

Information Form for SJTU Graduate Profession Courses

Basic Information				
* Course Name	Chinese			
	English Rapid Prototyping and Reverse Engineering			
* Credits	2.0	* Teaching Hours	32 1 =16	
* Semester	Fall	* Cross-semester?	No	Spanning over Semesters
* Course Type	Program Elective Course	* Course Type	For full-time students	
* Course Category	Specialized Course	Targeting Students	All graduates	
* Instruction Language	Chinese	Teaching Method	In class teaching	
* Grade	Letter grading	Exam Method	Essay	
* School	050 School of Material Science and Engineering			
Subject	Material Science and Engineering			
Person in charge	Name	ID	School	E-mail
				lixifeng@sjtu.edu.cn
Extended Information				
* () Course Description	200 3D			
* English Course Description	<p>Course orientation: The students' abilities of academic dialectical thinking and communication are trained by the course study. Rapid prototyping manufacturing and reverse engineering techniques are comprehensively understood and analyzed. The methodological guidance is supplied for the following dissertation research.</p> <p>Course objective: Various contents of rapid prototyping manufacturing and reverse engineering are acquired, such as concept, basic knowledge, research status and development trend, typical industrial applications, limitations and shortcomings. Independent thinking ability of science and technology is improved. The interest of students on this discipline and specialty is motivated.</p> <p>Main course contents: Typical additive manufacturing processes and 3D printing materials, defects in additive manufacturing and non-destructive testing, domestic and foreign research status and development trend of additive manufacturing, basic knowledge and application of reverse engineering, inner link between rapid prototyping manufacturing and</p>			

	reverse engineering Prerequisite: Plastic Forming Technique & Process Analysis , Polymer Molding , New Plastic Forming Technique Plastic Forming & Digital Manufacturing																																																		
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* Requirements	<p style="text-align: center;">50</p> <p style="text-align: center;">10% + 30% + 60%</p> <p>1) 2) 3D 3) 3D</p>																																																		
* English Requirements	<p>Assessment method Term project</p> <p>Assessment criteria Classroom performance 10% +Homework 30% + Term project 60%</p> <p>1) No late arrival, early leave and absence without reason, good classroom performance (Classroom performance)</p>																																																		

	<p>2) Right Choice of 3D printing product and process, clear and smooth oral presentation (Homework)</p> <p>3) Right Choice of 3D printing product and process, complete and deep discussion (Term project)</p>
<p>*</p> <p>Resources</p>	<p>[1] , 2001.</p> <p>[2] , 2010.</p> <p>[3] , 2013.</p> <p>[4] . 3D , 2017.</p>
<p>*</p> <p>English Resources</p>	<p>[1] LU qingping. Rapid prototyping manufacturing technique. Higher Education Press, 2001.</p> <p>[2] CHENG Siyuan. Comprehensive practice of reverse engineering technique. Publishing House of Electronics Industry, 2010.</p> <p>[3] WEI Qingsong. Laser powder bed fusion additive manufacturing technique. Huazhong University of Science & Technology Press, 2013.</p> <p>[4] China Society of Automotive Engineers. 3D printing in automotive industry technology development report. Beijing Institute of Technology Press, 2017.</p>
<p>Note</p>	