

<b>Course Description Form</b>		
<b>Course Code and Name</b>	ME206 Manufacturing Processes	
<b>Course Semester</b>	4	
<b>Catalog Content</b>	Basics of manufacturing processes, fundamentals of casting, metal forming, welding, and metal machining processes.	
<b>Textbook</b>	M.P. Groover; <i>Fundamentals of Modern Manufacturing</i> , 4th ed., US, John Wiley & Sons, Inc., 2010. ISBN: 978-0470-467002	
<b>Supplementary Textbooks</b>	<ol style="list-style-type: none"> <li>1. S. Kalpakjian, Steven Schmid; <i>Manufacturing Engineering and Technology</i>, 7th ed., South Asia, Pearson publ., 2014. ISBN: 978-981-06-9406-7.</li> <li>2. E.P. Degarmo, J.T. Black and R. Kohser, <i>Materials and Processes in Manufacturing</i>, Prentice Hall, 1997.</li> </ol>	
<b>Credit</b>	5	
<b>Prerequisites of the Course (Attendance Requirements)</b>	None	
<b>Type of the Course</b>	Compulsory	
<b>Instruction Language</b>	English	
<b>Course Objectives</b>	This course provides the student with an introduction to industrial manufacturing processes with limitations, and applications of different machine tools and engineering materials for product manufacturing. The overall aim is to establish the technical knowledge for selection, design, and planning of manufacturing processes and systems for a product.	
<b>Course Learning Outcomes</b>	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> <li>1. Gains knowledge of casting technique.</li> <li>2. Having knowledge about metal forming and appropriate manufacturing processes for product fabrication at up-front design stage.</li> <li>3. Gains knowledge of machining devices.</li> <li>4. Learn about powder metallurgy methods</li> <li>5. Have information about welding technique.</li> <li>6. Have information about dimensional measurement techniques.</li> </ol>	
<b>Instruction Methods</b>	Face to face	
<b>Weekly Schedule</b>	1	Introduction to Manufacturing Processes
	2	Ferrous And Non-Ferrous Metals And Alloys
	3	Fundamentals of Metal Casting
	4	Casting Processes
	5	Fundamentals of Metal Forming Processes
	6	Bulk Deformation Processes
	7	Sheet Metal Forming
	8	Midterm Exam I: Powder Metallurgy
	9	Theory of Metal Machining
	10	Theory of Chip Removal Process
	11	Machining Operations and Machine Tools
	12	Midterm Exam II: Fundamentals of Welding
	13	Welding Processes
	14	Workshop
	15	Final Exam

<b>Teaching and Learning Methods</b>  <i>(These are examples. Please fill which activities you use in the course)</i>	Weekly theoretical course hours :3 Weekly applied course hours : 1 Reading Activities: 2 Internet browsing, library work:2 Report preparing:2 Preparation of Midterm and Midterm Exam:10 Final Exam and Preparation for Final Exam:9																																																																
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	7	Ability to communicate effectively in Turkish, both orally and in writing; knowledge of at least one foreign language; the ability to write effective reports and understand written reports, to prepare design and production reports, to deliver effective presentations, to give and receive clear and understandable instructions.						
	8	Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology, and to renew oneself constantly.						
	9	Acting in accordance with ethical principles, professional and ethical responsibility; information about standards used in engineering applications						
	10	Information about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation; information about sustainable development.						
	11	Knowledge about the universal and social effects of engineering applications on health, environment and safety and the problems of the age reflected in the engineering field; awareness of the legal consequences of engineering solutions.						
<b>The Course's Lecturer(s) and Contact Informations</b>	<ol style="list-style-type: none"> <li>1. Prof.Dr. Rahmi UNAL, <a href="mailto:runal@gazi.edu.tr">runal@gazi.edu.tr</a>,</li> <li>2. Prof.Dr. İbrahim USLAN, <a href="mailto:iuslan@gazi.edu.tr">iuslan@gazi.edu.tr</a></li> <li>3. Prof.Dr. Mustafa YURDAKUL, <a href="mailto:myurdakul@gazi.edu.tr">myurdakul@gazi.edu.tr</a></li> <li>4. Doç.Dr. Yusuf USTA</li> <li>5. Doç.Dr. Gökhan Küçüktürk</li> <li>6. Doç.Dr. Elmas SALAMCI</li> </ol>							