

Nagar Yuwak Shikshan Sansayha's
Yeshwantrao Chavan College of Engineering
(An Autonomous institution affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)
(Accredited "A" Grade by NACC with score 3.25)
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Department Of Mechanical Engineering

Innovative Teaching Learning methods during 2024-25.

Sr No	Name of Faculty	Course Code	Course Name	Title of Innovative Method	Objective of Activity	Outcome of the activity
1	Prof. V.M.Korde	22ME501	Heat Transfer	Flipped Classroom	<ul style="list-style-type: none">-To make classroom an active learning environment.-To enable student to learn at their own pace	<ul style="list-style-type: none">-Flipped learning allows students to learn at their own pace.- Flipped learning is customized, active, and engaging.-Flipped lecture videos help students review for exams and master the content-Flipped content can be richer through curation and continuous improvement-Students in flipped classrooms may show better learning outcomes
2	A.S.Bonde	ME1303	MP	Flipped Classroom	<ul style="list-style-type: none">-To Improve the learning ability.-To Improve the attendance.	<ul style="list-style-type: none">-Gradual Improvement in Learning of the students-Improvement in Attendance and attentiveness in lecture

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					-To Improve the test competency	-Test Expectancy was improved
3	A.S.Bonde	ME307	MMI	Flipped Classroom	To Improve the learning ability. -To Improve the attendance. -To Improve the test competency	- Gradual Improvement in Learning of the students -Improvement in Attendance and attentiveness in lecture -Test Expectancy was improved
4	Dr.S.B Sahare	ME2417	AMT	Flipped classroom	-To apply creative thinking -To understand the topic before actual class	-Improvement in creating thinking -To take part in group discussion
5	Dr.S.B Sahare	22ME1307	KOM	Flipped classroom	-To apply creative thinking -To understand the topic before actual class	-Improvement in creating thinking -To take part in group discussion

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6	Prof. V.M.Korde	ME2443	Renewabl e Energy System	Flipped Classroom	<ul style="list-style-type: none">-To make classroom an active learning environment.-To enable student to learn at their own pace	<ul style="list-style-type: none">-Flipped learning allows students to learn at their own pace.- Flipped learning is customized, active, and engaging.-Flipped lecture videos help students review for exams and master the content-Flipped content can be richer through curation and continuous improvement-Students in flipped classrooms may show better learning outcomes
7	P.S.Barve	22ME505	ORT	KWL	<ul style="list-style-type: none">- To activate prior knowledge and build connections with new information.-To foster a sense of curiosity and inquiry among students.	<ul style="list-style-type: none">- The KWL method actively involves students in the learning process, fostering a sense of ownership and engagement.- By starting with what students already know, the KWL method builds a foundation for new learning.

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					-To promote student-centered learning and collaboration. -To assess and measure the effectiveness of the KWL method in enhancing understanding.	- The Want to Know phase encourages students to ask questions and explore topics that pique their curiosity - The KWL chart serves as a visual tool to assess students' understanding and monitor their learning progress
8	P.S.Barve	23OE1317	Hospitality Management	Blended mode	-To Improve the learning ability. -To Improve the attendance. -To make classroom an active learning environment.	-Improvement in creating thinking -To take part in group discussion
9	P.S.Barve	23OE2417	Hospitality Management	Blended mode	-To Improve the learning ability. -To Improve the attendance.	-Improvement in creating thinking -To take part in group discussion

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					-To make classroom an active learning environment.	
10	A.B.Amle SEC-H	23ME1201(T)	EG	Demonstration	<p>-To Develop basic visualization competency as well as ability to representing Idea on paper and computer</p> <p>- To build the exposure and some competence in presenting the ideas as picture and be able to unambiguously interpret drawing from others.</p>	Students will able to imagine and gain knowledge about various orthographic views of the object -
11	A.B.Amle SEC-V	23ME1101	EG	Demonstration	-To Develop basic visualization competency as well as ability to	Students will able to imagine and gain knowledge about various orthographic views of the object

