

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	海岸带地质地貌原理 Beaches and Coasts				
2.	授课院系 Originating Department	海洋科学与工程系 Department of Ocean Science and Engineering				
3.	课程编号 Course Code	OCE103				
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	秋季 Fall				
7.	授课语言 Teaching Language	中英双语 English & Chinese				
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)	徐景平, 海洋科学与工程系, 15376791963, xujp@sustc.edu.cn Jingping Xu/Department of Ocean Science and Engineering				
9.	实验员/助教、所属学系、联系方式 Tutor/TA(s), Contact	无 NA				
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				32

12. 先修课程、其它学习要求
Pre-requisites or Other Academic Requirements

13. 后续课程、其它学习规划
Courses for which this course is a pre-requisite

14. 其它要求修读本课程的学系
Cross-listing Dept.

教学大纲及教学日历 SYLLABUS

15. **教学目标 Course Objectives**

本课程针对大一新生，通过讲授主要的海岸地貌类型，包括海滩、湿地、潮滩等，是学生对这些海岸地貌的来历、形成机制、全球分布等有个基本的认知。通过本课程的学习，学生对人类活动对海岸带的影响，如海滩侵蚀、海平面上升及湿地蚀退及其后果有更深刻的认识，提高学生爱护环境的意识。

This course provides an introduction to coastal landforms, including beaches, salt marshes, tidal flats and sea cliffs, their origins, global distribution, and associated nearshore processes. Consideration is paid to human impacts on the coastal zone, including coastal erosion, land loss and management, and human responses to sea-level change.

16. **预达学习成果 Learning Outcomes**

完成本课程后，学生能够基本掌握以下知识：

1. 认识常见的海岸带类型，理解其成因；
2. 掌握主要人类活动对海岸带尤其是海滩的影响；
3. 初识我国海岸带管理现状。

Students will see that natural processes like hurricanes, landslides and sea-level changes are understandable events that form coastal habitats, and only create problems when people fail to consider these geological processes.

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.)

1. 课程介绍（地球、海洋、海岸地形地貌）（2学时）
Introduction to Course (Earth and Oceans, Coastal Landforms and Morphology) (2 credit hours)
2. 岸线类型、河口湾和三角洲、源到汇过程（2学时）
Coast types, Estuaries and Deltas, Source to Sink (2 credit hours)
3. 基岩海岸（侵蚀和演化特征、珊瑚礁）（2学时）
Rocky Coasts (Erosional Features, Evolution, Coral Reefs) (2 credit hours)
4. 测验 1 **Exam 1**
5. 波浪（风浪与涌浪）（2学时）
Surface Waves (Seas and Swells) (2 credit hours)
6. 波浪变形、折射、反射、和散射（2学时）
Wave Transformation, Refraction, Reflection, Diffraction (2 credit hours)
7. 海滩、沿岸搬运、海滩沙（砾）的来源（2学时）

Beaches, Longshore Drift, Origin of Beach Sand and Gravel (2 credit hours)
8. 海滩地貌 (沙坝、滩肩、滩尖) (2 学时) Beach Morphology (Bars, Berms, Cusps) (2 credit hours)
9. 测验 2 EXAM 2
10. 人造海岸建筑 (放浪墙、防波堤、丁字坝) (2 学时) Human Structures (Seawalls, Breakwaters, Jetties, Groins) (2 credit hours)
11. 潮汐、潮汐类型、潮流通道 (2 学时) Tides, Origins and Kinds of Tides, Tidal Inlets (2 credit hours)
12. 盐沼: 植物与潮汐的关系 (2 学时) Salt Marshes: Relationship Between Plants and Tides (2 credit hours)
13. 海岸带湿地管理、暴风巨浪与海滩演化 (2 学时) Management of Wetlands and Bluffs: Storms and Their Role in Beach Evolution (2 credit hours)
14. 历史上的风暴灾害; 抬升、沉降与海平面变化; 海岸带演化 (2 学时) Storm Case Histories: human disasters in history Long-Term Processes: Uplift, Subsidence and Sea-Level Change Long-Term Behavior of Coastal Environments (2 credit hours)
15. 个例研究: 中国的三角洲 (黄河、长江、珠江) (2 学时) Case History: Deltas in China (Yellow River, Yangtze, Pearl River) (2 credit hours)
16. 美国与中国的海岸带管理比较 (2 学时) Coastal Zone Management in the United States and China (2 credit hours)
17. 海滩考察 (4 学时) One day field trip to local beach (4 credit hours)

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

1. Beaches and Coasts, R. Davis, D. FitzGerald, Wiley-Blackwell, P.419, 2004. ISBN: 0632043083
2. Introduction to California's Beaches and Coast, Gary Griggs, University of California Press, P.328, 2010, ISBN: 0520262905

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				
小测验 Quiz		20		
课程项目 Projects				

平时作业 Assignments	20		
期中考试 Mid-Term Test	20		
期末考试 Final Exam	40		
期末报告 Final Presentation			
其它（可根据需要 改写以上评估方式） Others (The above may be modified as necessary)			

20. 记分方式 **GRADING SYSTEM**

<input checked="" type="checkbox"/> A. 十三级等级制 Letter Grading <input type="checkbox"/> 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

海洋科学与工程系本科教学委员会 Department of Ocean Science and Engineering Undergraduate Committee
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