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**	野外实习 III Field Trips III
2.	**授课院系 Originating Department**	生物系 Department of Biology
3.	**课程编号 Course Code**	BIO473
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**	夏季 Summer
7.	**授课语言 Teaching Language**	中文 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）**	实习基地指导老师：根据课程期间实习基地的人员情况安排和确定。 The teachers from practice basis will be assigned and arranged according to the actual conditions. 吕沫 高级实验师 南方科技大学生命科学学院 lvm3@sustech.edu.cn LV Mo, Senior engineer, School of Life Sciences, Southern University of Science and Technology 赵颖岚 高级实验师 南方科技大学生命科学学院 zhaoyl@sustech.edu.cn ZHAO Yinglan, Senior engineer, School of Life Sciences, Southern University of Science and Technology
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				One week (实习时间 1 周)	32
12.	先修课程、其它学习要求 Pre-requisites or Other Academic Requirements	无 None				
13.	后续课程、其它学习规划 Courses for which this course is a pre-requisite	无 None				
14.	其它要求修读本课程的学系 Cross-listing Dept.	无 None				

教学大纲及教学日历 SYLLABUS

15. 教学目标 Course Objectives

生物学野外实习是生物类本科生重要的学习内容和基本的教学训练，是同学们了解生物多样性及其与环境相互关系的重要环节，它不仅是对动物生物学、植物生物学、微生物学、遗传学、生态学、进化等生物学课程课堂知识和室内实验内容的必要补充，而且具有独特的形式、内容和效果。

通过野外实习可以培养学生自主发现问题、解决问题的能力，激发同学们探索自然奥秘，热爱自然，热爱生命科学。同时，野外实习还是培养同学之间互助、团结和合作精神的课堂。

Field Practice of Biology include important contents and it is a basic teaching training for biological undergraduates. It is a critical part for the understanding of biodiversity and environments. The course own specific organization form, contents and effects and it can provide an essential supplements for class and laboratory study such as animals, plants,microbiology, genetics, ecology, evolution etc. Students' ability of finding and solving questions will be enhanced and the course will promote students to explore nature,love nature and bioscience. The course also will provide a study opportunity for solidarity, cooperation and matual help among students.

16. 预达学习成果 Learning Outcomes

野外实习将帮助学生获取生物学实践知识和实践技能，加深对生物学理论知识的理解，开拓视野，提升对生命科学相关领域的学习兴趣。

The field trips will help students to learn practical knowledge and skills of biology, enhance the understanding of biological theory. The vision of students will be broaden and the course will promote students' interests in life science.

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.)

生命科学学院目前已建有深圳市中国科学院仙湖植物园，以及中国热带农业科学院南亚热带作物研究所等两个实习基地，正在与云南大学生命科学学院、中国科学院西双版纳热带植物园共建实习基地。

实习内容由生命科学学院根据本科人才培养目标，与实习基地协定，详见各个实习基地的实习方案。

野外实习时长为一周左右，课程内容包括：

1、介绍实习实践的纪律要求、安全事项、实践安排、考核方式等，要求学生清楚本实习课程的基本内容、安排和要求；

2、根据不同实习基地的特色资源，开展与生命科学相关的专题学习，实习内容可能涉及植物学、动物学、农学、生态学等（详情可参考各个实习基地的实习方案）。

3、课程以实习基地现场教学为主，辅以部分特色资源参观和学习交流，课程将引导同学认真观察和积极思考；

4、课程回顾与讨论。

Two practice basis for field trips have been established. One is in Fairylake Botanical Garden, Shenzhen & Chinese Academy of Sciences. The other one is in South Subtropical Crops Research Institute（SSCRI）, Chinese Academy of Tropical Agricultural Sciences. The field practice bases are under construction with School of Life Sciences of Yunnan University and Xishuangbanna Tropical Botanical Garden of Chinese Academy of Sciences.

The major contents of field trip will be discussed and assigned with different practise base according to the course objectives of School of Life Science. The details can refer to the internship program files.

The field trip is about one week. The content include:

The Introduction about safety, disciplines, contents, schedules ,evaluation etc.

According to the specific resources of field trip basis, organize the studies about bioscience projects. The contents may refer to plants, animals, agriculture, ecology, etc. (The details can refer to the program files of different field trip basis)

The major learning will be on-the-spot of different basis. The assistant study include some specific visits and communication. The course will provide student guidance about observe carefully and think actively.

