

## 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	地球历史 Earth System History				
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	OCE202				
4.	课程学分 Credit Value	3				
5.	课程类别 Course Type	专业基础课 Major Foundational 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)	周祐民 海洋科学与工程系 创园9栋507 0755-88018617 Drs. Yumin Chou Department of Ocean Sciences and Engineering Chuang Yuan 9-507 0755-88018617				
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	48	0	0	0	48

12. 先修课程、其它学习要求 <b>Pre-requisites or Other Academic Requirements</b>	无 NA
13. 后续课程、其它学习规划 <b>Courses for which this course is a pre-requisite</b>	OCE470 地质实习 Geology Field Trip
14. 其它要求修读本课程的学系 <b>Cross-listing Dept.</b>	无 NA

教学大纲及教学日历 SYLLABUS

15. 教学目标 **Course Objectives**

地球历史是针对选择海洋系本科生的专业基础课，使学生获得地球生成与演变过程的基本知识，为日后学习海洋科学打下基础。

This is an introduction to earth systems for undergraduate students of department of Ocean Science and Engineering. The class will provide students the basic knowledge of earth formation and evolution for further studies of oceanography.

16. 预达学习成果 **Learning Outcomes**

能力方面：能逻辑性思考并提出问题与看法，能掌握中外文资料查询的基本方法；具有从广泛角度思考问题的能力。  
知识方面：系统性了解地球形成过程，从内部构造、海洋系统、大气系统、地表作用来掌握生物演化基本理论、基本知识和基本技能，能以宏观角度了解地球各系统间的相互作用及演变历史。

The students will develop the ability of logical thinking and put forward their viewpoints. They are able to obtain the international scientific references, papers using modern information technology, and choose to look at things from a different angle.

The students will know the knowledges systematically of the formation of Earth systems, internal structure of Earth, ocean, atmosphere, ecosystem, and evolution of life. They could have a whole view of the interactions between different earth systems and their history.

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.)**

课程 Topic	学时 hours
1. 教学大纲和课堂介绍-地球系统 Syllabus and class introduction – The Earth systems	2
2. 宇宙大爆炸 The big bang	2
3. 太阳系 The solar Empire	2
4. 固体地球 The solid Earth	2
5. 矿物与岩石 Minerals and Rocks	2
6. 沉积环境 Sedimentary environment	2
7. 时间与地层 Time and Stratigraphy	2
8. 大气的形成与演化 The formation and evolution of atmosphere	2
9. 海洋的形成与演化 The formation and evolution of ocean	2
10. 生命的起源、演化与大灭绝 The origin of life, evolution and extinction	2
11. 古生物学基础 Basic of Paleontology	4
12. 微体古生物学 Micropaleontology	4
13. 冥古代与雪球地球 Hadean and Snow Ball Earth	2
14. 太古代 Proterozoic	2
15. 古生代 Paleozoic	2
16. 中生代 Mesozoic	2
17. 古近纪 Paleogene	2

18. 新近纪 Neogene	2
19. 第四纪 Quaternary	2
20. 人类世 Humans and Earth systems	2

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

<p>教学包括教科书、参考书籍与BBC影片。</p> <p>[Major] Stanley, S. M., 2014, Earth System History (4th ed.), Freeman, New York BBC Documentary</p> <p>[Reference] Martin, R., 2013, Earth's Evolving Systems- The History of Planet Earth: Jones &amp; Bartlett Learning, Burlington, Massachusetts</p> <p>《地球系统与演变》，汪品先等著，2018，科学出版社；</p>
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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		5		
课堂表现 Class Performance		5		
小测验 Quiz		0		
课程项目 Projects		0		
平时作业 Assignments		15		
期中考试 Mid-Term Test		0		
期末考试 Final Exam		50		
期末报告 Final Presentation		25		
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
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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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