

课程大纲 COURSE SYLLABUS

1.	课程代码/名称 Course Code/Title	ESE5002 环境科学与工程前沿（春） Frontier in Environmental Science and Engineering (Spring)
2.	课程性质 Compulsory/Elective	专业选修课
3.	课程学分/学时 Course Credit/Hours	2/32
4.	授课语言 Teaching Language	中文、英文
5.	授课教师 Instructor(s)	郑一
6.	先修要求 Pre-requisites	无
7.	教学目标 Course Objectives	
	1) 帮助学生了解环境科学与工程领域的最新进展 (To help students learn the recent advances in the field of environmental science and engineering) ; 2) 培养学生的批判性思维、严密的逻辑和创新的意识 (To promote critical thinking, logic and innovation spirit of students) 。	
8.	教学方法 Teaching Methods	
	1) 开放式的课堂讨论 (open discussion); 2) 批判性的阅读 (critical reading) ; 3) 科研思路的“头脑风暴” (brainstorming research ideas) 。	
9.	教学内容 Course Contents	
	Section 1	绪论 (2 课时) Introduction (2 class hours): Introducing the teaching pattern and assigning reading materials.
	Section 2	课堂汇报与讨论 (28 课时) Presentation and discussion (28 class hours) : after reading the assigned materials, students making presentations in turn, and each presentation is followed by open discussion and research idea brainstorm.
	Section 3	总结 (2 课时) Summarizing (2 class hours): summarizing the course
10.	课程考核 Course Assessment	
	1) 课堂汇报与讨论的表现 (40%) Presentation and discussion performance (40%) 2) 期末报告 (60%) Final report (60%)	
11.	教材及其它参考资料 Textbook and Supplementary Readings	
	Science, Nature 及其子刊, PNAS, Environmental Science & Technology, Water Resources Research 等顶尖刊物中的最新论文。 Recent papers published in top academic journals such as Science, Nature, PNAS, Environmental Science & Technology, Water Resources Research, etc.	