Nagar Yuwak Shikshan Sanstha's
Yeshwantrao Chavan College of Engineering
(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)
Hingna Road, Wanadongri, Nagpur - 441 110
Department of Mechanical Engineering

Innovative Teaching Learning methods during ODD term 2021-22

Sr. No.	Name of Faculty	Course Code	Course Name	Title of Innovative Method	Objective of Activity	Outcome of Activity	PO Mapped
1.	Dr. R. B. Chadge	ME 2466	Artificial Intelligence	Research paper-based learning	To measure understanding level of topic in theory class	-Students understand the basic concepts of various terminologies used in AI. -Student able to understand the important application of AI in manufacturing and other industries which are important for future point of view.	PO-3, PO-4, PO-5
2.	V. M. Korde	ME 2031	Heat Transfer	Flow charts/diagrams	-To describe a sequence of events or actions in a step-by-step fashion. -To help students in reading comprehension in students. -To serve as the visual aid to recall the process/method	-It allows students to chalk out their ideas and thoughts in logical and organized fashion. -It is useful tool for students to learn as it will often be used in business meetings and for presentations in future.	PO-4, PO-10, PO-12
3.	A. S. Bonde	ME 2305	Production Management	Online quizzes with continuous evaluation process	-To improve learning ability. -To improve test expectancy.	-Gradual improvement in learning ability of students. -The test expectancy will improve.	PO-1, PO-2, PO-6
4.	Dr. S. T. Bagde	ME 2435	Earth moving equipments	KWL	- To measure understanding level of topic in theory class	-Students learns the concept of fundamental of various project revival methods. -Students understand the importance of societal aspects of project.	PO-7, PO-8, PO-12
5.	Dr. S. R. Jachak	ME 2331	ORT	Expertise of IIT Professor	-To understand the basic concepts of transportation problem (algorithm).	-Students learns the basic concepts of transportation problem (algorithm). -Importance of topic get covered in less time.	PO-1, PO-5
6.	M. S. Tufail	ME 2304	Automation In Production	Flipped Classroom	-To evaluate the student's knowledge for the new topics by delivering the presentations.	-Improves students' engagement in the course.	PO-5, PO-10
7.	Dr. S. P. Ambade	ME 2201	Material Science and Metallurgy	Game based learning (Scrambled)	-To measure understanding level of topic in theory class.	-Students learnt the concepts of fundamentals of various terminologies in IC diagram. -Students able to understand the important word which is scrambled and student has to reconstruct that word.	PO-1, PO-4, PO-5, PO-6, PSO-1
8.	A. B. Amale	ME 2101	Engineering Graphics	Demonstration	-To develop basic visualization competency as well as ability to representing ideas on both	-Students understand the concept of engineering drawing and development of 3D objects, imagine overall shape,	PO-1, PO-5, PO-10, PO-

					paper and computer.	appearance, position, exposure to visual aspects of technical drawing.	12
9.	D. Y. Shahare	ME 2205	Mechanics of Material	Flipped Classroom	-To understand the concepts of slope and deflection and principal plane and stress. -The students should be able to learn themselves.	-The students will be able to understand the concepts of slope and deflection and principal plane and stress.	PO-5, PO-10
10.	A. P. Edlabadkar	ME 2201	Material Science and Metallurgy	Game based learning (Scrambled)	-To measure understanding level of topic in theory class	-Students learnt the concepts of fundamentals of various terminologies in IC diagram. -Students able to understand the important word which is scrambled and student has to reconstruct that word.	PO-1, PO-4, PO-5, PO-6, PSO-1
11.	Dr. P. D. Kamble	ME 2465	PE-V:DOETM	KWL	-To learn the practical concepts of spinning. -To understand the concept of mechanics of metal forming.	-The student will be able to practice the concepts of spinning and mechanics of metal forming.	PO-1, PO-4, PO-5, PO-6, PSO-1
12.	R. V. Adakane	ME 2205	Mechanics of Material	Practical performance through virtual lab	-To measure understanding level of topic in practical class.	-Students performed practical virtually.	PO-1, PO-2, PO-5, PO-10, PSO-1
13.	D. N. Kashyap	ME 2201	Material Science and Metallurgy	virtual lab	-To understand the procedure for sample preparation and metallographic examination. -To observe the metallographic sample at different magnification.	-Students can prepare a sample for metallographic examination. -Student can do microstructural analysis of steel at different magnification.	PO-1, PO-2, PO-5, PO-10, PSO-1
14.	A. R. Narkhede	ME 2205	Mechanics of Material	Flipped Classroom	-To understand the concepts of slope and deflection and principal plane and stress. -The students should be able to learn themselves.	-The students will be able to understand the concepts of slope and deflection and principal plane and stress.	PO-5, PO-10
15.	Y. Y. Nandurkar	ME 2208	Fluid Machines	Using actual models	-To understand the components used in Fluid Mechanics.	-Students learnt the working of component through models and important topics get covered in less time.	PO-1, PO-5, PO-10, PO-12
16.	M. M. Dakhore	ME 2305	Production Management	Research article	-To channelize students' knowledge about the subject towards showcasing something that is happened or is happening in a particular business or management environment.	-Students will able to apply their knowledge about the subject to prepare relevant case-study.	PO-1, PO-7, PO-8, PO-12, PSO-1
17.	P. S. Barve	ME 2426	Vehicle Engineering	Gear box	-To increase the use of text books, industrial examples and create interest in reading.	-Student will understand importance of reading books and industrial equipment problem.	PO-1, PO-5

