



<b>Course Name</b>	<b>Manufacturing Engineering and Technology</b>
<b>Course Director</b>	Ruan Jingkui, Zhou Xueliang, Hu Mingmao
<b>Major</b>	Mechanical Engineering, Automotive Engineering
<b>Objective</b>	Students are accepted not only to learn the knowledge about this course, but also to actually build the skills that will help them in the work in the near future.
<b>Semester</b>	6th
<b>Language</b>	English
<b>Learning/Teaching methods</b>	Classroom Lecture, Visiting Plants of DMC
<b>Hour</b>	36h
<b>Credit</b>	3.0
<b>Prerequisite</b>	Mechanical Graphing, Mechanical Designing, Mechanical Principle
<b>Content</b>	<ol style="list-style-type: none"> <li>1. Fundamentals of Machining(2h)</li> <li>2. Cutting-Tool Materials and Cutting Fluids(2h)</li> <li>3. Machining Processes: Turning and Hole Making (2h)</li> <li>4. Machining Processes: Milling, Broaching, Sawing, Filing, and Gear Manufacturing(4h)</li> <li>5. Machining Center, Machining-Tool Structures, and Machining Economics(2h)</li> <li>6. Abrasive Machining and Finishing Operations(2h)</li> <li>7. Advanced Machining Process (2h)</li> <li>8. Fabrication of Microelectronic Devices (2h)</li> <li>9. Fabrication of Microelectromechanical Devices and Systems and Nanoscale Manufacturing (2h)</li> <li>10.Surface Roughness and Measurement; Friction, Wear, and Lubrication (4h)</li> <li>11.Surface Treatments, Coatings, and Cleaning (2h)</li> <li>12.Automation of Manufacturing Process (4h)</li> <li>13.Computer-Aided Manufacturing(2h)</li> <li>14.Computer-Integrated Manufacturing Systems(2h)</li> <li>15.Product Design and Process Selection in a Competitive Environment (2h)</li> </ol>
<b>Grade/Exam</b>	Essays / Written Assignments, Exam
<b>Reference</b>	[1] Serope Kalpakjian and Steven Schmid. Manufacturing Engineering and Technology (Fifth Edition)