

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	多媒体信息处理 Multimedia Information Processing				
2.	授课院系 Originating Department	计算机科学与工程系 Department of Computer Science and Engineering				
3.	课程编号 Course Code	CS330				
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	春季 Spring				
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)	刘江, 教授, 计算机科学与工程系, liuj@sustech.edu.cn Liu Jiang, Professor, Department of Computer Science and Technology, liuj@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)					
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	32	0	32	0	64

Credit Hours

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12.	先修课程、其它学习要求 Pre-requisites or Other Academic Requirements	无
13.	后续课程、其它学习规划 Courses for which this course is a pre-requisite	无
14.	其它要求修读本课程的学系 Cross-listing Dept.	无

教学大纲及教学日历 SYLLABUS

15. **教学目标 Course Objectives**

This course introduces the concepts, issues, design, implementation, standards and applications of multimedia technologies. The media to be considered include text, digital audio, digital image, digital video, and their integration. The course covers basics and applications of analog and digital media. It discusses the characteristics, mathematical foundation, compression and processing of digital multimedia data including: audio, image (JPEG) and video (MPEG). It also covers standards in digital multimedia data such as MP3, JPEG, MPEG as well as the environment in which digital multimedia data are used, including multimedia architecture, indexing and retrieval, hypermedia and WWW.

本课程介绍多媒体技术的概念，课题，设计，实现，标准和应用等。多媒体将包括文字，声音，图像，视频以及他们的融合。本课程将覆盖模拟和数字媒体的概念和应用。讨论包括 MP3, JPEG, MPEG 在内的数字媒体的特征，数学基础，压缩，分析。并讨论数字媒体的标准以及应用场景，包括多媒体框架，索引，并覆盖超媒体及互联网。

16. **预达学习成果 Learning Outcomes**

At the end of this course, students should have the expertise and competence to design, implement and deploy multimedia systems.

课程结束后，学生将拥有能力理解和设计和开发多媒体系统。

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.)

64 hours in total. 2 hours lecture and 2 hours lab for each week. Corresponding to the following sections:

共计 64 小时，每周两小时理论课及两小时实验课，对应以下章节：

1. **Introduction**
介绍多媒体概念
LAB: Introduction of some popular multimedia software package
实验: 多媒体软件介绍
2. **Multimedia Systems; Digital Representation**
多媒体系统: 数字表达
LAB: Introduction of digital representation of multimedia software package
实验: 多媒体软件数字表达介绍
3. **Digital Representation**
多媒体系统: 数字表达
LAB: Introduction of digital representation of multimedia software package
实验: 多媒体软件数字表达介绍
4. **Compression**
压缩技术
LAB: Introduction of compression
实验: 多媒体软件压缩介绍
5. **Compression**
压缩技术
LAB: Introduction of compression
实验: 多媒体软件压缩介绍
6. **Digital Image**
数字图像技术
LAB: Introduction of digital image
实验: 多媒体软件图像处理介绍
7. **Digital Image**
数字图像技术
LAB: Introduction of digital image
实验: 多媒体软件图像处理介绍
8. **Midterm Exam**
期中考试
LAB: Lab Report
实验: 实验报告 1
9. **Digital Video**
数字视频信号处理技术
LAB: Introduction of digital video
实验: 多媒体软件视频信号处理介绍
10. **Digital Video**
数字视频信号处理技术
LAB: Introduction of digital video
实验: 多媒体软件视频信号处理介绍
11. **Digital Audio**
数字音频信号处理技术
LAB: Introduction of digital audio
实验: 多媒体软件音频信号处理介绍
12. **Retrieval Techniques**
检索技术
LAB: Introduction of retrieval
实验: 多媒体软件检索处理介绍
13. **Retrieval Techniques**

	检索技术 LAB: Introduction of retrieval 实验: 多媒体软件检索处理介绍
14.	Retrieval Techniques 检索技术 LAB: Introduction of retrieval 实验: 多媒体软件检索处理介绍
15.	Hypermedia and WWW 超媒体技术 LAB: Introduction of hypermedia and WWW 实验: 多媒体软件超媒体和 WWW 介绍
16.	Review 复习 LAB: Lab Report 实验: 实验报告

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

"Multimedia Computing". Gerald Friedland and Ramesh Jain. Cambridge University Press.

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		10		
课堂表现 Class Performance				
小测验 Quiz				
课程项目 Projects		30		
平时作业 Assignments		10		
期中考试 Mid-Term Test		20		
期末考试 Final Exam		30		
期末报告 Final Presentations				
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**

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

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