

课程详述

COURSE SPECIFICATION

以下课程信息可能根据实际授课需要或在课程检讨之后产生变动。如对课程有任何疑问，请联系授课教师。

The course information as follows may be subject to change, either during the session because of unforeseen circumstances, or following review of the course at the end of the session. Queries about the course should be directed to the course instructor.

1.	课程名称 Course Title	暑期海外水与环境管理认知实践 The overseas field-trip in water and environmental management
2.	授课院系 Originating Department	环境科学与工程学院 School of Environmental Science and Engineering
3.	课程编号 Course Code	ESE211
4.	课程学分 Credit Value	2
5.	课程类别 Course Type	专业选修课/ Major Elective Courses
6.	授课学期 Semester	夏季 Summer
7.	授课语言 Teaching Language	中英双语授课 Chinese and English
8.	授课教师、所属学系、联系方式（如属团队授课，请列明其他授课教师） Instructor(s), Affiliation & Contact (For team teaching, please list all instructors)	杨丽红，环境科学与工程学院，yanglh@sustech.edu.cn Lihong Yang, School of Environmental Science and Engineering
9.	实验员/助教、所属学系、联系方式 Tutor/TA(s), Contact	待公布 To be announced
10.	选课人数限额(可不填) Maximum Enrolment (Optional)	

11. 授课方式 Delivery Method	讲授 Lectures	习题/辅导/讨论 Tutorials	实验/实习 Lab/Practical	其它(请具体注明) Other (Please specify)	总学时 Total
学时数 Credit Hours	32	0	32	0	64
12. 先修课程、其它学习要求 Pre-requisites or Other Academic Requirements	无 N/A				
13. 后续课程、其它学习规划 Courses for which this course is a pre-requisite	无 N/A				
14. 其它要求修读本课程的学系 Cross-listing Dept.	无 N/A				

教学大纲及教学日历 SYLLABUS

15. 教学目标 Course Objectives

本课程以发达国家环境咨询机构为切入点，为进入环境专业初期的本科生提供广泛接触和了解发达国家环境领域研究与应用现状的学习机会。特别是针对水资源与水环境、土壤与地下水、全球气候变化等主要专业发展方向，通过理论知识讲座、野外实地考察、重要机构参观研讨等多种形式相结合的方式，为学生们更好地探索环境领域，尽快定位个人专业发展方向、激发专业学习热情、打开环境领域的认知视野奠定基础。本课程同时设定了选拔综合素质全面的优秀学生的目标，希望更多优秀的学生加入环境专业，为国家生态文明建设培养人才，助力国家高质量绿色发展。本课程内容可衔接《环境学导论》、《土壤与地下水污染》、《生态修复》、《环境经济学》、《全球气候变化》、《地理信息系统与遥感应用》等课程，为理论课开展提供基本的感性认知。

The purpose of this course is to present students the perspective of water and environmental management in developed country. This course includes seminars, field trip, and organization visiting. The topics include water resource and water environment, soil and groundwater, global climate changing, and so on. The course is aiming to widen the horizon of student in environmental research and industry, therefore to inspire their passion in this direction and help them to orient their personal interest..This course is also to screen the excellent students for the department. This course is also provide the foundation for the related theory courses, such as Environmental Instruction, Contamination of Soil and Groundwater, Ecological Remediation, Environmental Economy, Global Climate Changing, GIS and Remote Sensing.etc.

16. 预达学习成果 Learning Outcomes

了解发达国家水与环境管理的相关政策，通过知识结构和案例学习的方式了解发达国家环境管理领域的基础理论框架和技术手段，开展国外在土壤与地下水污染防治工程方面的相关实践与工程案例

After the course students will be familiar with the regulation and policies regarding environmental management in developed country. Especially in water pollution control ,soil and groundwater pollution control, and responsibility to climate changing. Students should also learn the engineering cases in soil and groundwater pollution control about he technologies and strategies.

17. 课程内容及教学日历（如授课语言以英文为主，则课程内容介绍可以用英文；如团队教学或模块教学，教学日历须注明主讲人）

Course Contents (in Parts/Chapters/Sections/Weeks. Please notify name of instructor for course section(s), if this is a team teaching or module course.)

