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Department of Industrial Engineering	
Manufacturing Processes I (65340)	
Total Credits	**3**
major compulsory	
Prerequisites	-

Course Contents

Manufacturing engineering, Manufacturing Processes Classifications, Casting Processes, Bulk Deformation Processes, Machining Processes, Joining Processes, Sheet Metal Working Processes, and Plastic Processes.

	Intended Learning Outcomes (ILO's)	Student Outcomes (SO's)	Contribution
1	Demonistrate knowledge in the basic principles of manufacturing processes and their technical capabilities	A	40 %
2	Be able to assess the manufacturability of products	B	20 %
3	Have the capacity to compare between different manufacturing processes technically and financially.	C	20 %
4	Able to determine the sequence of operations in manufacturing a certain product.	E	20 %

Textbook and/ or Refrences

1. Harold Johnson, Manufacturing Process 2. Serope Kalpakjian, Manufacturing Processes for Engineering Materials

Assessment Criteria	Percent (%)
First Exam	20 %
Second Exam	20 %
Projects	15 %
Final Exam	45 %

Course Plan

Week	Topic
1	Manufacturing Engineering and Manufacturing Processes classifications.
2-4	Casting Process Sand casring, shell casting, Investment casting, Pressure die-casting, centrifugal casting
4-6	Bulk Deformation Processes Rolling, Extrusion, Drawing, and Forging,Midterm I Exam
7-8	Machining (chip removal) Processes Turning, Milling, Drilling, Grinding, ..etc.
9-10	Joining Processes Mechanical Joining Processes, electrical Joining Processes, Chemical Joining Processes
11-12	Sheet metal working processes,Midterm II Exam
12-14	Plastic Processes Blow molding, injection molding, rotational molding.