

## Data Sheet of International Master's Courses, Tongji CAUP

### 同济大学建筑与城市规划学院本科生国际课程(英语)登记表

Course Code 课程编号	020410	Department 所在系(√)	A	P	L	D	院登记号 CAUP Code	
Instructor(Title) 主讲教师(职称)	Assistant Prof. YANG Chen	Other Teachers 合作教师						
	杨晨 助理教授							
课程中文名	数字化遗产景观							
Course Name (E)	zhai@tongji.edu.cn							
Form of Teaching 教学形式 (√)	Lectures 讲课	Design Studio 设计课	Seminar 研讨课		Internship 实践课		Others 其他	
	√		√		√			
Total Hours 总学时数	17	Hours per Week 周课时	2		Weeks 教学周数		8	
Semester 春季或秋季学期	Fall 秋季	Tongji Credits 同济 学分数	1					
Brief Course Description 课程简述 (中英文)								
<p>数字化遗产景观是近年来在风景园林和文化遗产研究中的一个新兴领域。本课程将介绍这一多学科交叉领域的基本概念、原理和方法，以及遗产景观信息采集、监测和表达的前沿技术。课程以讲座为主，结合课堂讨论和计算机实验，通过理论与实践的结合帮助学生了解遗产景观调查、记录、修复、管理和解说等重要议题的关键知识。通过学习该课程，学生将理解遗产景观数字化保护的基本原理，并能够批判性的利用数字化技术来识别和解读遗产景观的价值和意义。</p> <p>The digital conservation of heritage landscapes is an emerging field in Landscape Architecture and cultural heritage research. This course will provide an overview of the fundamental concepts, theories and methods of this interdisciplinary field. It will also introduce some cutting-edge technologies in capturing, monitoring and representing data of heritage landscapes. Through the delivery of lectures, in-class discussions and computer experiments, this course gives students the knowledge of central topics in relation to heritage landscape investigation, documentation, restoration, management and interpretation. When the course is finished, the students will understand the essential principles of the digital conservation of heritage landscapes, and will also be able to critically use digital tools to recognize and interpret values and meanings of heritage landscapes.</p>								
Brief Schedule and Topics 课程进度简表 (中英文)								

NO.	Content	Hours				Sub-total
		Theoretic Teaching	Experiment	Exercise	Computer Operation	
1	导论/Introduction	2				2
2	数字化遗产景观理论（上）/ Theories of digital heritage landscapes (Part 1)	2				2
3	数字化遗产景观保护理论（下）/ Theories of digital heritage landscapes (Part 2)	2				2
4	数字化时代的遗产景观存档/ Heritage landscape documentation in the digital era	2				2
5	数字化时代遗产景观时空信息的管理/ Spatio-temporal data management for heritage landscapes in the digital era	2				2
6	数字技术与遗产景观解说/ Digital technologies and heritage landscape interpretation	2				2
7	计算机实验/ Computer experiments			3		3
8	汇报讲评/ Final presentation and review	2				2
Total		14		3		17

Course Syllabus 课程大纲（中英文）

讲座提纲/

**Lecture Topics**

1. 导论/Introduction to digital heritage landscapes（2学时/2 teaching hours）

- 课程简介/Introduction to the course's theme, objectives and projects
- 遗产景观：概念、类别和价值/Heritage landscape - definition, types and significance
- 遗产景观保护与管理/Heritage landscape conservation and management
- 真实性与完整性/Authenticity and integrity

2. 数字化遗产景观理论（上）/Theories of digital heritage landscapes (Part 1)（2学时/2 teaching hours）

- 遗产景观保护的数字化时代/The digital era of heritage landscape conservation
- 复制品：虚拟技术的物质性/Replicants: the materiality of virtual technologies

3. 数字化遗产景观保护理论(下)/Theories of digital heritage landscapes (Part 2) (2 学时/2 teaching hours)
  - 知识系统管理与表现/Knowledge system management and representation
  - 文化遗产与虚拟系统/Cultural heritage and virtual systems
4. 数字时代的遗产景观存档/Heritage landscape documentation in the digital era (2 学时/2 teaching hours)
  - 空间信息的采集与点云技术/Spatial information and point cloud technologies
  - 非物质文化遗产信息的采集/Data collection for intangible cultural heritage
  - 数字知识景观/Digital knowledgescapes
5. 数字时代的遗产景观时空信息的管理/Spatio-temporal data management for heritage landscapes in the digital era (2 学时/2 teaching hours)
  - 地理信息系统与遗产景观/Geographical Information System and heritage landscapes
  - 空间文化的活态档案/Geo-storytelling: a living archive of spatial culture
6. 数字技术与遗产景观解说/Digital technologies and heritage landscape interpretation (2 学时)
  - 可触虚拟性/Tangible virtualities
  - 遗产景观可视化/Heritage landscape visualization
  - 遗产景观与超文本/Heritage landscapes in hyperdocuments
7. 计算机实验/Computer experiments: modelling heritage landscapes (2 学时/2 teaching hours)
  - 关键技术: 摄影测量和激光雷达/Technologies: photogrammetry and LiDAR
  - 软件介绍/Software
  - 景观要素记录实验/Documenting landscape elements
8. 汇报讲评/Final presentation and review (2 学时/2 teaching hours)

#### 成绩评定/Grade distribution

60%-终期论文; 30%-终期汇报; 10%-出勤

60% - final essay; 30% - seminar presentation; 10% - participation in class

#### 主要参考书目/Main Reference Books

- 1) Aplin, G., *Heritage: Identification, Conservation, and Management*. 2002, New York: Oxford University Press.
- 2) Lu, D. and Y. Pan, *Digital Preservation for Heritages*. 2010, Hangzhou: Zhejiang University Press.
- 3) Box, P., *Geographic Information Systems and Cultural Resource Management: A Manual for Heritage Site*

*Managers* 1999, Bangkok: UNESCO Principal Regional Office for Asia and the Pacific.

- 4) UNESCO, *World Heritage Cultural Landscapes: A Handbook for Conservation and Management*. World Heritage Papers, ed. N. Mitchell, M. Rossler, and P.-M. Tricaud. 2009, Paris, France: World Heritage Centre, United Nations Educational, Scientific and Cultural Organisation.
- 5) UNESCO. 2008. *Operational Guidelines for the Implementation of the World Heritage Convention*. [www.whc.unesco.org/archive/opguide08-en.pdf](http://www.whc.unesco.org/archive/opguide08-en.pdf)
- 6) ICOMOS, *International Charter for the Conservation and Restoration of Monuments and Sites (The Venice Charter 1964)*, I.C.o.M.a. Sites, Editor. 1964, International Council on Monuments and Sites: Venice.
- 7) ICOMOS, A., *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance*, ed. A. ICOMOS. 1999: Australia ICOMOS.
- 8) Marquis-Kyle, P. and M. Walker, *The Illustrated Burra Charter*. 2004: Australia ICOMOS.
- 9) UNESCO. *UNESCO/UBC Vancouver Declaration*. in *The Memory of the World in the Digital Age: Digitization and Preservation*. 2012. Vancouver, British Columbia, Canada: United Nations Educational, Scientific and Cultural Organisation.
- 10) UNESCO, *Charter on the Preservation of Digital Heritage*. Records of the General Conference. 2003, Paris: UNESCO.