4. Course review and discussion.

实习基地：以中国科学院西双版纳热带植物园为例

Practice base: Xishuangbanna Tropical Botanical Garden of Chinese Academy of Sciences

第一天：课程介绍/自然生态、植物、动物、菌物专题学习

介绍实习实践的纪律要求、安全事项、实践安排、考核方式等，要求学生清楚本实习课程基本内容、安排和要求。/ 系统学习自然生态、植物、动物、菌物等基本知识，强化人与自然关系、人类经济社会发展与自然环境的关系相关内容，例如西双版纳热区开发中 的橡胶林种植造成的生境片段化、生物多样性减少与环境改变问题，野生 动物保护与当地经济发展以及与当地社区居民的生产生活关系和矛盾问题， 昆明滇池由“高原明珠”变为严重污染水体代表的湖泊生态系统污染受损 与治理、恢复等重要内容，以加强学生对人与自然和谐发展、生态建设重 要性的认识。

DAY 1：Course Introduction/Plant Taxonomy & Preparation of Specimen/Thematic Learning of Bryophyta

Introduction about safety and disciplines in this Internship. The major content, schedules ,evaluation will be introduced. Systematically learn basic knowledge of natural ecology, plants, animals, fungi, etc., strengthen the relationship between man and nature, human economic and social development and the natural environment, such as habitat fragmentation, biodiversity reduction and environmental change caused by rubber plantation in Xishuangbanna hot area development. Wildlife protection, local economic development, production and living relations and contradictions with local community residents, Kunming Dianchi Lake from "plateau pearl" to severely polluted water represented by the lake ecosystem pollution damage, control, restoration and other important content, in order to strengthen students' understanding of the importance of harmonious development between man and nature, ecological construction.

第二天：西双版纳昆虫学习

介绍昆虫学基础知识以及昆虫学野外实习的知识、技能与方法，包括昆虫分类学知识、昆虫学研究方法、昆虫野外采集方法、昆虫标本制作方法、昆虫标本的保存等。并兼顾系统分类地位和当地代表性，精选 500 个西双版纳及附近地区习见种类昆虫分别加以介绍。

DAY 2：Insect learning in Xishuangbanna

Introduce the basic knowledge of entomology and the knowledge, skills and methods of field practice of entomology, including entomological taxonomy knowledge, entomological research methods, field collection methods of insects, preparation methods of insect specimens, preservation of insect specimens, etc.

第三天：西双版纳大型真菌学习

系统介绍大型菌物，包括子囊菌门，担子菌门，黏菌，地衣等。每个种包括一至三幅配图，讲解每种的生境和细节特征，并配以形态特征、分布和习性等描述。结合西双版纳现有真菌进行实地考察。

DAY 3：Macrofungal learning in Xishuangbanna

Macrophytes, including ascomycetes, basidiomycetes, slime molds, lichens and so on, are systematically introduced. Each species includes one to three illustrations illustrating the habitat and detailed characteristics of each species, accompanied by descriptions of morphological characteristics, distribution and habits. The existing fungi in Xishuangbanna were investigated on the spot.

第四天：西双版纳野生植物学习

西双版纳有两万多种植物和多种国家重点保护植物。通过系统学习植物分类，珍惜国家级保护植物，如野生兰科植物，了解生物多样性和植物较高的药用和观赏价值，倡导学生保护濒危物种，爱护自然。

DAY 4：Wild plant learning in Xishuangbanna

Xishuangbanna has more than 20,000 species of plants and a variety of state key protection plants. Through systematic study of plant classification, cherish national-level protected plants, such as wild orchids, understand biodiversity and high medicinal and ornamental values of plants, advocate students to protect endangered species and protect nature.

第五天：西双版纳野生动物学习/ 课程回顾与讨论

西双版纳栖息着 500 多种陆栖脊椎动物，有哺乳类，鸟类，两栖动物，爬行动物，鱼类等。通过实习考察国家重点保护野生动物，如亚洲象、印度野牛等，引导学生捍卫生物多样性的安全，做我国生态环境的守护者。组织学生对本次实习进行学习总结和经验分享，并收集学生对实习实践活动的建议和意见。

DAY 5： Wildlife learning in Xishuangbanna/Course review and discussion

Xishuangbanna is home to more than 500 kinds of terrestrial vertebrates, including mammals, birds, amphibians, reptiles, fish and so on. The students will be guided to safeguard the safety of biodiversity and be the guardian of our ecological environment through the practice investigation of national key protected wild animals, such as Asian elephants and Indian bison. Organize students to summarize and share experience on this internship, and collect students' suggestions and opinions on practice activities.

根据实习基地的实际情况，部分内容可能根据需要进行调整。

According to the real situations of the practice base, parts of contents may be adjusted as required.

南方科技大学
SOUTHERN UNIVERSITY OF SCIENCE AND TECHNOLOGY

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

无指定教材和参考书。

No specified textbook and references.

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		25		
课堂表现 Class Performance		30		
小测验 Quiz				
课程项目 Projects				
平时作业 Assignments				
期中考试 Mid-Term Test				
期末考试 Final Exam				
期末报告 Final Presentation		45		
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

本课程经生命科学学院本研课程体系建设委员会审议通过
This course is approved by the Undergraduate and Graduate Curriculum System Construction Committee, School of Life Sciences.