



G.Pullaiah College of Engineering and Technology

(Autonomous)

(Approved by AICTE, New Delhi | NAAC Accreditation with 'A' Grade |

Accredited by NBA (CSE, ECE & EEE) | Affiliated to JNTUA)

Nandikotkur Road, Venkayapalli (V), Kurnool - 518452, Andhra Pradesh

DATE: 24-12-2019

To

The Principal,
GPCET,
Kurnool.

Sir,

Sub: Approval of ADD-ON course for II ME, III ME & IV ME Students-Regd

The department of ME requests you to accept the proposal for conducting ADD-ON Course on “Advances in manufacturing” for the odd semester of II, III & IV year ME students scheduled for the duration of 42 hours. Kindly accept the proposal.

Thanking you sir,

Yours Sincerely

HOD-ME

PRINCIPAL

G.Pullaiah College of Engg & Tech.
Nandikotkur Road, VENKAYAPALLI
KURNOOL-518 452 (A.P)



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Nandikotkur Road, Venkayapalli (V), Kurnool - 518452, Andhra Pradesh

Department Circular –ADD-ON Course

DATE: 26-12-2019

The II year, III year & IV year-II semester ME Students are informed to enroll their names for ADD-ON Course on “**advances in manufacturing**” with their respective class-in-charges on or before 30-12-19. The course commences from 31st December and the duration of the course is for 42 hours. The course is conducted from 4 pm to 5 pm regularly.

Bus facility is made available soon after the class work.

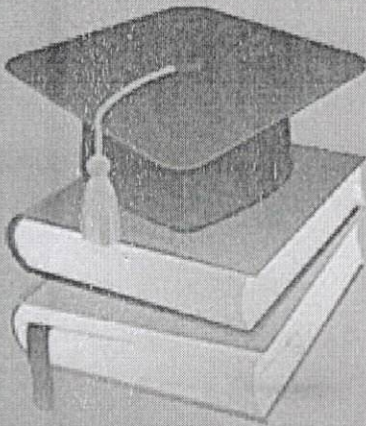
HOD-ME



**G. PULLAIAH COLLEGE OF
ENGINEERING AND TECHNOLOGY
(AUTONOMOUS)**

Department Of Mechanical Engineering

ADD ON COURSE



Topic : Advances in Manufacturing
Target audience : II and III Year Students
Total Courses Duration: 42 hrs
**Selection Procedure : Registration on First
come First serve basis**

FREE

**Register
Now**

Date of commencement of the course : 31 Dec , 2019.

End of Course : 27 Feb, 2020.

Exam Date: 28 Feb,2020.

Raw

SYLLABUS FOR ADD-ON COURSE ON ADVANCES IN MANUFACTURING

DAY	TOPICS
1	Introduction to Advanced Manufacturing Processes
2	Ultrasonic Machining (USM)
3	abrasive jet machining (AJM)
4	Abrasive water jet machining (AWJM)
5	Advanced Finishing Processes
6	Electrochemical Machining Process (ECM)
7	Thermal Material Removal Processes (EDM, EBM, LBM)
8	Electron Beam Machining (EBM)
9	Laser Beam Machining (LBM)
10	Nanomanufacturing and self-assembly.
11	Introduction to Advanced Manufacturing Processes
12	Ultrasonic Machining (USM)
13	abrasive jet machining (AJM)
14	Abrasive water jet machining (AWJM)
15	Advanced Finishing Processes
16	Electrochemical Machining Process (ECM)

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G PULLAIAH COLLEGE OF ENGINEERING & TECHNOLOGY: KURNOOL (Autonomous)

Department of Mechanical Engineering

The following is the list of the students who have attended Add on Course on ““advances in manufacturing””

