



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	交互设计 Interactive Design
2. 授课院系 Originating Department	系统设计与智能制造学院 School of System Design and Intelligent Manufacturing
3. 课程编号 Course Code	SDM391
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	秋季 Fall
7. 授课语言 Teaching Language	中英双语 English & 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)	白紫千, 助理教授 系统设计与智能制造学院 (设计智造学院) BAI Ziqian, Assistant Professor School of System Design and Intelligent Manufacturing (SDIM) Email: baizq@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)	待公布 To be announced



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
	32	0	32		64
学时数 Credit Hours					
12. 先修课程、其它学习要求 Pre-requisites or Other Academic Requirements	SDM114 产品设计视觉表达技巧 Product Design Visualization				
13. 后续课程、其它学习规划 Courses for which this course is a pre-requisite	无 NIL				
14. 其它要求修读本课程的学系 Cross-listing Dept.	无 NIL				

教学大纲及教学日历 SYLLABUS

15. 教学目标 Course Objectives

The goal of this course is to acquaint students with principles and techniques of interactive system design and to help students develop a number of critical skills that will enable students to be employed in the area of user interface design and evaluation. In particular, we expect every student

1. to build a connection between student knowledge on human information processing and interactive system design practice
2. to understand the goals, problems and structure of interactive system design process
3. to analyze major interface paradigms
4. to learn and apply techniques for task analysis and user analysis
5. to learn principles and gain practical skills of user interface evaluation
6. to develop an acquaintance with modern GUI and Internet programming techniques
7. to gain experience in the design and evaluation of practical user interfaces

本课程的目标是使学生熟悉交互式系统设计的原理和技术，并帮助学生开发关键技能，使学生可以从事用户界面设计和评估领域。特别是我们希望每个学生能够

1. 在人类信息处理的知识和交互式系统设计实践之间建立联系
2. 了解交互系统设计过程的目标，问题和结构
3. 解释交互界面的范式
4. 学习和应用所学技术进行任务分析和用户分析
5. 学习原理并获得实用的用户界面评估技能
6. 认识现代图形用户界面和网络编程技术
7. 积累设计和评估实际用户界面的经验

16. 预达学习成果 Learning Outcomes

Upon completion of the subject, students will be able to:



1. learn history and paradigms of human-computer interaction
2. be able to explain the role of knowledge of human information processing for interactive system design
3. understand the structure of the process and different approaches of interactive system design
4. be able to perform task analysis for user interface design
5. be able to perform several kinds usability analysis including heuristic analysis
6. be able to perform professional interactive system design process as a part of a design group
7. understand the innovative features of interactive system and be able to improve existing interfaces by considering these features

通过学习此课程，学生能够：

1. 学习人机交互的历史及范式
2. 能够解释人类信息处理知识在交互式系统设计中的作用
3. 了解处理的结构和交互式系统设计的不同方法
4. 能够执行用户界面设计的任务分析
5. 能够进行包括启发式分析在内的几种可用性分析
6. 能够作为设计小组的一部分，执行专业的交互式系统设计过程
7. 了解交互式系统的创新功能，并能够通过考虑这些功能来改进现有界面

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.)

Course Schedule					
Week	Hour	Lecture		Practice	Hours
		Lecture Title	Language	Practice	
1	2	Introduction Introduction to Java Applets 课程介绍 Java Applet 简介	• Bilingual	Use Java. Applets. Drawing and writing on a Graphics Pane. 使用 Java 小程序。练习在图形窗格上绘图和书写。	2
2	2	Human Virtual Machine 人类虚拟机	• Bilingual	Java 2d Graphics in awt. Lines, colors, fonts, shapes, arches and polygons. 练习 awt 中的 Java 2d 图形。线条，颜色，字体，形状，拱形和多边形。	2
3-4	4	Interaction Styles Introduction to Servlets 交互方式 Servlet 简介	• Bilingual	Client-Server approach, WWW as a client-server platform. HTTP protocol. Servlets. Simple Servlet Example. Forms and form data. Processing form data with doPost. 练习客户端-服务器方法，WWW 作为客户端-服务器平台，HTTP 协议，Servlet，简单的 Servlet 示例。表格和表格数据。使用 doPost 处理表单数据	4
5-6	4	Interactive Programming Dialog Programming in Java; Java Event Processing and Widgets 互动程式设计	• Bilingual	Modal Input Dialog. Modal dialogs: JOptionPane. Java Event Processing. AWT and Swing. Widgets. Button class. 练习模态输入对话框。模态对话框：JOptionPane，Java 事件处	4



		用 Java 进行对话框编程; Java 事件处理和小部件		理, AWT 和 Swing, 小部件, 按钮类。	
7	2	Midterm presentation and feedback 中期检查及回顾	•	Student's Midterm Presentation 学生中期汇报	2
8-9	4	Anatomy of the Interactive System Design Process 交互式系统设计过程的剖析	• Bilingual	Mapping between Java applets and applications. Label class. JColorChooser. Java Swing TextField and PasswordField. Checkboxes and Radio Buttons. 练习 Java applet 和应用程序之间的映射, 标签类, JColorChooser, Java Swing TextField 和 PasswordField。复选框和单选按钮。	4
10	2	Heuristic Analysis Java Lists and Layouts 启发式评估 Java 列表和布局	• Bilingual	Practicing heuristic analysis 练习进行启发式评估	2
11-12	4	User Studies 用户研究	• Bilingual	Apply user study methods: Interviews, observation, contextual enquiries, questionnaires, experiments 运用用户研究方法, 访谈, 观察, 情景再现, 问卷, 实验	4
13	2	Task Analysis and Task-centered design.	• Bilingual	Final project groups reported Evaluation project issued 期末报告及问题评估	2
14-15	4	Extended Interface: Help, Manuals, Training	• Bilingual	Heuristic Interface elements. On-line Help. Documentation. Training. High-Functionality Applications. 练习启发式界面元素, 网上帮助, 归档, 训练, 高功能应用程序	4
16	2	Final Presentation 期末汇报	•	Student's final presentation 学生期末汇报	2

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

<p>Supplementary readings:</p> <p>Interactive System Design, William M. Newman, Michael G. Lamming, Addison-Wesley Pub Co, 1995, 468 pp., ISBN: 0201631628</p> <p>Task-Centered User Interface Design: A Practical Introduction, Clayton Lewis and John Rieman, University of Colorado, Boulder, 1994.</p> <p>Designing the User Interface : Strategies for Effective Human-Computer Interaction, Ben Shneiderman, Catherine Plaisant, 5th Edition (4th and 3rd edition will also work), Addison-Wesley Pub Co, 2009, 606 pp., ISBN: 0321537351</p> <p>Interaction Design: Beyond Human-Computer Interaction, Helen Sharp, Yvonne Rogers, Jenny Preece, 2 Edition (March 23, 2007) John Wiley & Sons; 2007, ISBN: 0470018666</p>



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				
课堂表现 Class Performance				
小测验 Quiz				
课程项目 Projects				
平时作业 Assignments	每周 Weekly	40	NIL	评估学生个人作业 To assess students' individual assignment
期中考试 Mid-Term Test				
期末考试 Final Exam				
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)	期末报告 Final Presentation and Report	第 16 周 End of the 16 th week	60	NIL 评估学生设计项目 To assess students' group design project

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