

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.

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| 1. | 课程名称 Course Title | 全球生物多样性保护 Conservation in the Anthropocene |
| 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 | ESE331 |
| 4. | 课程学分 Credit Value | 3 |
| 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 | 英文 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) | Luke Gibson, School of Environmental Science and Engineering, 17817400477, biodiversity@sustech.edu.cn |
| 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) | |

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|---|----------|-----------|---------------|------------------------|-------|
| 11. 授课方式 Delivery Method | 讲授 | 习题/辅导/讨论 | 实验/实习 | 其它(请具体注明) | 总学时 |
| | Lectures | Tutorials | Lab/Practical | Other (Please specify) | Total |
| 学时数 Credit Hours | 48 | 0 | 0 | 0 | 48 |
| 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

In a world where humanity currently utilizes 160% of the resources our planet provides, conservation – of our planet's diverse ecosystems and the species that live within – is an essential discipline that our society depends upon. In this course, students will learn about (1) patterns of biodiversity around the planet and extinction over time; (2) how these patterns are changing due to human activities; (3) strategies to reduce extinction rates and preserve biodiversity; and (4) how government policies and economic markets can be applied towards conservation.

16. 预达学习成果 Learning Outcomes

Students will learn about the major drivers of biodiversity loss and the main solutions used to stem this loss. They will also learn of how government policy and consumer demand can influence conservation, and thus how their individual decisions can have global impacts affecting the environment in which we live.

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.)

The course will be comprised of 24 two-hour lectures, within 4 major themes:

Biodiversity and Extinction

1. Introduction to Conservation Biology
2. Biodiversity – What and Where?
3. Species Rarity and Vulnerability to Extinction
4. Ecosystem Function and Services
5. The Anthropocene

6. Extinctions Over Time: From the Cambrian to the 6th Mass Extinction

Drivers of Biodiversity Loss

7. Habitat Loss and Degradation
8. Agricultural Expansion
9. Fragmentation and Extinction Debt
10. Wildlife Trade and Overharvesting
11. Invasive Species
12. Disease
13. Climate Change
14. Fire and Pollution

Strategies for Preserving Biodiversity

15. Island Biogeography and Reserve Design
16. Endangered Species Management
17. Population Viability Analysis/Minimum Viable Populations
18. Captive Breeding and Reintroduction
19. Habitat Restoration
20. Urbanization and Biodiversity

Conservation Policy

21. Environmental Law and Policy
22. Conservation Economics and Sustainable Development
23. How to be a Conservation Biologist?
24. Conclusions and Summary

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

Required: Primack RB, Sher A. 2016. An Introduction to Conservation Biology. Oxford University Press. <https://global.oup.com/ushe/product/an-introduction-to-conservation-biology-9781605354736?cc=a2&lang=en&>

Optional: Sodhi NS, Ehrlich PR. 2010. Conservation Biology for All. Oxford University Press. <https://global.oup.com/academic/product/conservation-biology-for-all-9780199554232?cc=a2&lang=en&>

| 课程评估 ASSESSMENT | | | |
|------------------------|------|-----------|---------|
| 19. 评估形式 | 评估时间 | 占考试总成绩百分比 | 违纪处罚 备注 |

| Type of Assessment | Time | % of final score | Penalty | Notes |
|--|------|------------------|---------|-------|
| 出勤 Attendance | | 5% | | |
| 课堂表现 Class Performance | | | | |
| 小测验 Quiz | | 10% | | |
| 课程项目 Projects | | | | |
| 平时作业 Assignments | | 20% | | |
| 期中考试 Mid-Term Test | | 15% | | |
| 期末考试 Final Exam | | 30% | | |
| 期末报告 Final Presentation | | 20% | | |
| 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**

- 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