledge efficiently. This is achieved by adopting the Teaching methodologies suited for the students

Sr.No.	Different ICT tools that Used by Faculty	No. of Students benefited
1	Tutorials	120-150 (TY, Final Year) every year
2	Quiz Competition	100 to 150 students (FY) every year
3	Presentation of papers/posters at various technical events	30-40 Students (TY, Final Year)every year
4	Seminars	250-300 Students (TY, Final Year)every year



[Signature]
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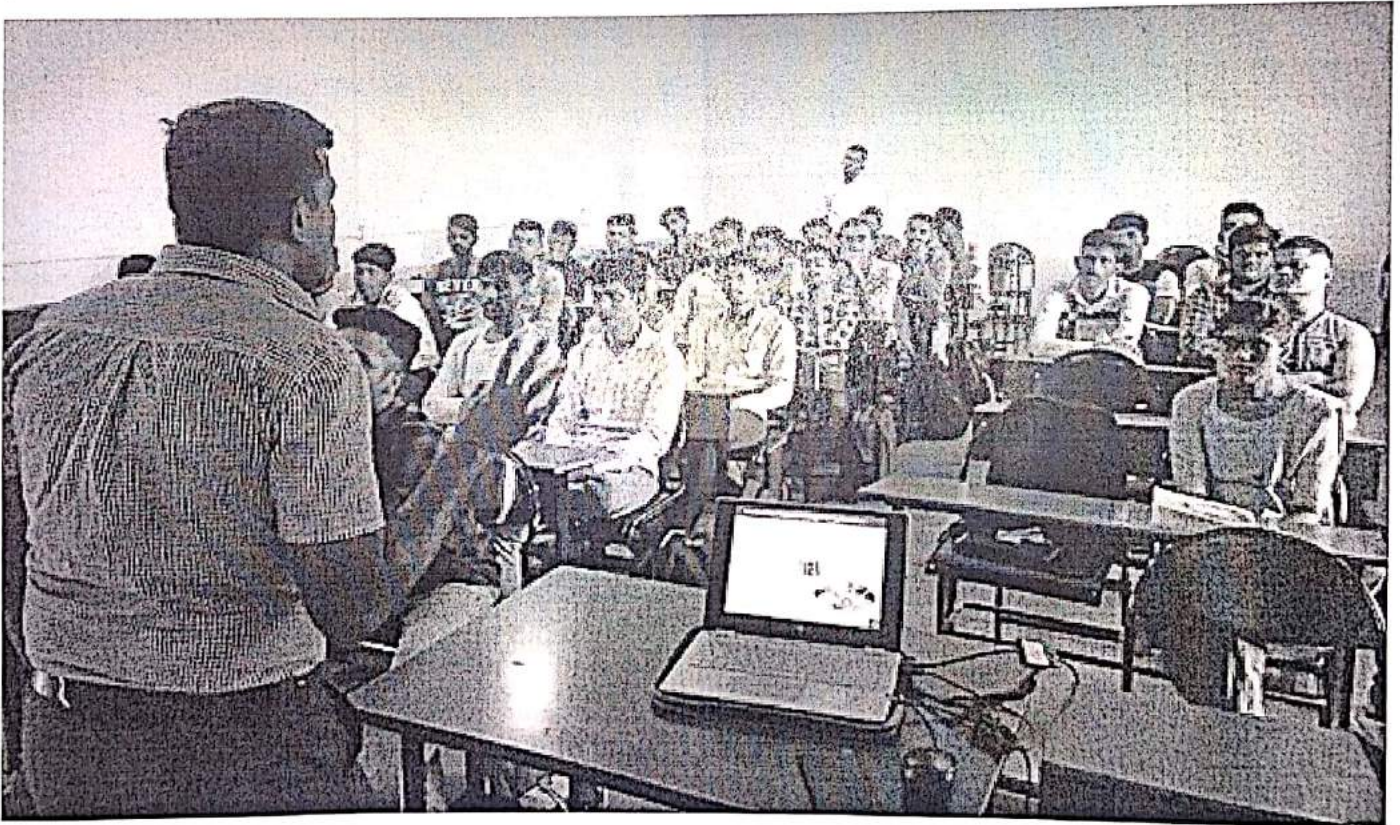
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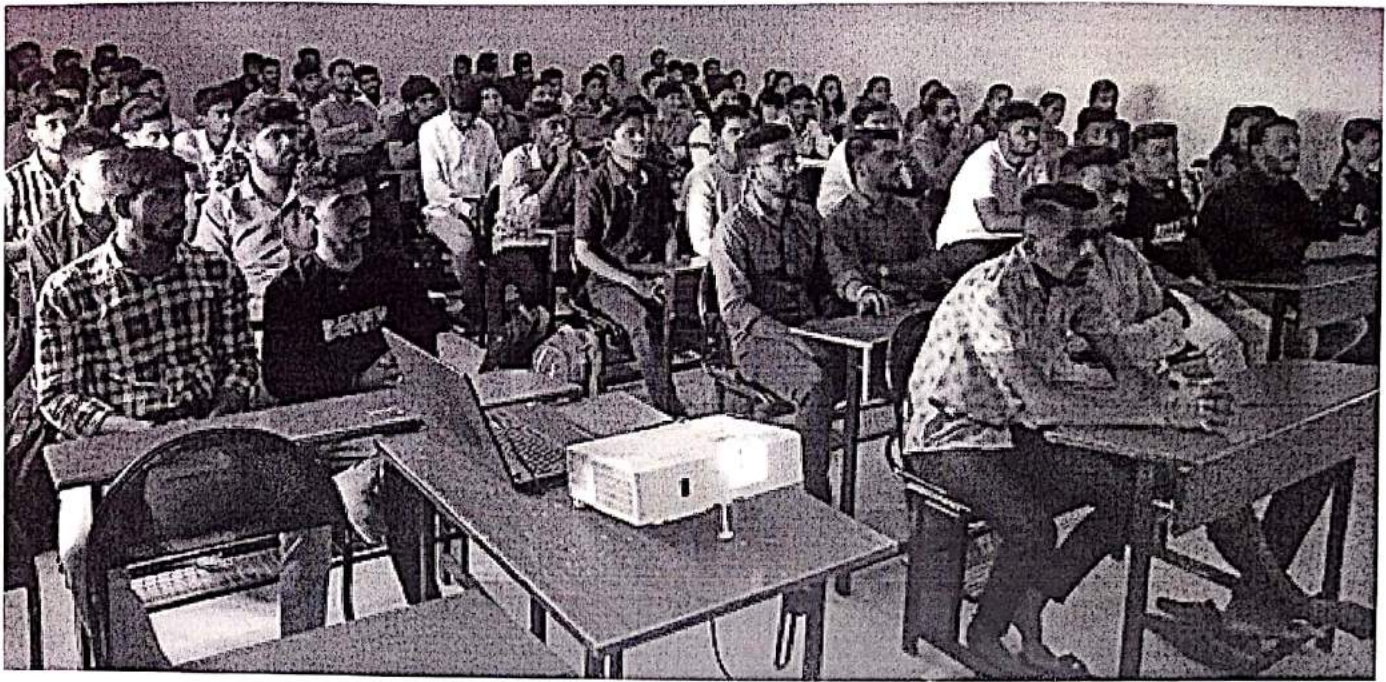
Seminars

