

CSCI 3280

Introduction to Multimedia

(2016 Spring)

Computer Science & Engineering
The Chinese University of Hong Kong



Teaching Staff

Lecturer:

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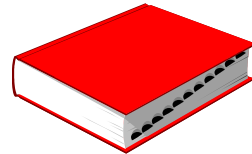


Lectures, Tutorials, ...

- Lectures
 - LSB LT6 H2
 - LSB LT6 F2-3
- Tutorials
 - No tutorial for the first 2 weeks.
 - To be rescheduled next Thursday!!
- Homepage:
<http://course.cse.cuhk.edu.hk/~csci3280/>
Username: csci3280 Password: mmonkey
- Newsgroup: eLearning
- Language: Cantonese with English technical terminologies



Textbook & References



- **Semi-Textbook:**
 - **“Fundamentals of Multimedia”**
by Ze-Nian Li and Mark S. Drew, Prentice Hall, 2004
- **References: (In order of importance)**
 - **“Multimedia Communication: Applications, Networks, Protocols and Standards”**
by Fred Halsall, Addison Wesley
 - **“Digital Compression for Multimedia”**,
by Jerry D. Gibson, Tony Berger, David Lindbergh and Richard L. Baker, Morgan Kaufmann, 1998
 - Technical papers, online document, ...



Course Contents

1. Overview

- Introduction
- Multimedia applications
- Media types
- Challenges and research issues
- Tools



2. Media Data Representations

- Digital audio
- Computer music, MIDI, mp3
- Digital image, video (2D or 3D)

3. Computer Graphics (not covered)

- Will not be covered in this course.
I recommend you to take
CSCI3260

4. Data Compression

- Lossless compression, Huffman, Arithmetic, LZW
- Lossy compression, JPEG, JPEG2000
- Video coding, Motion JPEG, H.261, MPEG/2/4/7

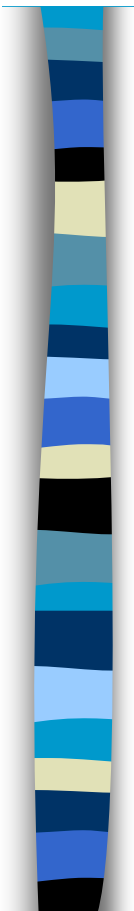


5. Storage Media (optional)

- Magnetic media
- RAID
- Optical disks
- Block placement and admission control

6. Network Communications (not covered)

- Recommend you to take a network course
CSCI4430
- Techniques for transferring huge data volume
- Streaming



7. Project

- will be announced later
- P2P, streaming
- C, C++ or Java + some libraries



Evaluation

- 15%+15% Two programming assignments
- 20% Mini-project (group of 5)
- 50% Final exam
(22 April 2015, Friday, 9:30am)
If you cannot attend, please drop this course



Important Issues

- Switch off all your phones before lectures & tutorials
- If you want to receive the phone call, please move outside of the classroom
- To respect the rights of your classmates, refrain from talking during the lectures & tutorials
- No copy (or similar program copies) or cheating is allowed. Otherwise,



Important Issues (2)

- You need to have sufficient programming background (C, C++ or Java) in order to finish the assignments and projects
- Please refer the document of Student/Faculty Expectation on Teaching and Learning.