序号 NO.	内容 Content	学时安排 Hours				学时汇总 Sub- total
		理论 Theoretic Teaching	实验 Experiment	实践 Exercise	上机操作 Computer Operation	
1	政策法规讲座 1: 超级基金: 地下水污染修复基金缘起及发展 Lecture: Superfund Site: Keystone corridor ground water contamination	3				3
2	政策法规讲座 2: 美国环境诉讼案例学习 Lecture: The environmental lawsuit in US	3				3
3	环境管理案例讲座 1: 密西西比河流域天然气泄露对于地下水的影响调查 Lecture: Groundwater Investigations Following a Natural Gas Leak Mississippi	2				2
4	环境管理案例讲座 2: 湖泊对于海中小岛上淡水的影响分析 Lecture: Understanding the impacts of lakes on freshwater availability of small islands	2				2
5	环境技术讲座 1: 受污染地下水的修复评估及实施 Lecture: Implementation and Assessment of Remedial Measures for Restoring Contaminated Groundwater to Beneficial Use	4				4
6	环境技术讲座 2: 地下水流模型 (编程及数据分析技术) Lecture: Groundwater Flow Models as a Tool to Solve Problems	4				4
7	环境技术讲座 3: 地下水监测自然衰减趋势评估 Lecture: Trend Analysis for MNA Guidance	4				4
8	环境技术讲座 4: 利用卫星遥感图像分析土地利用变化 Lecture: Analysis of Land Use Change with Satellite Imagery	4				4
9	环境机构参观与研讨 1: 美国宇航局气候变化研究及遥感应用 Lecture and visiting: Climate Change Research at NASA and Remote Sensing Applications	4		4		
10	环境机构参观与研讨 2: 美国地质调查局地质调查技术及应用 Lecture and visiting: Geology survey and observation at NASA	4		4		
11	实地考察 1: 流域水环境与水生态野外考察 Field-trip: Potomac River and James River (Chesapeake and Ohio Nat. Park)			4		4

12	实地考察 2: 地质认识基础野外实践 Field-trip: Fundamental of Geologic Observations at Great Falls National Park Nature History Museum visiting			8		8
13	实地考察 3: 生态学观测基础野外实践 Field-trip: Patuxent Wildlife Center visiting			4		4
14	实地考察 4: Oronoco Outfall 煤气化污染场地修复考察 Field-trip: Manufactured Gas Tar Residuals Oronoco Outfall			4		4
15	实地考察 5: 住宅用地固废资源化项目的环境影响分析 Field-trip: Consequences of Recycled Concrete Aggregate as a Subbase for a Residential Building			4		4
16	实地考察 6: 亚历山大港污染场地考察 Field-trip: Contaminated Sediments and Field Trip to Alexandria			8		8
Total				32		64

注：以上学习内容根据实际实施条件调整顺序和时长。

18. 教材及其它参考资料 **Textbook and Supplementary Readings**

1. Groundwater and Surface Water: A single resource
2. Sustainability of Groundwater Resources
3. Environment and Society

课程评估 **ASSESSMENT**

19. 评估形式 Type of Assessment	评估时间 Time	占考试总成绩百分比 % of final score	违纪处罚 Penalty	备注 Notes
出勤 Attendance				
课堂表现 Class Performance		20%		包括理论讲座时的听讲效果和互动情况，以及野外实习过程中的综合表现
小测验 Quiz				
课程项目 Projects				
平时作业 Assignments		20%		每日实习记录本记录情况
期中考试 Mid-Term Test				
期末考试 Final Exam				
期末报告 Final Presentation		60%		实习结束提交整体实习报告

其它（可根据需要
改写以上评估方
式）
Others (The
above may be
modified as
necessary)

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20. 记分方式 **GRADING SYSTEM**

- A. 十三级等级制 **Letter Grading**
 B. 二级记分制（通过/不通过） **Pass/Fail Grading**

课程审批 **REVIEW AND APPROVAL**

21. 本课程设置已经过以下责任人/委员会审议通过
This Course has been approved by the following person or committee of authority

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