Seminar is an event where individuals gather to discuss a specified topic. Generally, these meetings are interactive experiences led by one or two presenters whose role focuses on guiding the conversation along a delineated path.



Seminars on "career opportunities in product and tool design (Final Year)"





Seminars on "Energy conservation(AllFinal Year Students)

Goal:

- The goal of a seminar is to provide an opportunity for participants to gain knowledge and skills through lectures, discussion, and other interactive activities. Seminars are typically designed to provide a comprehensive overview of a particular topic or to provide in-depth training on a specific subject.

Significance: It provides a chance to interact with experts from the specific field. Discussing about the relevant topics of the particular subject, students tend to learn about the latest information and new skills related to the concerned subject.




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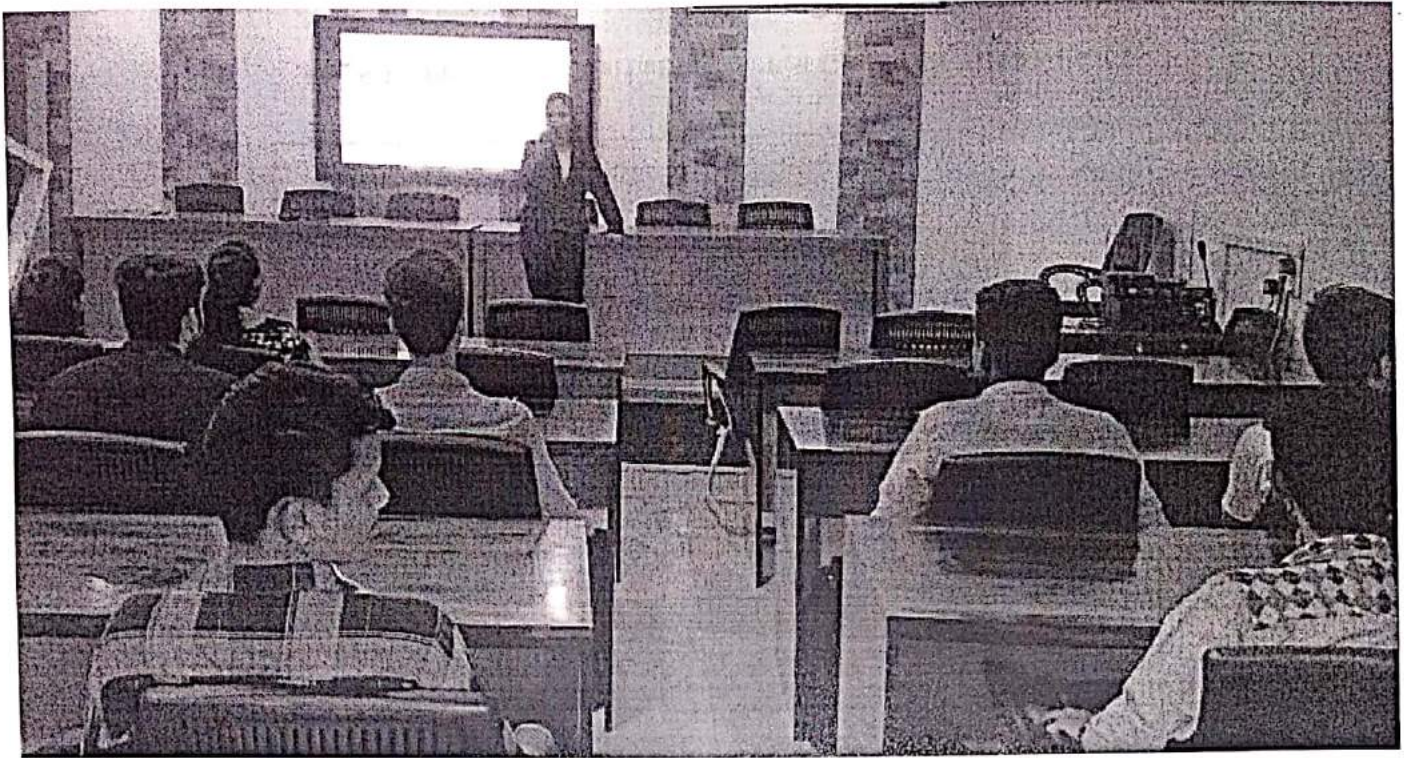
Smart Classroom

Almost all faculty members follow advanced lecture methods besides conventional teaching and learning processes. However, chalk and talk methods have traditionally occupied a pivotal place in teaching the students with lucid illustrations. All classrooms are provided with LCD projector and internet facility. Faculty members are using SMART classrooms to provide interactive sessions through video lectures, PPT, Animated videos, and lectures by eminent Professors.

