Course Specifications

Program(s) on which this course is given:	Aerospace Engineering
Department offering the program:	Aerospace Engineering
Department offering the course:	**Mechanical Design & Production**
Academic Level:	2nd year
Date	2014/2015
Semester (based on final exam timing)	☑ Fall ☐ Spring

A- Basic Information

1. Title:	Production Technology (3)			**Code:**		**MDP210**		
2. Units/Credit hours per week:	Lectures	**3hrs**	Tutorial	**1hr**	Practical		Total	4hrs

B- Professional Information

1. Course description:	**This course aims to introduce the basic principles of production technology and its applications in aerospace engineering**
2. Intended Learning Outcomes of Course (ILOs):	**a) Knowledge and Understanding**
	The student should know the cutting theories and different materials
	The student should know about the different industrial tools and its materials
	b) Intellectual Skills
	The student will be able to solve the problem of the interaction between the cutting too the work-piece.
	The student will be able to solve the problem related to the cutting energy calculating
	c) Professional and Practical Skills
	The student will gain the ability to estimate the cost of the production process
	d) General and Transferable Skills

3. Contents

Topic	Total hours	Lectures hours	Tutorial/ Practical hours
Metal Forming	6	4	2
Flow curve	5	3	2
Slap method applied to forging	5	3	2
Rolling	6	4	2
Extrusion and wire drawing	6	4	2
Sheet metal processes	7	5	2

Fine edge blanking and piercing	6	4	2
Deep drawing – contour roll forming	5	3	2
Machine tool for metal forming	5	3	2
4. Teaching and Learning Methods	Lectures ☑	Practical Training/ Laboratory ☑	Seminar/Workshop ( )
	Class Activity ☑	Case Study ( )	Projects ( )
	E-learning ( )	Assignments /Homework ☑	Other:

5. Student Assessment Methods	
• **Assessment Schedule**	**Week**
-Assessment 1; Class test	
-Assessment 2; Project Assignment	
-Assessment 3; Presentations	
-Assessment 3; Midterm Exam	
-Assessment 4; Final Exam	
• **Weighting of Assessments**	
-Mid-Term Examination	20
-Final-term Examination	60
-Project	10
-Class Test	
-Presentation	10
-Total	

6. List of References
Lecture note
Essential Books (Text Books)
Principles of metal cutting (M. Shaw)
Fundamentals of metal machining and machine tools (Boothroyd)
Periodicals, Web Sites, … etc

7. Facilities Required for Teaching and Learning	
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Course Coordinator:	**Hassan Megahed**
Head of Department:	**Prof. Ayman H. Kassem**