BMM3643 Manufacturing Processes Course Information

by
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Course Introduction

Lecturer:

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Course Synopsis

This course introduces students to manufacturing processes used for converting raw materials into finished products. Various processes, machinery, and operations will be examined with emphasis placed on understanding engineering materials and processing parameters that influence design considerations, product quality, and production costs. Sustainable manufacturing process will be discussed in student project presentation.

COURSE OUTLINE

Week	Content	Week	Content
1	Introduction to Manufacturing Processes	8	Sheet Metal Forming -Bending & Deep Drawing
2	Metal Casting - Fundamental of Metal Casting & Sand Casting	9	Powder Metallurgy
3	Metal Casting - Expandable Casting & Permanent Casting	10	Material removal processes: Machining, Abrasive and Finishing operation
4	Forming & Shaping Polymer - Extrusion, Blow Molding & Injection Molding	11	Joining Processes
5	Bulk Metal Forming - Open-die, Closed-die & Precision Forging	12	Surface Treatment
6	Bulk Metal Forming - Extrusion & Drawing Process	13	Project Presentation
7	Sheet Metal Forming - Sheet Metal Characteristics & Cutting	14	Project Presentation

References

1. Manufacturing Engineering & Technology. S. Kalpakjian & S. Schmidt. © 2014 7th ed. Prentice Hall
2. Introduction to Manufacturing Processes. J. A. Schey © 2000, 3rd ed. McGraw-Hill
3. Fundamentals of Modern Manufacturing, Mikell P. Groover © 2002, 4th John Wiley & Sons, Inc.

Course Information

Assessment	Percentage (%)
Assignment/Quiz	15
Project (Report and Presentation)	25
Mid-Term Exam	20
Final Exam	40
TOTAL	100

Fail to sit in for Final Exam will cause you fail in this subject.

Assignment & Project Format

Please remember to include the questions given in the assignments. **Cover page** of the assignment should include:

1. Leader's Name & No. Matric
2. Section
3. Group Members' Name & No. Matric
4. Lecturer's Name
5. Submission date

ZERO MARKS for PLAGIARISM & COPY/PASTE from internet !!!

Late submission also will be penalized

Project Information

A project proposal must be submitted before approval is given for you to proceed your project. Maximum of 5 pages which includes:

i. Cover page
ii. Contents ;

- ✓ Propose an engineering product which is produced through multiple manufacturing processes, **at least** consists of 10 different processes.
- ✓ Describe full process activities in product manufacturing processes such as design, bill of material, costing and etc.
- ✓ Your product MUST NOT similar with other groups, so it is First Come, First Serve basis.
- ✓ Need to submit the project proposal after MID TERM BREAK.

General Class rules

- Attendance MUST minimum 80% (refer UMP's rule)
- Please be punctual to avoid interruption during lecture (beyond 10 min late, students are not allowed to enter the class)
- Proper Attire/Apparel (no slippers!)
- Class preparation (make sure all whiteboards are clean, desktop is in ON condition)

Author and Co-authors Information

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