Availability of the internet in the classroom has taken the teaching-learning processes to newer heights as shown in figure. The students make the best use of this facility during the lean times for downloading the latest information/ PowerPoint study materials/ YouTube lectures. Thus, this facility made students listen to lectures of eminent teachers and Nobel laureates across the globe.



Smart Class room providing LCD projector with ppts, videos etc



Smart Class room providing LCD projector with ppts, videos on screen etc

Goal:

- develop skills, adapt, and use technologies in a learning context that produces elevated learning outcomes which leads to big data.
- The objectives of a smart classroom that helps the student discover a new dimension of studying

Significance: It reduces distractions, and therefore, students can concentrate more and retain more information.



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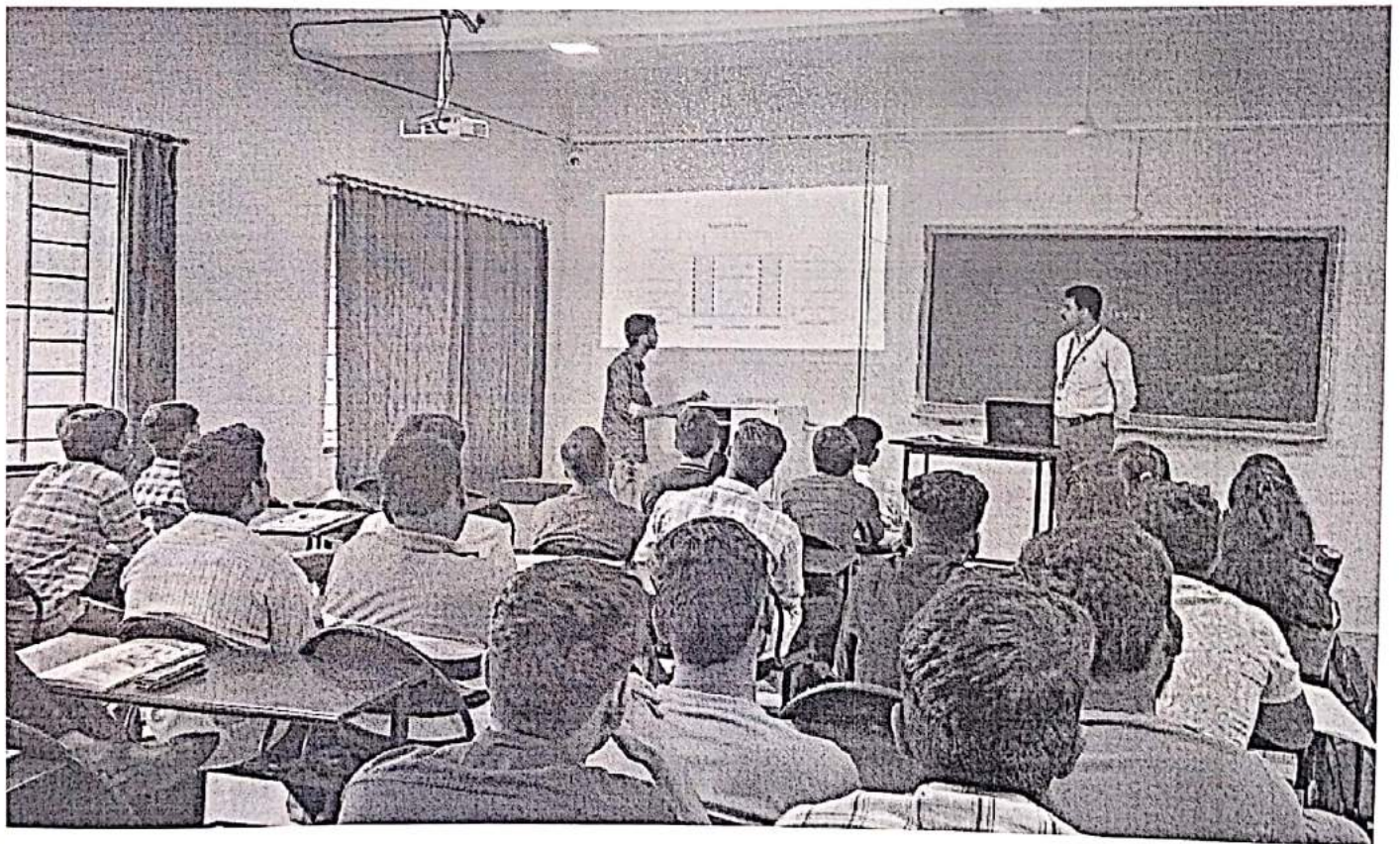
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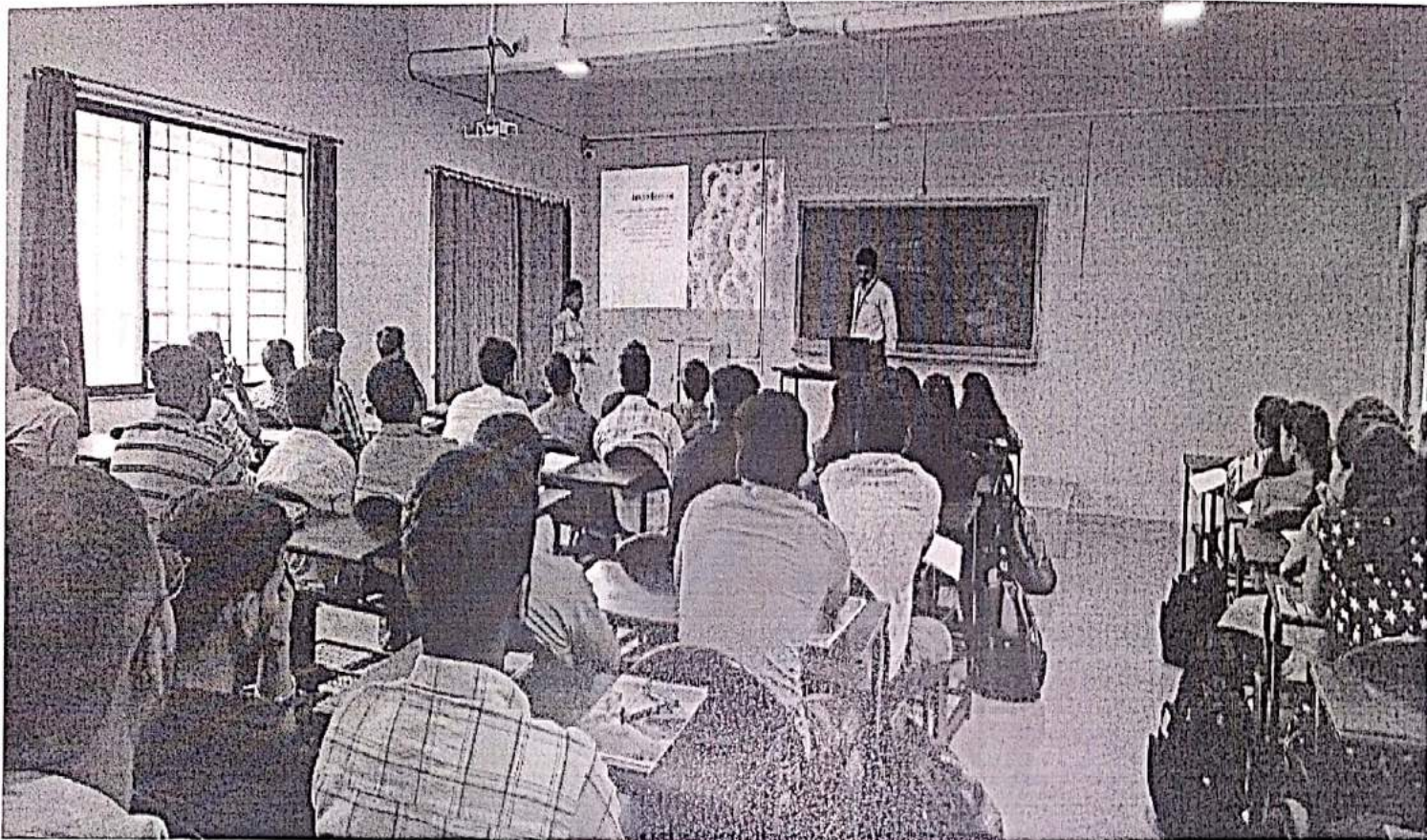
Flipped Class