18.	Dr. A. P. Kedar	ME 2449	Project Evaluation Management	Flipped Classroom	-To understand the concepts of project management. -The students should be able to learn themselves.	-The students will be able to apply engineering knowledge and problem analyse in the project management.	PO-5, PO-10
19.	C. A. Mahatme	ME 2335	Robotics and Subtractive manufacturing	Demonstration	-To channelize students' knowledge about the subject towards showcasing something that is happened or is happening in a particular business or management environment.	-Students will able to analyse and gain knowledge about the CNC machine and its components. - With the help of context and detailed demonstration students should analyse different aspects related to CNC machine.	PO-1, PO-7, PO-8, PO-12, PSO-1
20.	P. A. Hatwalne	ME 2423	Computer Aided Drawing and Manufacturing	Research paper-based report writing	-To identify the recent research topics related to area of subject. -To aware the students related to research articles, its structure, way of reading, how to write article etc.	-Students will get information related to various structure of research article such as abstract, introduction, experimentation, results, conclusion etc. -Students will understand how to read the research article ans extract the findings out of it.	PO-4, PO-5, PO-10
21.	Dr. S. V. Prayagi	ME 2301	Heat Transfer	Flipped Classroom	-To understand the concepts of transmission system. -The students should be able to learn themselves.	-The students will be able to apply engineering knowledge and problem analyse in the transmission system.	PO-5, PO-10
22.	Dr. V. R. Khawale	ME 2343	Power Generation Engineering	Flipped Classroom	-To understand the concepts of project management. -The students should be able to learn themselves.	-The students will be able to apply engineering knowledge and problem analyse in the project management.	PO-5, PO-10
23.	N. J. Giradkar		Refrigeration and air-conditioning	Project based learning	-To apply knowledge of air-conditioning in practical field.	-Students will be able to interpret the psychrometric properties if air and processes, select and apply the various psychrometric process to live problem.	PO-1, PO-2, PO-3, PO-5, PO-7, PO-8

