

Joining Processes	
Catalogue Description	Processes such as welding, brazing, soldering, and fastening. Applications of conventional machining processes and thermal cutting.
Prerequisites	None
Credits	2 Lecture-sessions/week – 90 min per session
Textbook	Fundamentals of Modern Manufacturing. SI version, by: M. P. Groover; 4th
References	Principles of Manufacturing, 10th Edition, W. D. Engel, 2009. Prentice Hall. Mcgraw-Hill Education. Bralla, Mcgraw-

Learning Outcomes	Correlation with	Program Outcomes	Program Objectives
1. Learned the common issues related to Joining operations: welding, brazing, soldering and adhesive bonding, and mechanical assembly.		a,b,e	1,2
2. Recognized the capabilities of non-traditional cutting processes.		a,b,e	1,2
3. Familiar with shaping of materials with special properties, complex part geometries, and to avoid surface damage		a,b,e	1,2
4. Learned the basics of the processes, technology, and equipment in the plastics industry		a,b,e	1,2
5. Familiar with composite fabrication processes		a,b,e	1,2
6. Ability to recognize the capabilities of powder metallurgy pressing and sintering techniques		a,b,e	1,2
7. Learned how to calculate the cost of cutting operations		a,b,c,e	1,2

Learning Outcomes Assessment Tools	Quizzes	End of term exam
1. Learned the common issues related to Joining operations: welding, brazing, soldering and adhesive bonding, and mechanical assembly.	x	x
2. Recognized the capabilities of non-traditional cutting processes.	x	x
3. Familiar with shaping of materials with special properties, complex part geometries, and to avoid surface damage	x	x
4. Learned the basics of the processes, technology, and equipment in the plastics industry	x	x
5. Familiar with composite fabrication processes	x	x
6. Ability to recognize the capabilities of powder metallurgy pressing and sintering techniques	x	x
7. Learned how to calculate the cost of cutting operations	x	x

Assessment:

Assessment:	Dates	Weighing
Quizzes	Per announcement	60%
End of term Exam	Exam period	40%

Attendance:

As set by BAU regulations, and specified in Student Manual, students who miss more than one-fifth of the sessions of any course in the first ten weeks of the semester will be required to withdraw from the course with a grade of "WF".

Course Coordinator	Dr. Hadi Abou Chakra
Date	