The department always believes in innovating the teaching pedagogy & thus from 2017 onwards introduced flipped classrooms for the students. Flipped Learning is a pedagogical approach in which direct instruction moves from the group learning space to the individual learning space and it ensures that this blended learning approach is used against the traditional learning approach. Here in the flip class, students watch online lectures on Laboratory experimental procedures (delivered by our faculty) and carry out the experiments in the laboratory with the guidance of a Lab In charge.



Flip Class conducted in FY (Energy Environment Engineering)





Flip Class conducted in FY (Energy Environment Engineering)

Goal:

- To practice a more student-centered pedagogy, thereby engaging students in active learning experiences.
- To have students view and/or listen to lectures outside of class and allow class time for hands-on activities.
- Students obtain the initial information independently, at home, often through video content. This enables them to get used to the process of self-study and allows them to learn at their own pace.

Method: PPT on topic, chalk board, animation



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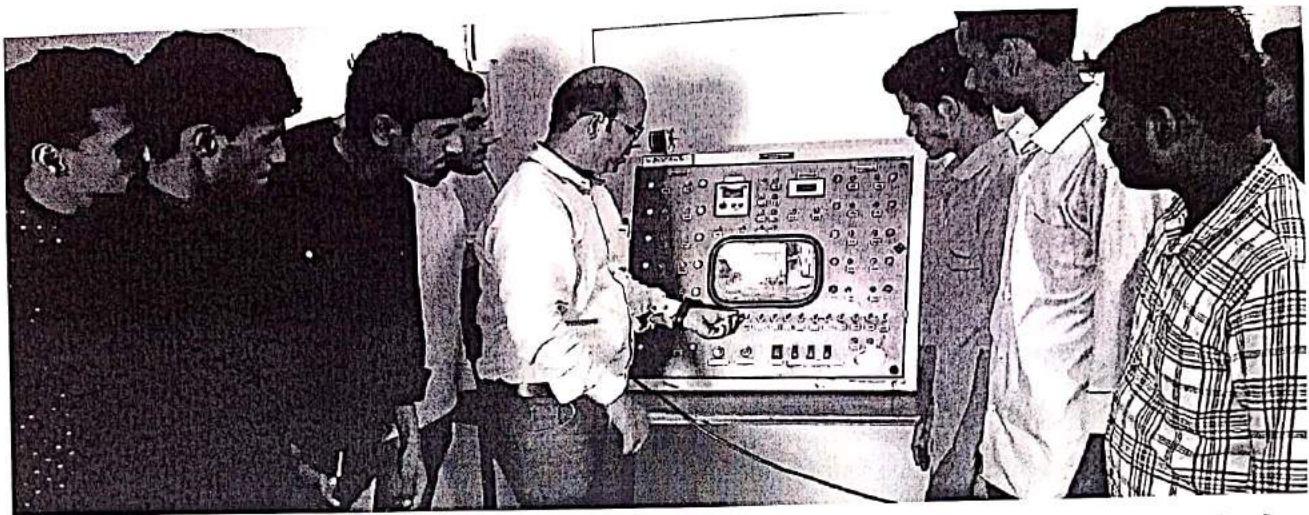
Chart and Model-based teaching

The faculty use working models and visual charts in the classrooms which creates an interest in the course among the students as shown in figure.

