

DS322 课程大纲

- 1、2022 秋季学期 (2-8 页码)
- 2、2023 秋季学期起 (9-14 页码)

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	用户体验与交互 UX and Interaction
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	DS322
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	秋季 Fall
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)	LUO Tao Assistant Professor, School of Design luot@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

本课程涵盖交互的原则与实践，以及通过项目工作在各种环境和设备中设计用户体验。学生将运用微交互的方法和理论，探索和检视各种情境下的交互技巧（触摸屏、实体交互、VR/AR、互动游戏等），比较和分析这些交互技巧的逻辑和结构，以改善特定场景下的用户体验为目标构建和提出创新的交互技巧，判断并正确论证所各种交互技巧的优缺点，并根据他人的反馈和批评修改所自己提出的交互。学生将在本课程中进行个人项目，出色的解决方案（交互技巧）将获得发明专利申请的行政和财务支持。学生在本课程中仅有个人项目，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。如果某些个人项目的解决方案（交互技术）质量优秀且资金到位，入选的解决方案将获得申请发明专利的行政和资金支持。

核心技能：交互的规律与原则；交互技巧创新；交互技巧评估；用户体验设计和开发。

This course covers the principles and practices of interaction and the design of user experiences across a range of contexts and devices through project work. Student will apply methods and theories of micro-interaction to explore and inspect interaction techniques in various context (touchscreen, tangible interaction, VR/AR, interactive games, etc.), compare and analyze the logic and structure of these techniques, construct and propose innovative interaction techniques to improve the UX of a certain context, judge and properly argue the pros and cons of a proposed interaction technique, and revise the proposed interaction based on feedback and critiques from others. Students will only have personal project in this course. This course will include field trips and collaborations with external companies depending on availability. Lecture and activity schedules are indicative and may be adjusted. If the quality of some personal project's solution (interactive techniques) is outstanding and the fund is available, selected solutions will receive administrative and financial support to apply for invention patents.

Skills: Principles of interaction; innovations of interaction techniques; evaluation of interaction techniques; UX design and development.

16. 预达学习成果 Learning Outcomes

在本课程结束时，学生将能够：

1. 应用微交互的方法、理论和原理来探索和检视各种环境下的交互技巧。
2. 比较分析各种情境下交互技巧的逻辑和结构。
3. 构建并提出创新的交互交互技巧，以改善特定上下文的用户体验。
4. 判断并正确论证所提议交互技巧的利弊，并根据他人的反馈和批评修改该交互技巧。

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

1. Apply methods, theories, principles of micro-interaction in inspecting interaction techniques in various contexts.
2. Compare and analyze the logic and structure of interaction techniques in various contexts.
3. Construct and propose innovative interaction techniques to improve the UX of a certain context.
4. Judge and properly argue the pros and cons of a proposed technique and revise the technique based on feedback and critiques from others.

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.)

<u>Week</u>	<u>Content</u>
1	<p>Lecture (4 hours) Course introduction, Outline of the Course and Personal Projects, Software Preparation. Fundamental Perspectives of Interaction. Introduction to Universal Interactive Gestures Dictionary.</p> <p>Practice (4 hours) Explore and collect examples of various interactive gestures in various contexts. Discuss and debate on pros and cons of collected interactive gestures. Card Game of Interaction Techniques. Proposal of Personal Project.</p>
	<p>Lecture (4 hours) Concepts of Virtual Control Force (VCF) framework and Notations. Case Studies. Methods, theories and principles of interaction.</p> <p>Practice (4 hours) Explore and collect examples of various concepts in VCF framework. Comparison and analysis of interaction techniques in the context of personal project.</p>

	Analyse pain-points and needs of the context in personal project. Revise proposal of personal project
2	<p>Lecture (4 hours) Concepts of Virtual Control Force framework and Notations. Case Studies. Methods, theories and principles of interaction.</p> <p>Practice (4 hours) Exercise of various concepts in VCF framework. Comparison and analysis of interaction techniques in the context of personal project. Analyse pain-points and needs of the context in personal project. Revise proposal of personal project</p>
	<p>Lecture (4 hours) Concepts of Virtual Control Force framework and Notations. Case Studies. Methods, theories and principles of interaction.</p> <p>Practice (4 hours) Propose innovative solutions of interaction techniques. Assess and criticise on other's design. Possible Field Trip to or Collaborative Workshop with UX and Interaction related companies.</p>
3	<p>Lecture (4 hours) Interim Review: Analysis and Solution Presentation Revise proposed solution based on feedback</p> <p>Practice (4 hours) Propose innovative solutions of interaction techniques. Assess and criticise on other's design. Ideation for Solutions & Prototyping.</p>
	<p>Lecture (4 hours) Usability Test and Evaluation. Analysis of Test Results</p> <p>Practice (4 hours) Ideation for Solutions, Prototyping & Iteration.</p>
4	<p>Lecture (4 hours) Tutorials and preparation of final presentation.</p> <p>Practice (4 hours) Ideation for Solutions, Prototyping & Iteration.</p>

	<p>Lecture (4 hours) Tutorials and preparation of final presentation.</p> <p>Practice (4 hours) Final Presentation and Evaluation of Project (Analysis, Creativity, Prototyping, Presentation)</p>
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18. 教材及其它参考资料 Textbook and Supplementary Readings

Luo, T. (2018) Interaction Design Language: Designing the Beauty of Interactions. China: Tsinghua University Press. ISBN: 978-7-302-51533-3.

Luo, T. (2019) Universal Interactive Gesture Dictionary. Korea: UXPA Korea Press. ISBN: 979-11-90120-08-1.

B. Moggridge. 2007. Designing Interactions. The MIT Press.

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		10%		
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		80%		

**Final
Presentation**

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其它（可根据需要
改写以上评估方式）

**Others (The
above may be
modified as
necessary)**

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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

课程详述

COURSE SPECIFICATION

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4	Concepts of Virtual Control Force framework and Notations. Case Studies. Methods, theories and principles of interaction.
5	Exercise of various concepts in VCF framework. Comparison and analysis of interaction techniques in the context of personal project. Analyze pain-points and needs of the context in personal project. Revise proposal of personal project

6	Concepts of Virtual Control Force framework and Notations. Case Studies. Methods, theories and principles of interaction.
7	Propose innovative solutions of interaction techniques. Assess and criticize on other's design. Possible Field Trip to or Collaborative Workshop with UX and Interaction related companies.
8	Interim Review: Analysis and Solution Presentation
9	Revise proposed solution based on feedback. Ideation for Solutions & Prototyping. Assess and criticize on other's design.
10	Propose innovative solutions of interaction techniques. Assess and criticize on other's design. Ideation for Solutions & Prototyping.
11	Test and Evaluation. Analysis of Test Results. Ideation for Solutions, Prototyping & Iteration.
12	Test and Evaluation. Analysis of Test Results. Ideation for Solutions, Prototyping & Iteration.
13	Tutorials and preparation of final presentation. Ideation for Solutions, Prototyping & Iteration.
14	Tutorials and preparation of final presentation. Ideation for Solutions, Prototyping & Iteration.
15	Tutorials and preparation of final presentation. Ideation for Solutions, Prototyping & Iteration.
16	Final Presentation and Evaluation of Project (Analysis, Creativity, Prototyping, Presentation)

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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		80%		
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
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 Dean, School of Design