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1	Dr. J. P. Giri	ME 2369	Computer Integrated Manufacturing	Research paper based case studies	-To channelize students for research paper reading and writing.	-Students will be able to read the research papers according to their project topics and collect the data regarding it. -With the help of this activity the student will be able to write the research paper.	PO-1, PO-11, PO-12
2	A. S. Bonde	ME 2254	Manufacturing Process II	Field visit	-To improve learning ability. -To improve test expectancy.	-Gradual improvement in learning ability of students. -The test expectancy will improve.	PO-1, PO-2, PO-6
3	Dr. S. S. Chaudhari	ME 2254	Manufacturing Process II	KWL	-To learn the practical concepts of spinning. -To understand the concept of mechanics of metal forming.	-The student will be able to practice the concepts of spinning and mechanics of metal forming.	PO-1, PO-2, PO-5, PSO-1
4	M. S. Tufail	ME 2371	Mechatronics	Project based learning	-To evaluate students' knowledge by preparing small project containing all the element of mechatronics system.	-Improve students' engagement in the course for better understanding.	PO-1, PO-2, PO-3, PO-5, PO-7, PO-8
5	Dr. S. P. Ambade	ME 2387	Advanced Welding Techniques	Game based learning (Scrambled)	-To measure understanding level of topic in theory class.	-Students learnt the concepts of fundamentals of various terminologies in IC diagram. -Students able to understand the important word which is scrambled and student has to reconstruct that word.	PO-1, PO-4, PO-5, PO-6, PSO-1
6	P. N. Shende	ME 2381	Operation Research Technique	KWL	-To improve learning ability through chart preparation. -To select best content that gives precise information about the topic.	-Improves the searching and learning ability of system. -Improves learning skill and presentation skill.	PO-1, PO-2, PO-5, PO-6, PO-9
7	A. B. Amale	ME 2101	Engineering Graphics	Object based learning	-To develop basic visualization competency as well as ability to representing ideas on both paper and computer.	-Students understand the concept of engineering drawing and development of 3D objects, imagine overall shape, appearance, position, exposure to visual aspects of technical drawing.	PO-1, PO-5, PO-10, PO-12
8	G. H. Waghmare	ME 2254	Manufacturing Process II	Video Flipped Classroom	-To understand the concepts of 3D printing. -The students should be able to learn themselves.	-The students will be able to apply knowledge of 3D printing.	PO-5, PO-10
9	D. Y. Shahare	ME 2251	Design of Machine Elements	Flipped Classroom	-To understand the concepts of Spur gear. -The students should be able to learn themselves.	-The students will be able to apply knowledge of spur gear.	PO-5, PO-10

10	A. P. Edlabadkar	ME 2392	Reliability Engineering	Flipped Classroom	-To understand the concepts of field effect transistor. -The students should be able to learn themselves.	-The students will be able to apply knowledge of field effect transistor in analysis of electronic circuit.	PO-5, PO-10
11	Dr. S. S. Khedkar	GE 2373	Innovation and Entrepreneurship	Video Flipped Classroom	-To understand the concepts of Entrepreneurship. -The students should be able to learn themselves.	-The students will be able to apply knowledge of Entrepreneurship.	PO-5, PO-10
12	A. R. Narkhede	ME 2354	Design of Mechanical Drives	Case study-based learning	-To activate thought process to compare theoretical things practically. -To motivate them to recall taught content.	-Students improves their ability to recall learnt concepts. -Students improves their drafting/writing/presentation skill.	PO-1, PO-2, PO-5, PO-6, PO-12, PSO-1
13	Y. Y. Nandurkar	ME 2252	Engineering Thermodynamic	Using actual models	-To understand the components used in Engineering Thermodynamics.	-Students learnt the working of component through models and important topics get covered in less time.	PO-1, PO-5, PO-10, PO-12
14	C. A. Mahatme	ME 2256	Mechanical Measurement and Metrology	Flipped Classroom	-To channelize the students knowledge about the subject towards showcasing what they have learnt about the topic when they are made to teach the topic in class.	-Students will be able to apply their knowledge about the topic they have learnt. -With the help of context and detailed data, students will be able to analyse the topic. -Student will be able to provide detailed explanation and answer the questions from the audience i.e. colleagues and teacher.	PO-5, PO-10
15	Dr. G. M. Dhote	ME 2354	Design of Mechanical Drives	Case study-based learning	-To activate thought process to compare theoretical things practically. -To motivate them to recall taught content.	-Students improves their ability to recall learnt concepts. -Students improves their drafting/writing/presentation skill.	PO-1, PO-2, PO-5, PO-6, PO-12, PSO-1
16	P. A. Hatwalne	ME 2351	Fluid Machines	Flipped Classroom	-To understand the concepts of Spur gear. -The students should be able to learn themselves.	-The students will be able to apply knowledge of spur gear.	PO-5, PO-10
17	Dr. P. D. Kamble	ME 2361	Finite Element Method	KWL	-To improve learning ability through chart preparation. -To select best content that gives precise information about the topic.	-Improves the searching and learning ability of system. -Improves learning skill and presentation skill.	PO-1, PO-2, PO-5, PO-6, PO-9