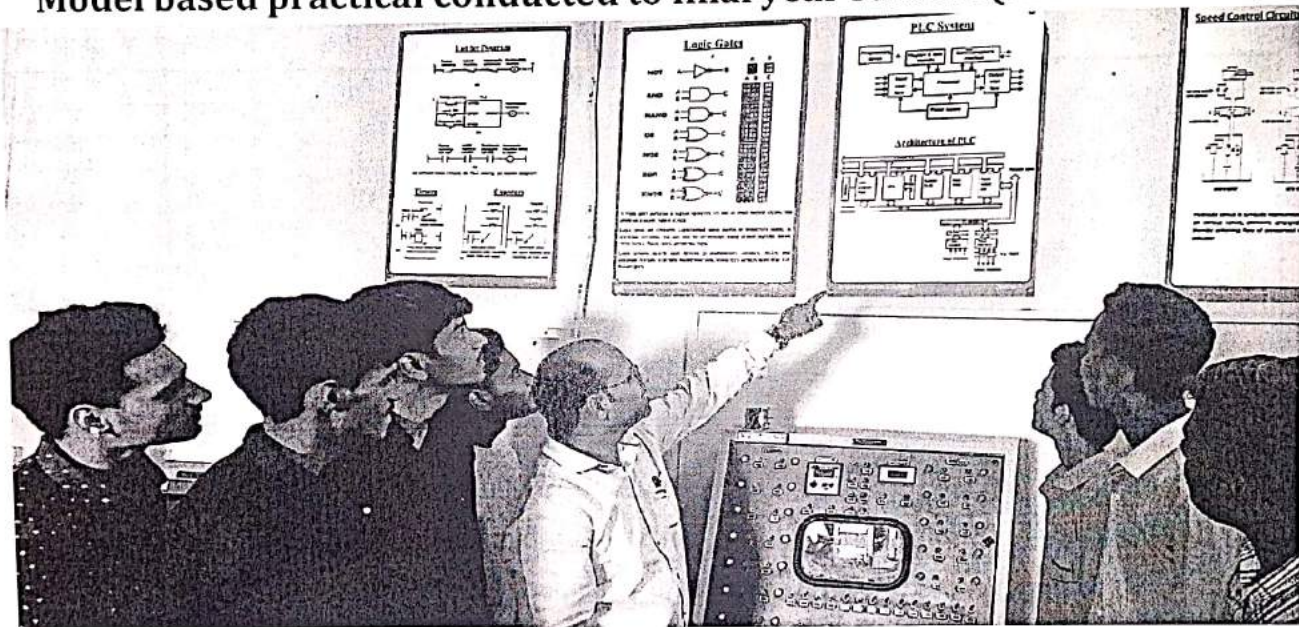


Model based practical conducted to final year student (EDM machine)





Model based practical conducted to final year student(Mechatronics)



Goal:

- It helps a teacher to develop his capacity to teach and create conducive and appropriate environment learning. To improve students' academic performance.
- It can present a real and practical outline of teaching and thus give a practical shape to learning situations.
- To instill students with intrinsic motivation to learn.

Significance: It may help to develop his capacity to teach larger number of persons and create conducive environment for their learning.



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DEPARTMENT OF Applied Science & Humanities



Innovation by faculty in Teaching Learning Process

Sr.No.	Name of staff	Name of subject	Innovative Method
1	Prof.S.V.Hajare	Communication Skill	Group Discussion and Presentaion
2	Prof. P.P.Hirave Prof. A.K.Kulkarni	Engineering Physics	Models and flipped classroom
3	Prof .R.A.Pasale	Engineering Graphics	Models ,YouTube channel (40 lectures covered in entire syllabus)Think pair share, Group discussion.
4	Prof. A.T.Tare	Engineering Mathematics	Flipped Classroom
5	Dr.S.G.Chonde Prof. S.L.Rathod	Engineering Chemistry	Seminar activities, ppt and animated videos


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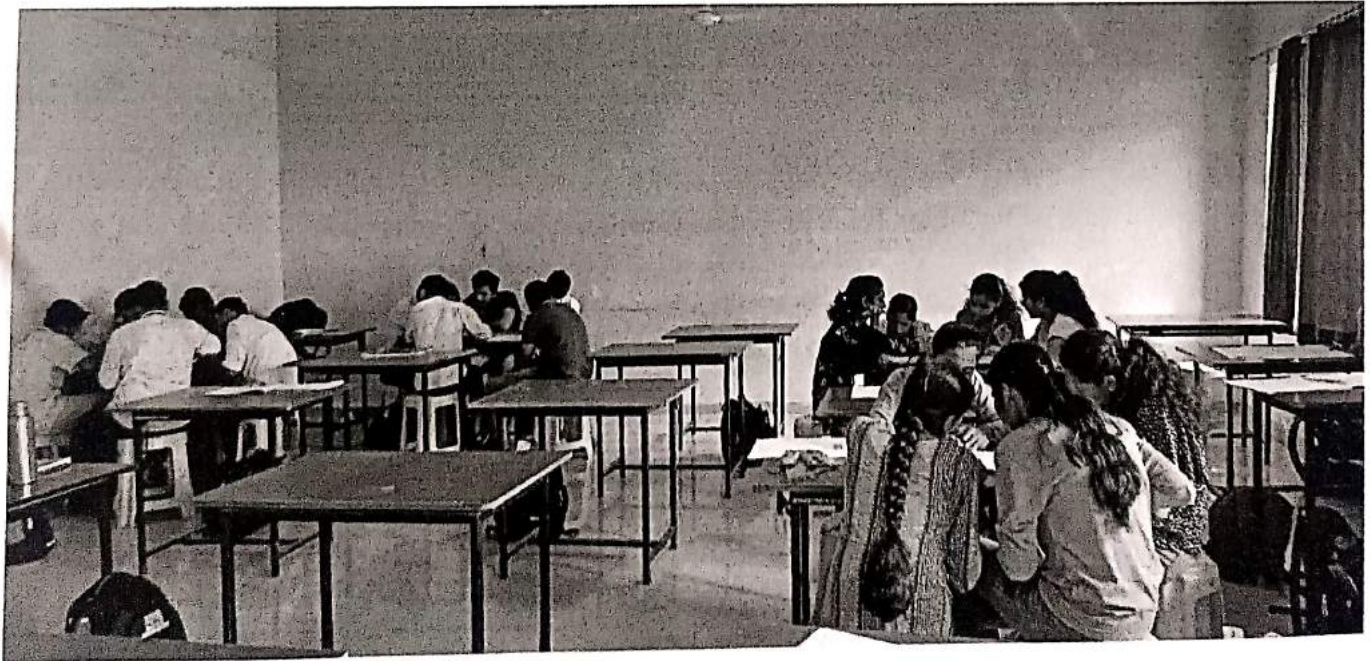



