Information Form for SJTU Graduate Profession Courses

Basic Information							
*	Chinese						
Course Name	English Eco-materialogy						
*	2		* Tooking House	32 1 =16			
Credits *	Spring		Teaching Hours *	No	Spanning over		
Semester			Cross-semester?	Semesters			
* Course Type	Program Elective Course		* Course Type	For full-time students			
* Course Category	Specialized Course		Targeting Students	Master Level			
* Instruction Language	Chinese		Teaching Method	In class teaching			
* Grade	Letter g	grading	Exam Method	Essay			
* School	School of Materials Science and Engineering						
Subject							
Subject	Name	ID	School		E-mail		
Person in charge					dshu@sjtu.edu.cn		
	Extended Information						
* () Course Description	LCA						
* English Course Description	Eco-materialogy is an interdiscipline about the interaction between materials, material cycling process and ecological environment. Its purpose is to minimize the load of materials on environment in the whole life cycle while meeting the performance requirement of materials. This course starts from discussing the increasingly serious environmental problems faced by traditional materials industry, learning the origin, basic conception and significance of eco-materials, understanding and mastering the life cycle assessment (LCA) method and its application in materials. On this basis, we focus on how to improve the environmental compatibility of steel, non-ferrous metals, ceramics, polymers and other traditional materials in the aspects of eco-design, eco-processing and recycling. Besides, the rapid development of new functional eco-materials, such as metal-air battery materials, photocatalysis materials, sewage purification materials, air purification materials, noise control materials, biodegradable materials, will also be discussed in this course.						

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	material ecological design and preparation techniques through literature surveys.					
	7. New eco-materials 6 teaching hours teaching in class					
	Understand the development of various emerging environmental functional materials, and summarize the development and trends of new ecological environmental materials through literature survey. 8. Field investigation of eco-material in industrial park 2 teaching hours filed visit					
	Learn how the material industry develops in harmony with the environment.					
	50					
*	•					
~	= 10%					
Requirements						
Requirements	= 30% PPT					
	= 60%					
	GRADING:					
*	General performance = 10% Attendance and participation in class					
English	Presentation = 30% Oral presentation in class					
Requirements	Homework = 60% Essay					
	1. , . 2003					
*	2. 1997					
	3					
Resources	4. Michael F Ashby. Materials and the environment eco-informed					
	material choice . 2016					
	1. Tieyong Zuo, Zuoren Nie, Fundamentals of Environmental Materials, Beijing: Science Press,					
*	2003					
English	2. Ryouichi Yamamoto, Environmental Materials, Beijing: Chemical Industry Press, 1997					
Resources	 3. Ryouichi Yamamoto, Ecological Design, Beijing: Chemical Industry Press, 1997 4. Michael F Ashby. Materials and the environment eco-informed material choice, Shanghai: 					
	Shanghai Jiao Tong University Press, 2016					
	2010					
Note						
NOIE						

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