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					representing Idea on paper and computer - To build the exposure and some competence in presenting the ideas as picture and be able to unambiguously interpret drawing from others.	
12	P.S.Barve SEC-R	23ME1201(T)	EG	Demonstration	-To Develop basic visualization competency as well as ability to representing Idea on paper and computer - To build the exposure and some competence in presenting the ideas as picture and be able to unambiguously interpret drawing from others.	Students will able to imagine and gain knowledge about various orthographic views of the object -

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13	P.S. Barve SEC-A	23ME1201	EG	Demonstration	<p>-To Develop basic visualization competency as well as ability to representing Idea on paper and computer</p> <p>- To build the exposure and some competence in presenting the ideas as picture and be able to unambiguously interpret drawing from others.</p>	<p>Students will able to imagine and gain knowledge about various orthographic views of the object</p> <p>-</p>
14	R.V. Adakane SEC-G	23ME1201	EG	Demonstration	<p>-To Develop basic visualization competency as well as ability to representing Idea on paper and computer</p> <p>- To build the exposure and some competence in presenting the ideas as picture and be able to</p>	<p>Students will able to imagine and gain knowledge about various orthographic views of the object</p> <p>-</p>

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					unambiguously interpret drawing from others.	
15	R.V. Adakane SEC-G	22ME308	MOM	Experiential Learning	To measure understanding level of topic in Theory and Practical class.	-Students learn the concept easily -Individual students develops chart on Topic
16	Prof. A.P.Edlabadkar	ME2392	Reliability Engineering	Flipped Classroom	-To learn themselves -To understand the concept of field effect transistor	-To practice themselves on given topic -To apply the knowledge of field effect transistor in analysis of electronic circuit
17	Dr P.D.Kamble	22ME611	FEM	KWL	Students will be able to -Learn the constant strain triangle - To understand the concepts of constant strain triangle	Student will be able to practice the concept of constant strain triangle
18	D.I.Sangotra	ME2466	Industrial safety	Research paper-based report writing	-To identify the recent research topics related to area of subject	-Students got information to various structure of research article such as abstract,

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					-To aware students related to research articles, its structure, way of reading, how to write article etc	introduction, experimentation, result and conclusion etc - Students understood how to read the article and extract the finding out of it.
19	D.I.Sangotra	ME2421	Vibration	Research paper-based report writing	-To identify the recent research topics related to area of subject -To aware students related to research articles, its structure, way of reading, how to write article etc	- Students got information to various structure of research article such as abstract, introduction, experimentation, result and conclusion etc
20	D.I.Sangotra	23ME652	DFMA	Research paper-based report writing	-To identify the recent research topics related to area of subject -To aware students related to research articles, its structure, way of reading, how to write article etc	- Students got information to various structure of research article such as abstract, introduction, experimentation, result and conclusion etc

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21	Y.Y.Nandurkar	22ME501	HT	Project based learning	To apply the knowledge of heat transfer mechanism in practical field	Students were able to design and analyse the heat transfer mechanism system
22	P.A.Hatwalne	22ME507	MMI	K-W-L	To enhance student engagement and activate prior knowledge by encouraging them to identify what they already know, what they want to learn, and what they have learned at the end of the lesson. This method fosters curiosity and self-directed learning.	Students develop critical thinking, better retention of concepts, and take ownership of their learning process. It promotes reflective learning and improves comprehension and participation
23	P.A.Hatwalne	23OE2421	Marketing Management	Activity Based Learning	To enhance student engagement and conceptual understanding by involving learners in hands-on, experiential activities that promote critical thinking, collaboration, and real-world application of knowledge.	Students demonstrate improved retention of concepts, increased participation, enhanced problem-solving abilities, and a deeper understanding of subject matter through active involvement and peer interaction. -