Head,

Applied Science & Humanities



“Think Pair Share” : A problem is given in a group of two students. Students discuss between them and unanimously give answer



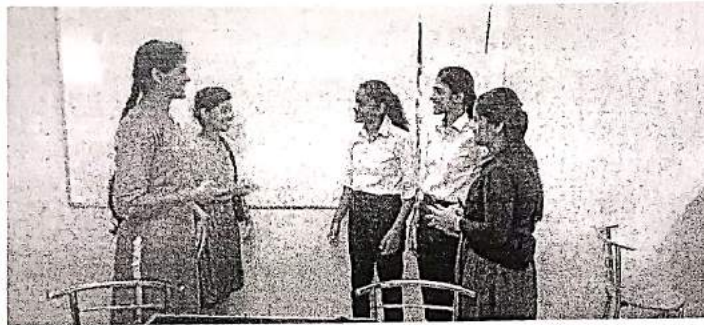
“Group Discussion”: For orthographic projection topic problems are asked to discuss within a group of 4 to 5 students, and that answers are discussed with all students.



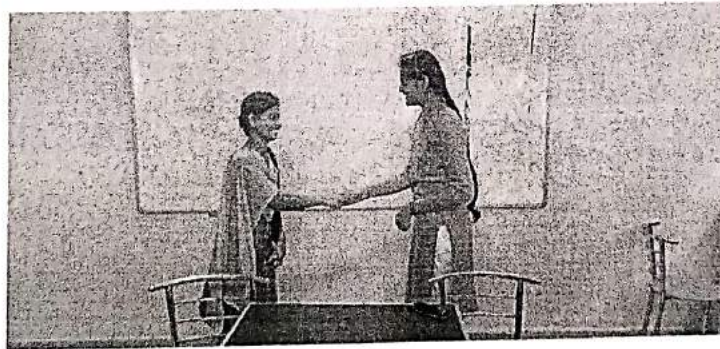
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INNOVATIVE ACTIVITIES CONDUCTED UNDER COMMUNICATION SKILL SUBJECT 2023-24



Students engaged in developing their personality, in the class room, conducted by facilitator. The said picture indicates students busy in interacting with each other in developing their English language.



Two girls are trying to develop their dialogue by exchanging their ideas in class room in front of the students.



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A group discussion taken place between two groups and giving pose after successfully completion



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Innovative Activity conducted Under Mathematics Subject 2023-24

Flipped Classroom

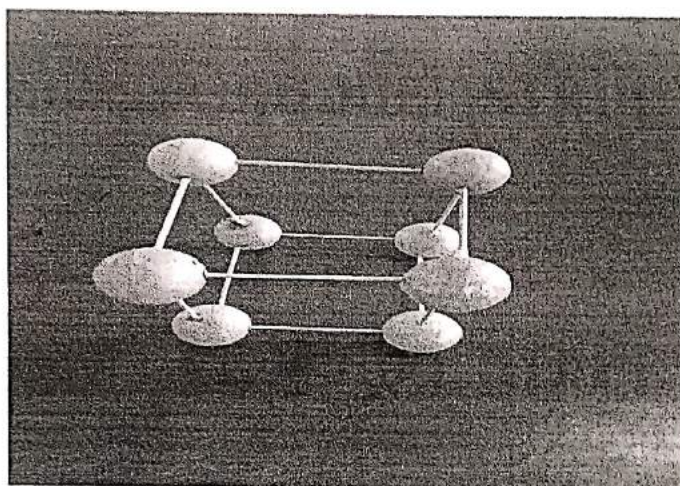


A student is giving lecture on 'Tracing of Curves' with diagram presentation and showing her confidence in classroom.