17th Batch Students

S.No	ROLL NO	Name of the Candidate
1	17AT1A0301	SYED AALE RASOOL
2	17AT1A0302	SHAIK AFZAL AHMMED
3	17AT1A0303	KATIKA ALLAH BAKASH
4	17AT1A0304	PAGADAM ANANDA SWAROOP KUMAR
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15	17AT1A0318	SHAIK MOHAMED SAIF
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26	17AT1A0331	GUDURU RAGHAVA
27	17AT1A0332	BUDARAPU RAGHAVENDRA
28	17AT1A0333	SHAIK RAHAMAN
29	17AT1A0334	PEDISELA RAJA PRAVEEN
30	17AT1A0335	GURRAM REVANTH
31	17AT1A0336	MADANAKANTI SAI KIRAN

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32	17AT1A0337	CHAWAN SAIASHWIN
33	17AT1A0338	PINJARI SALEEM BASHA
34	17AT1A0339	SEMIKALA SANJEEVA REDDY
35	17AT1A0340	SABOLU SATHESH
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49	18AT5A0304	SHAIK GAFOOR BASHA
50	18AT5A0306	GELLELA GANESH REDDY
51	18AT5A0307	KURUVA MALLIKARJUNA
52	18AT5A0308	SHAIK MOHAMMAD ISHAQ
53	18AT5A0309	GOLLA PARASHURAM
54	18AT5A0312	KUMMARI RAVI KUMAR
55	18AT5A0313	MADARA BOYINA SAI KRISHNA
56	18AT5A0314	BOYA SAI KUMAR

18th batch Students

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16	18AT1A0316	DASTAGIRI MOHAMMED AMEEN
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18	18AT1A0318	SHAIK MOHAMMED MOHSIN
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P. V. Rao

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55	19AT5A0316	BEECHARLA YATHEENDRANATHA REDDY
56	19AT5A0317	MALLU JAYARAMI REDDY
57	19AT5A0319	EEDARA SIVA SAI

Ramesh

G PULLAIAH COLLEGE OF ENGINEERING & TECHNOLOG
DEPARTMENT OF MECHANICAL ENGINEERING
ADDON COURSE SCHEDULE

Date: 31/12/2019

II & III YEAR – II Semester		
Course	Faculty	Duration
Introduction to Advanced Manufacturing Processes	DR.SATIESH BABU	3 hours
Ultrasonic Machining (USM)	DR.SATIESH BABU	3 hours
abrasive jet machining (AJM)	DR.SATIESH BABU	2 hours
Abrasive water jet machining (AWJM)	Dr.K.MALLIKARJUNA	3 hours
Advanced Finishing Processes	Dr.K.MALLIKARJUNA	3 hours
Electrochemical Machining Process (ECM)	Dr.K.MALLIKARJUNA	2 hours
Thermal Material Removal Processes (EDM, EBM, LBM)	A.SINIVAS	3 hours
Electron Beam Machining (EBM)	A.SINIVAS	3 hours
Laser Beam Machining (LBM)	K.CHINNA VEREESH	3 hours
Nanomanufacturing and self-assembly	K.CHINNA VEREESH	3 hours

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G. PULLAIAH COLLEGE OF ENGINEERING & TECHNOLOGY (AUTONOMOUS)

II, III & IV B. Tech I SEM Objective Paper – Assessment

Branch: MECHANICAL ENGINEERING

Sub: Advances in Manufacturing

Date: 28/02/2020

Time: 30 min

Max. Marks: 25

Roll No:

Invigilator signature:

