

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	原型制作 Prototyping
2.	授课院系 Originating Department	创新创意设计学院 School of Design
3.	课程编号 Course Code	DS365
4.	课程学分 Credit Value	3
5.	课程类别 Course Type	专业选修课 Major Elective Course
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)	Xueliang Li Assistant Professor, School of Design lixl6@sustech.edu.cn

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	32		32		64
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 this course, students will practice basic skills of developing design prototypes and conduct preliminary design evaluation. The lecturer will provide a series of lectures introducing basic skillsets and procedures in designing prototypes of different types and fidelity, and how these prototypes can be applied in design research for different purposes. The students, in groups or individually, will go through interactive processes to realize their design ideas, and test their designs with potential users in simulated or real-life contexts. In making of the prototypes, students will exploit a variety of technologies, including electronic engineering, manufacturing methods, and algorithms, to meet the specific requirements of their own projects. Students will learn and apply quantitative and qualitative research methods to evaluate use experiences of their prototypes. The course will involve external collaborators based on availability to provide stakeholder opinions and client perspectives on students' coursework.

Skills: basic hardware development, basic software development, user test of prototypes, report writing

在这门课程中，学生将学习设计原型开发的基本技能，并基于他们的设计原型进行初步设计评估。本课程将提供一系列讲座，介绍针对不同产品类型和保真度的设计原型的基本技能和开发流程，以及这些原型是如何通过不同方式应用在设计研究中的。学生将以小组或个人的方式，通过迭代式的设计开发过程实现他们的设计概念想法，并在模拟或实际环境中与潜在用户测试他们的设计。在原型制作过程中，学生将利用各种技术，包括电子工程、智能制造和计算机软件开发，以满足他们项目的特定要求。学生将学习并应用定量和定性研究方法评估他们的原型的使用体验。该课程将根据实际情况邀请外部合作者，提供来自利益相关者或目标客户的专业意见，对学生们的课程作业产出进行指导。

技能：基础硬件开发；基础软件开发；设计原型测试；报告撰写

本课程有安排实地考察和与外部公司合作的可能性。届时课程内容和活动安排将会调整。

This course will include field trips and collaborations with external companies depending on availability. Lecture and activity schedules are indicative and may be adjusted.

16. 预达学习成果 Learning Outcomes

在本课程结束时，学生将能够：

At the end of this course, students will be able to:

1. Conceptualize product interaction modes in response to user habits, needs, and preferences
2. Realize design ideas in forms of prototypes of different fidelity;
3. Identify usability issues and users' feedback via preliminary design evaluation.

1. 根据用户的习惯、需求和偏好，构思产品交互模式
2. 以不同保真度的原型形式实现设计理念；
3. 通过初步设计评估发现可用性问题和用户反馈。

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.)

Week	Content
1-2	<p>Lecture (4 hours) Course introduction and overview. Lecture: Project brief and introduction to design interaction.</p> <p>Practice (4 hours) Lecture: User research methods for product interaction, workshop.</p>
3-4	<p>Lecture (4 hours) Lecture: What is Prototype in Design? Lecture: The basics in design prototyping 1</p> <p>Practice (4 hours) Workshop and project tutorials.</p>
5-6	<p>Lecture (4 hours) Lecture: The basics in design prototyping 2</p> <p>Practice (4 hours) Workshop and project tutorials.</p>
7-8	<p>Lecture (4 hours) Interim review preparation, tutorials.</p> <p>Practice (8 hours) Interim Review with invited guests (depending on availability), formative feedback.</p>
9-10	<p>Lecture (4 hours) Project tutorials and workshop.</p> <p>Practice (4 hours) Project tutorial and workshop.</p>
11-12	<p>Lecture (4 hours) Lecture and discussion about exhibition, description, demonstration of outcomes.</p> <p>Practice (4 hours) Project tutorial and workshop.</p>
13-14	<p>Lecture (4 hours) Project tutorials and workshop.</p>

	Practice (4 hours) Project tutorial and workshop.
15-16	Lecture (4 hours) Final review preparation. Practice (4 hours) Final review with invited guest (depending on availability), summative feedback.

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

<p>1. Buchenau, M., & Suri, J. F. (2000, August). Experience prototyping. In <i>Proceedings of the 3rd conference on Designing interactive systems: processes, practices, methods, and techniques</i> (pp. 424-433).</p> <p>2. Zimmerman, J., Forlizzi, J., & Evenson, S. (2007, April). Research through design as a method for interaction design research in HCI. In <i>Proceedings of the SIGCHI conference on Human factors in computing systems</i> (pp. 493-502).</p>
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课程评估 **ASSESSMENT**

19. 评估形式 Type Assessment	评估时间 of Time	占考试总成绩百分比 % of final score	违纪处罚 Penalty	备注 Notes
出勤 Attendance		10%		
课堂表现 Class Performance				
小测验 Quiz				
课程项目 Projects				
平时作业 Assignments		70%		
期中考试 Mid-Term Test				
期末考试 Final Exam		20%		

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**

- 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

Professor Tom Kvan
Dean, School of Design