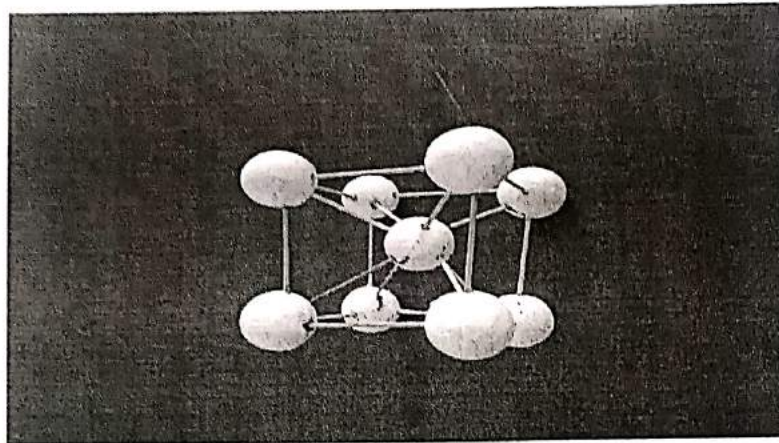
Engineering Physics Department

PHYSICS LAB MODEL STRUCTURE



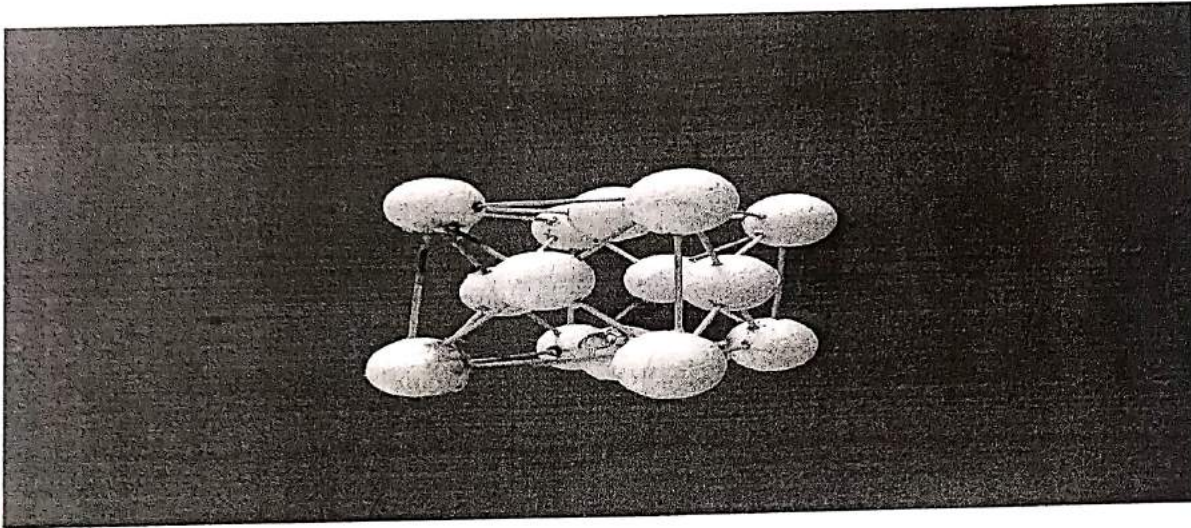
Simple cubic structure Model(SC)

In the simple cubic structure there is only one lattice point at each corner of the cube-shaped unit cell. They mark the position of either a single atom, or the same group of atoms, known as the motif, which is repeated across the lattice.



Body Centered Cubic Model (BCC)

Body-centered cubic (BCC) is a crystal structure that consists of a cube-shaped unit cell with atoms located at the corners and in the center of the cube. In this structure, each atom is surrounded by eight nearest neighbors located at the corners of the cube.



Face Centered Cubic Structure Model (FCC)

A face-centered cubic unit cell structure consists of atoms arranged in a cube where each corner of the cube has a fraction of an atom with six additional full atoms positioned at the center of each cube face. The atoms at the corner of the cube are shared with eight other unit cells.



