

CET318
CODE NO.

MULTIMEDIA DEVELOPMENT
COURSE NAME

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: MULTIMEDIA DEVELOPMENT

Code No.: CET318-3 Semester: 6

Program: COMPUTER ENGINEERING TECHNOLOGY

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Date: Jan. 1995 Previous Outline Dated: _____

APPROVED:

F. P. Carella

Dean

95-01-10

Date



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TOTAL CREDITS: 3

PREREQUISITES: Completion of the Computer Engineering Technician Program or approval of the Dean.

These prerequisites imply competency with DOS and Windows based computing environments, e-mail and Internet information gathering skills.

I. PHILOSOPHY/GOALS:

This course develops awareness of multimedia computer systems, concepts and applications. As the computing environment matures, applications may include audio, images, graphics and video in addition to text-based information. New skills must be applied to install, maintain and fully utilize multimedia applications effectively.

In addition to understanding the hardware and software requirements of multimedia systems, this course provides experience in evaluating multimedia software and in the design of multimedia presentations using a variety of commercial authoring and presentation software.

The use of multimedia in wide area networks such as the Internet will be investigated through the study of current software such as Mosaic.



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II. STUDENT PERFORMANCE OBJECTIVES (OUTCOMES):

Upon successful completion of this course the student will:

1. Identify potential educational, business, recreational and industrial applications of multimedia.
2. Specify and configure the hardware components required in a typical Multimedia PC.
3. Compare data compression techniques and standards for graphics, image, sound and video information.
4. Describe the software alternatives available for sound, image and video capture, manipulation and presentation in multimedia applications.
5. Identify good design principles in Multimedia presentations and interactive training.
6. Develop multimedia presentations utilizing a variety of software and hardware tools.
7. Evaluate and compare multimedia authoring software.
8. Describe the use of multimedia in wide area networks like the Internet.

III. TOPICS TO BE COVERED:

1. Introduction to Multimedia Applications.
2. Multimedia Hardware.
3. Data compression standards for sound, image and video.
4. Multimedia software tools.
5. Multimedia design principles.
6. Multimedia Authoring software.
7. Multimedia on the Internet.

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IV. LEARNING ACTIVITIES/REQUIRED RESOURCES

1.0 Introduction to Multimedia Applications.

Learning Activities:

- 1.1 Listen to a presentation on multimedia concepts and terminology.
- 1.2 Participate in a discussion of potential multimedia applications in education, business, entertainment and industry.
- 1.3 Analyze and evaluate various multimedia demonstrations.

Resources:

"Creating Multimedia On Your PC", Badgett and Sandler
Instructor's handouts.

2.0 Multimedia Hardware.

Learning Activities:

- 2.1 Listen to presentations on the hardware configuration requirements and options for an MPC or Multimedia PC.
- 2.2 Listen to a presentation on the types of devices and standards associated with multimedia PCs.
- 2.3 Listen to a presentation on the nature of Analog to Digital conversion and the information storage requirements of various types of information.
- 2.4 View demonstrations of sound, image and video capture hardware.
- 2.5 Investigate current issues of importance in multimedia systems by using the resources of the Internet and consulting current periodicals and media resources.

Resources:

"Creating Multimedia On Your PC", Badgett and Sandler , Chap. 1
Instructor's Handouts.
The Internet, Libraries and Periodicals.

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3.0 **Data Compression Standards for Sound, Image and Video.**

Learning Activities:

- 3.1 Listen to a presentation on data compression technologies, file types and standards of relevance to multimedia applications.
- 3.2 Listen to a presentation on image file formats such as **jpeg, gif, tiff, pcx**, etc., their advantages and disadvantages and conversion techniques.
- 3.3 Listen to a presentation on sound compression and storage techniques and standards including **wave, midi** and **voc**.
- 3.4 Listen to a presentation on video standards and compression technologies such as DVI, Digital Video Interactive, AVI, Audio Video Interleaved and MPEG.

Resources:

"Creating Multimedia On Your PC", Badgett and Sandler , Appendices B,C and D.
Instructor's Handouts.