I. MULTIPLE CHOICE QUESTIONS

1. Which of the following is NOT a key driver of advances in manufacturing? []
a) Automation b) Globalization c) Sustainability d) Traditional methods
2. Additive manufacturing is also known as: []
a) Subtractive manufacturing b) 3D printing c) Injection molding d) Casting
3. Which of the following materials can be used in additive manufacturing? []
a) Metals b) Plastics c) Ceramics d) All of the above
4. What is the primary advantage of laser cutting in manufacturing processes? []
a) High precision b) Low initial cost c) Limited material compatibility d) Slow production speed
5. What is the purpose of Computer-Aided Manufacturing (CAM) software? []
a) Designing 3D models b) Controlling manufacturing processes c) Analyzing market trends
d) Managing inventory
6. Which of the following is NOT a benefit of implementing JIT manufacturing? []
a) Reduced inventory costs b) Increased production lead times c) Improved production
flexibility d) Enhanced quality control
7. What is the primary advantage of using CNC machining in manufacturing? []
a) High precision and repeatability b) Low initial investment c) Limited material compatibility
d) Slow production speed
8. Which of the following is a characteristic of Industry 4.0? []
a) Mass production b) Centralized decision-making c) Cyber-physical systems d) Manual labor
9. What is the purpose of Six Sigma in manufacturing? []
a) Improving process efficiency and quality b) Reducing material costs c) Increasing production
speed d) Enhancing workplace safety
10. What is the primary function of a Programmable Logic Controller (PLC) in manufacturing
automation? []
a) Analyzing market trends b) Managing human resources c) Controlling machinery and
processes d) Designing product prototypes

Ram

11. Which of the following is NOT an application of Robotics in manufacturing? []
a) Material handling b) Welding c) Inventory management d) Assembly
12. Which of the following is NOT a typical characteristic of Lean manufacturing? []
a) Waste reduction b) Continuous improvement c) Mass production d) Employee involvement
13. What is the primary goal of Total Quality Management in manufacturing? []
a) Maximizing profits b) Reducing production costs c) Ensuring customer satisfaction
d) Minimizing production lead times
14. What is the main advantage of using FMS in production? []
a) Low initial investment b) Limited product customization c) High production flexibility
d) Slow production speed
15. Which of the following is NOT a benefit of implementing (JIT) manufacturing? []
a) Reduced inventory costs b) Increased production lead times c) Improved production
flexibility d) Enhanced quality control
16. What is the primary function of a Computer Numerical Control (CNC) machine? []
a) Designing product prototypes b) Controlling machinery and processes c) Analyzing market
trends d) Managing human resources
17. Which of the following is a characteristic of Industry 4.0? []
a) Mass production b) Centralized decision-making c) Cyber-physical systems d) Manual labor
18. What is the purpose of Six Sigma in manufacturing? []
a) Improving process efficiency and quality b) Reducing material costs c) Increasing production
speed d) Enhancing workplace safety
19. What is the primary function of a Programmable Logic Controller (PLC) in manufacturing
automation?
a) Analyzing market trends b) Managing human resources c) Controlling machinery and
processes d) Designing product prototypes
20. Which of the following is NOT a common application of Robotics in manufacturing?
a) Material handling b) Welding c) Inventory management d) Assembly
21. Which of the following is NOT a typical characteristic of Lean manufacturing?
a) Waste reduction b) Continuous improvement c) Mass production d) Employee involvement
22. What is the primary goal of Total Quality Management (TQM) in manufacturing?
a) Maximizing profits b) Reducing production costs c) Ensuring customer satisfaction
d) Minimizing production lead times

Evans

23. What is the main advantage of using flexible manufacturing systems (FMS) in production?

- a) Low initial investment
- b) Limited product customization
- c) High production flexibility
- d) Slow production speed

24. What is the primary function of a Computer Numerical Control (CNC) machine?

- a) Designing product prototypes
- b) Controlling machinery and processes
- c) Analyzing market trends
- d) Managing human resources

25. Which of the following is NOT a characteristic of smart manufacturing?

- a) Integration of information technologies
- b) Real-time data analysis
- c) Reduced automation
- d) Increased connectivity between systems

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G PULLAIAH COLLEGE OF ENGINEERING & TECHNOLOGY: KURNOOL (Autonomous)

Department of Mechanical Engineering

Evaluation sheet on Add on Course on “advances in manufacturing”

17th Batch Students

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