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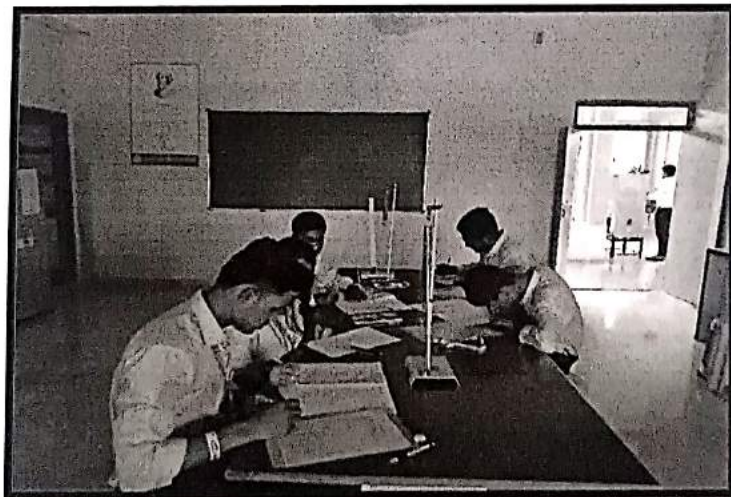
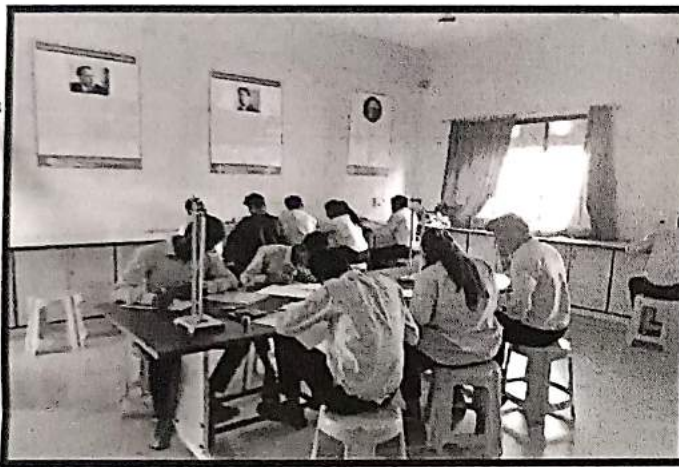
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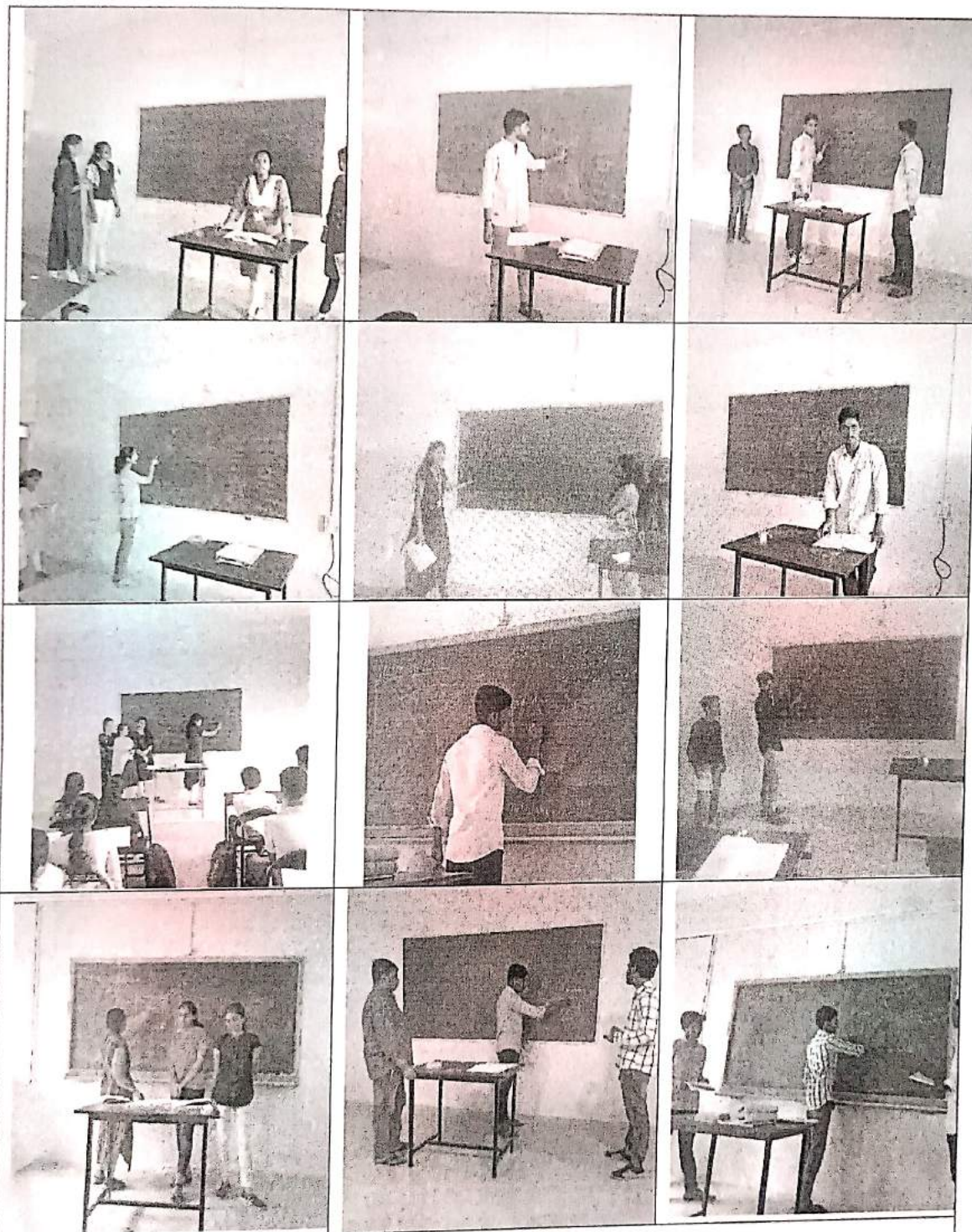
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Students are First understanding the concept and write the summary on that





**Innovative Teaching Learning Process (Seminar Activity) :
Engineering Chemistry**



Every Semester Seminar Activity is Conducted for Engg. Chemistry Subject. In this Activity Group of Students are allocated with any 1 chapter according to their choice and each group presents the whole chapter or some specific portion of Chapter, point wise. This Activity plays a major role in development of Stage daring , Confidence level, learning ability, Creativity, presentation skills etc. of students



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Physics Lab – SL-07

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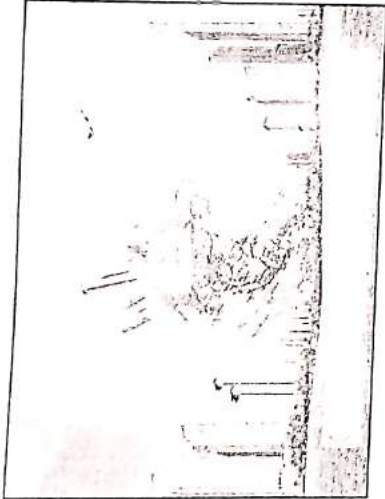
HOD

Applied Science and Humanities



COMMUNICATION SKILL

PRESENTED BY MR. SATISH HAJARE (TRAINER)
 ASHOKRAO MANE GROUP OF INSTITUTES, VATHAR



Contents

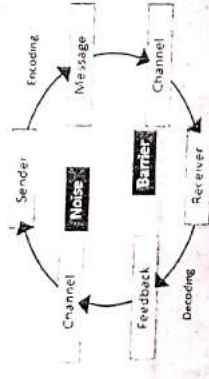
- What is communication
- Types of communication
- Levels of communication
- Communication barriers
- Principles of Effective Communication

Communication is what ??

It is a process of exchanging -

- Information
- Ideas
- Thoughts
- Feelings
- Emotions
- Through -
- Speech
- Signals
- Writing
- Behavior

Process of



Types of

People communicate with each other in a number of ways that depend upon the message and its context in which it is being sent.

Types of communication based on the communication channels used are -

- ❖ Verbal Communication
- ❖ Nonverbal Communication

Industrial Visit



Industrial Visit /Field visit

