

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	矿物学与岩石学实验 Mineralogy and Petrology Laboratory				
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	OCE408				
4.	课程学分 Credit Value	1				
5.	课程类别 Course Type	专业选修课 Major Elective Courses				
6.	授课学期 Semester	春季 Spring				
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)	陈斌, 地球与空间科学系, 创园 9 栋 407, chenb6@sustech.edu.cn CHEN Bin, Department of Earth and Space Sciences, Chuangyuan 9-407 Tel. 13661002268				
9.	实验员/助教、所属学系、联系方式 Tutor/TA(s), Contact	王玉琼 WANG Yuqiong				
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	0		32		32

12. 先修课程、其它学习要求 Pre-requisites or Other Academic Requirements	OCE407 矿物学与岩石学 Mineralogy and Petrology
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

本课程教学目标：掌握各种造岩矿物和副矿物的光学性质和鉴定特征，掌握不同类型的岩浆岩、沉积岩和变质岩的矿物组成、结构构造和分类命名的原则；

Course objectives: To command the optical and identification features of different rock-forming and accessory minerals via examining thin-sections of rocks under microscope, and to understand the mineral assemblages, textures/structures and principles of lithological classification.

16. 预达学习成果 Learning Outcomes

1 掌握不同类型火成岩（包括火山岩和侵入岩）的主要造岩矿物组成、矿物的鉴定特征、结构构造和分类命名原则；

Main constituent minerals, identification features, textures/structures and lithological classification of igneous rocks (including plutonic and volcanic rocks).

2 掌握不同类型沉积岩（碎屑沉积和化学沉积岩等）的矿物组成、胶结物特征、结构构造，及其与沉积环境的关系；

Mineral assemblages, cements, textures/structures and genetic relationship with sedimentary settings of different detrital and chemical deposits.

3 掌握不同变质级别变质岩（包括泥质岩系列和火山岩系列）的矿物组成和鉴别特征、结构构造，及其与变质作用程度的关系。

Mineral assemblages, identification features and textures/structures of metapelitic and metabasitic rocks with varied metamorphic grades, and relationship with metamorphism.

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.)

第一章 火成岩实习（12 学时） Chapter one: Igneous rocks (12 hours)

实习 1 橄榄岩-辉石岩 Peridotite-Pyroxenite

实习 2 辉长岩-玄武岩 Gabbro-Basaltic rocks

实习 3 闪长岩-安山岩 Diorite-Andesite

实习 4 花岗岩 Granites

实习 5 流纹岩 Rhyolites

实习 6 碱性岩 Alkali rocks

第二章 沉积岩实习（8 学时） Chapter two (8 hours)

实习 7 砂岩-页岩 (1) Sandstone-Shale (1)
 实习 8 砂岩-页岩 (2) Sandstone-Shale (2)
 实习 9 灰岩-白云岩 (1) Limestone-Dolostone (1)
 实习 10 灰岩-白云岩 (2) Limestone-Dolostone (2)
 第三章 变质岩实习 (12 学时) Chapter three (12 hours)
 实习 11 千枚岩-板岩 Phyllite-Slate
 实习 12 云母石英片岩 Mica quartz schists
 实习 13 片麻岩 Gneisses
 实习 14 阳起石片岩 Actinolite schists
 实习 15 斜长角闪岩 Amphibolites
 实习 16 麻粒岩 Granulites

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

1. 教材: 桑隆康, 马昌前. 岩石学. 地质出版社, 2012;
 Textbook: Sang LK and Ma CQ, Petrology, Geological Publishing House, 2012

2. 其它参考资料: Supplementary Readings
 Myron G. Best. Igneous and Metamorphic Petrology (Second Edition). Blackwell, 2003
 徐夕生, 邱检生. 火成岩岩石学. 科学出版社, 2010
 Xu XS and Qiu JS, Igneous Petrology, Sci. Press, 2010
 常丽华等. 透明矿物薄片鉴定手册. 地质出版社, 2006
 Chang et al., Identification of Transparent Minerals Under Microscope, Geological Publishing House, 2006
 常丽华等. 火成岩鉴定手册. 地质出版社, 2009
 Chang et al., Identification of Igneous Rocks, Geological Publishing House, 2009

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			
课程项目 Projects			
平时作业 Assignments	90		
期中考试 Mid-Term Test			
期末考试 Final Exam			
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
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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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