4.0 **Multimedia Software Tools.**

Learning Activities:

- 4.1 Listen to a presentation describing the various types of software available for multimedia development.
- 4.2 Evaluate various software tools currently available and present your findings to the class.
- 4.3 Listen to a presentation on ownership and copyright issues in multimedia development.
- 4.4 Investigate various sources for graphics, sound, image and video materials for use in multimedia development.
- 4.5 Investigate the conversion and integration of various sound and image formats into presentations.

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Resources:

"Creating Multimedia On Your PC", Badgett and Sandler.
Instructor's Handouts.
Ultimedia CD-ROM software.
Internet.
"Creating Multimedia Presentations" by Douglas Wolfgram, Que Books

5.0 Multimedia Design Principles.

Learning Activities:

- 5.1 Participate in a discussion of the elements of successful multimedia presentations for various audiences and purposes.
- 5.2 View various multimedia presentations and judge their effectiveness.
- 5.3 Participate in a discussion of actual case studies of successful multimedia presentations.
- 5.4 Listen to a presentation on the steps involved in multimedia design and production.

Resources:

"Creating Multimedia On Your PC", Badgett and Sandler, Chap. 3
Instructor's Handouts.
"Creating Multimedia Presentations" by Douglas Wolfgram, Que Books

6.0 Multimedia Authoring Software.

Learning Activities:

- 6.1 Listen to a presentation on the different development environments for multimedia presentations.
- 6.2 Investigate the use of various authoring software including Storyboard Live, Action!, IconAuthor, Authorware and Multimedia Toolbook.
- 6.3 Compare the capabilities, advantages and disadvantages of various multimedia

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authoring tools.

- 6.4 Listen to presentations/demonstrations on Toolbook programming.
- 6.5 Develop (or modify) a simple interactive presentation using Toolbook.
- 6.6 Design and develop a multimedia presentation using available resources and demonstrate it.

Resources:

"Creating Multimedia On Your PC", Badgett and Sandler, Chap. 3
Ultimedia CD-ROM software.

7.0 **Multimedia on the Internet.**
Learning Activities

- 7.1 Listen to a presentation on the issues involved in the use of multimedia on local and wide area networks.
- 7.2 Listen to a presentation on the World Wide Web and the use of Web Browser software such as Mosaic on the Internet including HTML, HyperText Markup Language and its use in the creation of World Wide Web Home pages.
- 7.3 Create a World Wide Web Mosaic Home Page using HTML and various multimedia resources.
- 7.4 Listen to a presentation on MBONE, the Multimedia Backbone.

Resources:

Instructor's handouts.
Internet.

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V. EVALUATION METHODS:

Theory Tests	2 @ 25%	50%
Projects/Presentations and Assignments		45%
Quizzes		5%

(The evaluation scheme and percentages shown above may require modification. Students will be consulted and notified of any changes.)

GRADING SCHEME

A+	90	-	100%
A	80	-	89%
B	70	-	79%
C	55	-	69%
I	Incomplete		
R	Repeat		

UPGRADING OF INCOMPLETES

When a student's course work is incomplete or final grade is below 55%, there is the possibility of upgrading to a pass when a student meets the following criteria:

1. The student's attendance has been satisfactory.
2. An overall average of at least 40% has been achieved.
3. The student has not had a failing grade in all of the theory tests taken.
4. The student has made reasonable efforts to participate in class and complete assignments.

The method of upgrading is at the discretion of the teacher and may consist of one or more of the following options: additional assignments, rewrite tests on specific topics, or writing a comprehensive supplemental examination. The highest grade obtainable on a re-write test is a C.

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VI. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced standing in the course should consult the instructor. This course is not eligible for challenge at the present time.

VII. REQUIRED STUDENT RESOURCES:

TEXT BOOKS:

"Creating Multimedia on Your PC"

by Tom Badgett and Corey Sandler
John Wiley and Sons, 1994

VIII. ADDITIONAL RESOURCE MATERIALS AVAILABLE:

Book Section

"The CD-ROM Book" by Sloman and Bosak, Que Books

"Creating Multimedia Presentations" by Douglas Wolfgram, Que Books

Audiovisual Section

IX. SPECIAL NOTES:

Students with special needs (eg. physical limitations, visual or hearing impairments, or learning disabilities) are encouraged to discuss any required accommodations confidentially with the instructor.

Your instructor reserves the right to modify the course as deemed necessary to meet the needs of students or take advantage of new or different learning opportunities.

