

University / Academy: Menoufiya University

College / Institute: Faculty of Electronic Engineering

Department: Physics and Engineering Mathematics

Course Specification

١- Course basic information :		
Course Code: PM ٠٠٦	Course Title: Production Engineering	Academic year: ٢٠١٢/٢٠١٣ Level (١)– Semester ٢
Department requirement Faculty requirement University requirement	Teaching hours- Lecture: ٢ Tutorial: ٠ Lab: ٢	

٢- Aim of the course	<ul style="list-style-type: none">a. To give the student short idea about the main aim of Production Engineeringb. The student should be familiar with the material classifications, the student should be familiar with different techniques of metal formingc. The student should be familiar with different techniques of conventional and non conventional machining.
٣- Intended Learning Outcomes:	
A- Knowledge and Understanding	<ul style="list-style-type: none">a١. Concepts and theories of mathematics and sciences, appropriate to the discipline.a٣. Characteristics of engineering materials related to the discipline.a٥. Methodologies of solving engineering problems, data collection and interpretationa٦. Quality assurance systems, codes of practice and standards, health and safety requirements and environmental issues.a٧. Current engineering technologies as related to disciplines.

	<p>a¹⁰. Technical language and report writing</p>
B- Intellectual Skills	<p>b². Select appropriate solutions for engineering problems based on analytical thinking.</p> <p>b³. Think in a creative and innovative way in problem solving and design.</p> <p>b⁶. Assess and evaluate the characteristics and performance of components, systems and processes.</p> <p>b⁸. Select and appraise appropriate ICT tools to a variety of engineering problems.</p> <p>b⁹. Judge engineering decisions considering balanced costs, benefits, safety, quality, reliability, and environmental impact.</p> <p>b¹². Create systematic and methodic approaches when dealing with new and advancing technology.</p>
C- Professional Skills	<p>c¹. Apply knowledge of mathematics, science, information technology, design, business context and engineering practice integrally to solve production engineering problems.</p> <p>c⁶. Use computational facilities and techniques, measuring instruments, workshops and laboratory equipment to design experiments, collect, analyze and interpret results.</p> <p>c⁷. Use a wide range of analytical tools, techniques, equipment, and software packages pertaining to the discipline and develop required computer programs.</p> <p>c⁸. Apply numerical modeling methods to engineering problems.</p> <p>c⁸. Apply safe systems at work and observe the appropriate steps to manage risks.</p> <p>c¹⁰. Apply quality assurance procedures and follow codes and standards.</p> <p>c¹¹. Exchange knowledge and skills with engineering community and industry.</p> <p>c¹². Prepare and present technical reports.</p>
D- General Skills	<p>d¹. Collaborate effectively within multidisciplinary team.</p> <p>d². Work in stressful environment and within constraints.</p> <p>d³. Communicate effectively.</p> <p>d⁶. Lead and motivate individuals.</p>