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24	N.D.Gedam	ME2469	Turbines	Recent Technologies used in Turbines	- To learn themselves -To understand the concept of different turbines	- To practice on Recent Technologies used in fluid machines -Students will be able to apply the knowledge of turbine
25	N.D.Gedam	22ME603	Fluid Machines	Recent Technologies used in fluid machines	- To learn themselves -To understand the concept of different fluid machines	- To practice on Recent Technologies used in fluid machines -Students will be able to apply the knowledge of turbine
26	N.D.Gedam	OE2409	PEM	Predictive Analytics for Proactive Project Management	- To learn themselves -The students should be able to understand the concepts of Different Project Managements	- The students will be able to practice themselves on given topic. -The students will be able to apply the knowledge of Project Managements
27	S.S.Nagpure	22ME302	Fundamental of managem	Research paper based	-Function of management	-Differentiate the method of management -Identify various techniques of management

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			ent and economic s		-Identify tool and technique of marketing of goods and services	
28	Dr. S.S.Chaudhari	23ME1401	MP	KWL	-Students will be able to learn the practical concepts of spinning - Students will be able to understand the concepts of mechanics of metal forming.	- The students will be able to practice the concept on given topic.
29	A.R.Narkhede	ME2354	DMD	Case study-based learning	To learn themselves To understand the concept of design	Practice themselves on given topic Apply the knowledge of design
30	Dr. S.P.Ambade	22ME671	ORT	Open book test	To measure understanding level of topic in theory class	-To learn the concepts of fundamentals of LPP -An ability to identify, formulates and solve engineering problems -Difficulty level of student can test

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31	Dr. S.P.Ambade	23ME1105	MSM	Game based learning	To measure understanding level of topic in theory class	-To learn the concepts of fundamentals of various terminologies in iron carbon diagram -To understand the importance of word which is scrambled and student has to reconstruct that word -Difficulty level of student can test
32	P.V.Lande	23OE2416	Material Managem ent	Flipped Classroom	-To understand the concept of ABC analysis -To enable students to categorize inventory items -To improve decision making skills	-Engineering knowledge and problem analysis in the project management -Self study Industrial exposure
33	P.V.Lande	23OE2416	Material Managem ent	Flipped Classroom	-To understand the concept of ABC analysis -To enable students to categorize inventory items	-Engineering knowledge and problem analysis in the project management -Self study Industrial exposure

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					-To improve decision making skills	
34	Neeraj Sunheriya	23ME1301	CAD	Flipped Classroom	-The primary objective of implementing the innovative Flip Classroom method in the Computer Aided Design (CAD) course was to bridge theoretical knowledge with real-world application through industrial exposure	-Engineering knowledge and problem analysis in the project management -Self study Industrial exposure
35	Neeraj Sunheriya	22ME1101	EG (Sec-F)	Object based learning	- This refers to experiential and active learning; it is a mode of learning that student likes the most. When they learn with hands-on learning techniques,	- To develop basic visualization competency as well as ability to representing ideas on both paper and computer -To build exposure and some competence in presenting ideas as pictures, and be able to unambiguously interpret drawing from others.

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					it deepens their involvement with the subject matter. Moreover, their lateral thinking, analytical skills, and group work features are improved.	
36	P.N.Shende	22ME554	PEM	Mind map	<ul style="list-style-type: none"> -To improve learning ability through chart preparation - To select best content that gives precise information about the topic 	<ul style="list-style-type: none"> -The ability to create new concepts, theories, technology products or processes - This method improves the searching and learning ability of students - Improves learning skills and presentation skills
37	P.N.Shende	22ME654	Plastics and composite s	Research paper-based report writing	<ul style="list-style-type: none"> - To identify the recent research topics related to area of subject - To aware students related to research 	<ul style="list-style-type: none"> - To understand the various structure of research article such as abstract, introduction, experimentation, result and conclusion etc

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					articles, its structure, way of reading, how to write article etc	- To understand how to read the research article and extract the finding out of it
38	P.N.Shende	ME2444	Engineering plastics	Mind map	-To improve learning ability through chart preparation - To select best content that gives precise information about the topic	-The ability to create new concepts, theories, technology products or processes - This method improves the searching and learning ability of students - Improves learning skills and presentation skills
39	A. S. Bonde	ME1401	MP	Surprise Test	- Promotes continuous learning Enhances preparedness and discipline -Provide real time feedback to teachers and students - To improve the test expectancy	- Gradual improvement in learning ability of students - Improvement in attendance and attentiveness in the lecture - Test expectancy was improved

