DEREE COLLEGE SYLLABUS FOR:

ITC 4271 INTERACTIVE MULTIMEDIA SYSTEMS - LEVEL 6
(Updated Fall 2013)

PREREQUISITES: CS 1070 Introduction to Information Systems
CS 2188 Introduction to Programming


RATIONALE: An interactive multimedia system combines a series of technologies to increase the range and depth of presentation, interaction and processing, with that system and with other users. These technologies include: video, graphics, animation and sound for greater presentation; graphical user interfaces and speech recognition for greater user input; and network and communication technologies for greater group and social communication.

Current advances in informatics have brought us to an era that focuses on the user and the possible ways of providing information in the easiest and most efficient way. This is achieved through multi-databases, multi-networks and multimedia. The use of multimedia is growing rapidly since it provides a computing environment in which interaction will be more natural.

The course is intended for students of the Digital Media Technologies of the IT major. It aims to introduce them with the multimedia key issues and acquaint them with hypermedia design and production.

LEARNING OUTCOMES: As a result of taking this course, the student should be able to:
1. Demonstrate knowledge of the fundamental building blocks of multimedia, including text, images, motion, video, sound and interactivity.
2. Comprehend and select the hardware and software technology necessary for multimedia production.
3. Illustrate the industry’s trends from offline media to Web production.
4. Identify and evaluate a range of systems analysis and design methodologies and their associated tools that can be used in the development of multimedia systems.
5. Construct a prototype of an interactive multimedia system.
6. Use the necessary tools such as authoring tools, hypermedia and graphical user interfaces software to develop an interactive multimedia system.
METHOD OF TEACHING AND LEARNING:

In congruence with the learning and teaching strategy of the College, the following tools/activities are used:

- Lectures, class discussions on the requirements and design specifications of multimedia systems. Laboratory practical sessions on Interactive Multimedia Systems development.
- Office hours held by the instructor to provide further assistance to students.
- Use of the Blackboard Learning platform to further support communication, by posting lecture notes, assignment instruction, timely announcements, and online submission of assignments.

ASSESSMENT:

<table>
<thead>
<tr>
<th>Summative:</th>
<th>Formative:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project: functional requirements/ analysis /design/prototype application development/ documentation</td>
<td>In-class, 1-hour “diagnostic” test: short answers to essay questions</td>
</tr>
<tr>
<td>Final Examination (2-hour): combination of short answers to essay questions and case problems.</td>
<td>Coursework: practical exercises using multimedia authoring tools/ case problems</td>
</tr>
</tbody>
</table>

50                                                                                     0
50                                                                                     0

The diagnostic test aims to shape teaching along the semester and prepare students for the final exam.

The project tests Learning Outcomes 2,4,5,6

The final examination tests Learning Outcomes 1-4

(Guidelines and assessment rubrics are distributed on the first day of classes along with the course outline.)

INDICATIVE READING:

REQUIRED READING:


Instructor Notes and On-Line Help

RECOMMENDED READING:

- Macromedia Authorware 6 Training from the Source (with CD-ROM), Macromedia Press

**COMMUNICATION REQUIREMENTS:**
Daily access to the course’s site on the College’s Blackboard CMS.

**SOFTWARE REQUIREMENTS:**
Adobe Authorware 7
Adobe Flash, latest edition
Adobe Director, latest edition

**WWW RESOURCES:**
ACM – SIGCHI, [http://sigchi.org/sigchi](http://sigchi.org/sigchi)


Jacob Nielsen’s usable information technology: [http://www.useit.com/](http://www.useit.com/)

Slashdot [http://slashdot.org/](http://slashdot.org/)

[http://education.nasa.gov/multimedia.html](http://education.nasa.gov/multimedia.html)

NASA multimedia resources. A spectacular array of on-line multimedia resources such as image archives, movie clips, interactive imagery, WebCams, and NASA TV via the Internet. Valuable resources for students.

[www.coedu.usf.edu/inst_tech/resources/multimedia.html](http://www.coedu.usf.edu/inst_tech/resources/multimedia.html)

This page lists multiple Web sites that deal with the production and application of multimedia programs and tools and serves as a shortcut in the search process by providing links to valuable multimedia information.


Online version of the Multimedia and Internet Training Newsletter. It contains editorials from recent issues, Web-based training links, a list of multimedia developers, and a summary of authoring programs.

[http://cui.unige.ch(OSG/info/MultimediaInfo/mmsurvey/standards.html](http://cui.unige.ch(OSG/info/MultimediaInfo/mmsurvey/standards.html)

An excellent list of all multimedia standards with a brief explanation.

[http://ibis.nott.ac.uk/guidelines/title.html](http://ibis.nott.ac.uk/guidelines/title.html)
Contains an electronic version of "New Frontiers of Learning (Guidelines for Multimedia Courseware Developers in Higher Education)". An extensive collection of information pertaining to the creation of computer-based training on multimedia platforms.

http://www.tiac.net/users/jasiglar/MMASFAQ.HTML

Contains general information on authoring systems as well as a comprehensive list of tools organized by platform, and related newsgroups and Web sites.

http://www.adobe.com/

Provides information on several of Adobe’s multimedia software products.

1. What Is Interactive Multimedia?
   1.1 Computers and Multimedia
   1.2 Computers and Interaction
2. Interaction and the Interface
3. Semiotics
4. Multimedia Analysis and Design
   4.1 Planning and Costing
   4.2 Analysis
   4.3 Product Design Processes and Management
   4.4 Developing and Delivering
5. Stakeholders and Teamworking
6. Multimedia Authoring Tools
   6.1 Types of authoring tools
   6.2 Use of a multimedia authoring tool
7. Text
   7.1 Using text in multimedia
   7.2 Fonts and typefaces
   7.3 Font-editing and design tools
   7.4 Hypermedia and hypertext
8. Sound
   8.1 Multimedia system sounds
   8.2 MIDI versus digital audio
   8.3 Digital audio
   8.4 Audio formats
   8.5 Production of audio
9. Images
   9.1 Making still images; elements of colour
   9.2 Image file formats
10. Animation
   10.1 Principles of animation
   10.2 Making animations that work
11. Video
   11.1 Using video and how video works
   11.2 Broadcast video standards
   11.3 Shooting and editing video tips
   11.4 Recording formats; digital video

12. Future Trends