	<p>d^٦. Effectively manage tasks, time, and resources.</p> <p>d^٧. Search for information and engage in life-long self learning discipline.</p> <p>d^٩. Refer to relevant literatures.</p>												
٤- Course Contents	Engineering Materials: Ferrous and non-ferrous metals - Introduction to engineering Instruments -Metal forming and machining -Different methods of joining metals -Introduction to non-conventional machining.												
٥- Teaching and Learning Methods	<ul style="list-style-type: none"> - Lectures data show , white board and markers and some video films . - Tutorials - Labs and/or case studies : workshop training . - Research assignments reports about some selected topics 												
٦- Teaching and Learning Methods for disable students	N/A												
٧- Student Assessment													
a- Assessment Methods	<ul style="list-style-type: none"> -Weekly sheet exercises at class room. -Quizzes. -Labs and/or case study for more demonstration. -Midterm and final exams. 												
b- Assessment Schedule	<table style="width: 100%; border: none;"> <tr> <td>-Exercise sheet /lab assignment :</td> <td>Weekly</td> </tr> <tr> <td>-Quiz: ١</td> <td>Week no ٤</td> </tr> <tr> <td>- Mid-term exam:</td> <td>Week no ٨</td> </tr> <tr> <td>- Quiz: ٢</td> <td>Week no ١٢</td> </tr> <tr> <td>-Lab exam:</td> <td>Week no ١٦</td> </tr> <tr> <td>-Final-term examination:</td> <td>Week no ١٧</td> </tr> </table>	-Exercise sheet /lab assignment :	Weekly	-Quiz: ١	Week no ٤	- Mid-term exam:	Week no ٨	- Quiz: ٢	Week no ١٢	-Lab exam:	Week no ١٦	-Final-term examination:	Week no ١٧
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c- Weighting of Assessment	<table style="width: 100%; border: none;"> <tr> <td>- Class tutorial and quizzes :</td> <td style="text-align: right;">١٠ %</td> </tr> <tr> <td>- Mid-term examination:</td> <td style="text-align: right;">١٠ %</td> </tr> <tr> <td>- Case study and/or practical exam:</td> <td style="text-align: right;">٢٠ %</td> </tr> <tr> <td>- Final – term examination:</td> <td style="text-align: right;">٦٠ %</td> </tr> <tr> <td>- Other types of assessment:</td> <td style="text-align: right;">.... %</td> </tr> <tr> <td style="text-align: right;">Total</td> <td style="text-align: right; border-top: 1px solid black;">١٠٠ %</td> </tr> </table>	- Class tutorial and quizzes :	١٠ %	- Mid-term examination:	١٠ %	- Case study and/or practical exam:	٢٠ %	- Final – term examination:	٦٠ %	- Other types of assessment: %	Total	١٠٠ %
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- Final – term examination:	٦٠ %												
- Other types of assessment: %												
Total	١٠٠ %												
٨- List of text books and references													

a- Course notes	-----
b- Text books	<p>١- Production Engineering by M.Eissa , Eiyrac for publishing books.</p> <p>٢- Workshop technology by chapman et.Al.volumes ١,٢ and ٣.</p> <p>٣- Nontraditional machining techniques by Hassan el Houfy.</p>
c- Recommended books	Production Engineering by M.Eissa , Eiyrac for publishing books. (available in Arabic and English)
d- Periodicals, Web sitesetc	All periodicals related to the course.

Course contents - ILOs Matrix

Content Topics	Week	A- Knowledge & Understanding	B- Intellectual skills	C- Professional and practical skills	D- General and transferable skills
Course outlines, contents, aims and intended outcomes.	١,٢	a١,a٥,a٦,a١٠	b٣,b٥,b٨,b٩,b١٢	c١,c٥,c١١,c١٢	d١,d٣,d٦
Ferrous and non-ferrous metals	٣,٤	a١,a٥,a٨,a١٠	b٣,b٩,b١٢	c١,c٥,c٨,c١٢	d١,d٣,d٧
Introduction to engineering Instruments	٥,٦	a١,a٥, a١٠	b٣,b٥,b٩	c١,c٨,c١٢	d١,d٢,d٣,d٥,d٦,d٧
Metal forming and machining	٧,٨,٩	a١,a٨,a١٠	b٣,b٥,b٩	c١,c٥,c٨,c١٠,c١١,c١٢	d١,d٢,d٣,d٧
Different methods of joining metals	١٠,١١	a١,a٨,a١٠	b٣,b٥,b٩	c١,c٥,c٨,c١٠,c١١,c١٢	d١,d٢,d٣,d٦,d٧
Introduction to non-conventional machining.	١٢,١٣,١٤	a١,a٦,a٨,a١٠	b٣,b٥,b٨,b٩,b١٢	c١,c٥,c٨,c١٢	d١,d٧,d٩

Course coordinator:
Prof. Dr. Prof.Mustafa H.M.Eissa

Head of Department:
Prof. Dr. Magdi Kamel

Date: / /