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40	M.N.Dakhore	23OE2415	Operation Management	Research article	- To channelize students' knowledge about recent trends in an industry and implementation of operation management	- Apply their knowledge about the subject to prepare the relevant research articles -With the help of context and detailed data, students should analyse what they would and would not do in a particular situation, why, and how by giving the conclusion on the research article at the end
41	M.N.Dakhore	23OE1315	Operation Management	Research article	- To channelize students' knowledge about recent trends in an industry and implementation of operation management	- Apply their knowledge about the subject to prepare the relevant research articles -With the help of context and detailed data, students should analyse what they would and would not do in a particular situation, why, and how by giving the conclusion on the research article at the end
42	M.N.Dakhore	MDM2ME202	Industrial Robotics	Research article	- To channelize students' knowledge about recent trends in an industry of CNC and robotics	- To prepare the relevant research article - Students should analyse what they would and would not do in a particular situation, why, and

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						how by giving the conclusion on the research article at the end
43	M.N.Dakhore	MDM1ME201	Industrial Robotics	Research article	- To channelize students' knowledge about recent trends in an industry of CNC and robotics	- To prepare the relevant research article - Students should analyse what they would and would not do in a particular situation.
44	Dr. S.T.Bagde	ME2435	EME	KWL	-To measure understanding level of topic in theory class	-Students learnt the concepts of fundamentals of various project revival methods. -Student able to understand the importance of societal aspects of project. -Difficulty level of student can test.
45	Dr. S.T.Bagde	ME2412	Additive Manufacturing	KWL	-To measure understanding level of topic in theory class	-Students learnt the concepts of fundamentals of various project revival methods. -Student able to understand the importance of societal aspects of project. -Difficulty level of student can test.

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46	D.N.Kashyap	ME2401	AIP	KWL	-Student should understand the Construction & Working of different Types of Sensors used in Industrial Robot.	-Student can able to select suitable sensors for specific applications
47	Dr. V.R.Khawale	ME2427	SEU	Flipped classroom	-The typical lecture process is reversed in this teaching strategy. Before the actual class session, students are asked to view video lecture. They will then use the knowledge gained from these lectures to solve a quiz conducted during same session.	-Engineering knowledge and problem analysis in the project management -Self study

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48	Dr. S.R.Jachak	22ME505	ORT	Flipped classroom	<ul style="list-style-type: none">1.To shift from a teacher-centered to a learner-centered approach2. To maximize classroom interaction and engagement3. To promote deeper understanding of concepts4. To foster critical thinking and higher-order skills5. To encourage self-directed and independent learning6. To improve academic outcomes through active learning7. To create a flexible and resilient learning environment	<ul style="list-style-type: none">-Improved Student Engagement-Enhanced Conceptual Understanding-Personalized Learning Experience-Increased Teacher-Student Interaction-Development of Higher-Order Thinking Skills-Improved Academic Performance-Fostering Independent Learning and Accountability-Flexibility and Accessibility
49	V.G.Thakre	23ME1207	FAB Shop	Demonstration	<ul style="list-style-type: none">-To communicate an idea with the aid of visuals such	<ul style="list-style-type: none">- To get knowledge in welding

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					as experimentation, flip chart, posters etc -A demonstration always as a finished product - The key to a good demonstration is for the audience to be able to go home and does what teacher have taught them how to do	- To develop design welding system, components or processes meeting specified needs for broadly defined engineering problems appropriate to the welding discipline
50	V.G.Thakre	23ME1107	FAB Shop	Demonstration	-To communicate an idea with the aid of visuals such as experimentation, flip chart, posters etc -A demonstration always as a finished product - The key to a good demonstration is for the audience to be able to go home and does what teacher have taught them how to do	-To develop basic visualization competency as well as ability to representing ideas on both paper and computer. -To build exposure and some competence in presenting ideas as pictures, and be able to unambiguously interpret drawing from others.