

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: MULTIMEDIA DEVELOPMENT

Course No.: CET318

Program: COMPUTER ENGINEERING TECHNOLOGY

Semester: SIXTH (6)

Date: JANUARY 1997

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Previous Outline

Dated: JAN 1995

APPROVED:

*Joseph C. Smith*  
Dean

97-01-03  
Date

TOTAL CREDITS: 3

TOTAL CREDIT HOURS: 48

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.

LENGTH OF COURSE: 3 Hours per Week comprised of:  
1 - 1 hour lecture class with the Professor  
1 - 2 hour lab work period with the Professor

C O U R S E O U T L I N E

I. Course Description

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

II. LEARNING OUTCOMES AND ELEMENTS OF PERFORMANCE:

(Generic Skills Learning Outcomes placement on the course outline will be determined and communicated at a later date.)

**A. Learning Outcomes:**

1. Demonstrate an awareness, appreciation and value of Multimedia Applications.
2. Define and describe the various multimedia hardware/software capabilities and requirements.
3. Define and describe the various data compression techniques and standards for sound, image and video.
4. Work with various multimedia software tools.
5. Develop a multimedia presentation with an appreciation of a variety of design principles and skills required to develop a professional application.
6. Design a personal Internet Web page using a variety of multimedia design techniques and features.

II. LEARNING OUTCOMES AND ELEMENTS OF PERFORMANCE(Continued):

**B. Learning Outcomes and Elements of Performance:**

Upon successful completion of this course the student will demonstrate the ability to:

1. Demonstrate an awareness, appreciation and value of Multimedia Applications.

*Potential elements of the performance:*

- Review multimedia concepts and terminology.
- Participate in a discussion of potential multimedia applications in various disciplines.

This will constitute approximately 5 % of the course grade (possible weighting strategy) and take approximately 1 week.

2. Define and describe the various multimedia hardware/software capabilities and requirements.

*Potential elements of the performance:*

- Describe the hardware configuration requirements and options for an MPC or Multimedia PC.
- Define the types of devices and standards associated with multimedia PC's.
- Define and describe the nature of Analog to Digital conversion and the information storage requirements of various types of information.
- Specify and configure the hardware components required in a typical Multimedia PC.
- Analyse and evaluate various multimedia demonstrations.

This will constitute approximately 10 % of the course grade (possible weighting strategy) and take approximately 2 weeks.

II. LEARNING OUTCOMES AND ELEMENTS OF PERFORMANCE(Continued):

B. Learning Outcomes and Elements of Performance  
(Continued):

3. Define and describe the various data compression techniques and standards for sound, image and video.

*Potential elements of the performance:*

- Describe data compression technologies, file types and standards of relevance to multimedia applications.
- Work with various image file formats such as jpeg, gif, tiff, pcx, etc..
- Discuss the advantages and disadvantages of the various image file formats as well as the conversion techniques.
- Work with a variety of sound compression and storage techniques such as wave, midi and voc.
- Work with a variety of video standards and compression techniques such as DVI, AVI and MPEG.
- Produce image, sound and full motion video clips.
- Build a library of standard clips that can be used when developing a multimedia presentation.

This will constitute approximately 10 % of the course grade (possible weighting strategy) and take approximately 2 weeks.

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II. LEARNING OUTCOMES AND ELEMENTS OF PERFORMANCE(Continued):

B. Learning Outcomes and Elements of Performance  
(Continued):

4. Work with various multimedia software tools.

*Potential elements of the performance:*

- Run several of the demonstrations provided on the sampler CD.
- Investigate the use of various authoring software including Storyboard Live, Action!, IconAuthor, Authorware and Multimedia Toolbook.
- Perform a variety of the exercises as illustrated in the text.
- Evaluate various software tools currently available and present your findings to the class.
- Produce a report that summarises the similarities, differences, advantages and disadvantages of various multimedia authoring tools.
- Investigate various sources for graphics, sound, image and video materials and add them to your library for use in multimedia development.
- Investigate the conversion and integration of various sound and image formats into presentations.

This will constitute approximately 30 % of the course grade (possible weighting strategy) and take approximately 4 weeks.

**B. Learning Outcomes and Elements of Performance  
(Continued):**

5. Develop a multimedia presentation with an appreciation of a variety of design principles and skills required to develop a professional application.

***Potential elements of the performance:***

- Value ownership and copyright laws with respect to Multimedia Applications.
- Review the steps involved in multimedia design and production.
- Define and describe the various design issues when developing a Multimedia Presentation.
- Participate in a discussion of the elements of successful multimedia presentations for various audiences and purposes.
- Develop (or modify) a simple interactive presentation using Toolbook.
- Design and develop a multimedia presentation using available resources and demonstrate it.

This will constitute approximately 30 % of the course grade (possible weighting strategy) and take approximately 4 weeks.

6. Design a personal Internet Web page using a variety of multimedia design techniques and features.

***Potential elements of the performance:***

- Review a variety of WEB PAGE editors.
- Produce a personal Internet Web Page using a variety of multimedia design techniques and features.
- Install the Personal Web Page on our Alumni Computer.

This will constitute approximately 15 % of the course grade (possible weighting strategy) and take approximately 3 weeks.

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III. TOPICS TO BE COVERED

\* NOTE: These topics sometimes overlap several areas of skill development and are not necessarily intended to be explored in isolated learning units or in the order below.

TOPICS	APPROXIMATE TIME
1. Introduction to Multimedia Applications.	1 WEEK
2. Multimedia Hardware and Software.	2 WEEKS
3. Data Compression techniques.	2 WEEKS
4. Work with Multimedia Tools.	4 WEEKS
5. Develop Multimedia Presentation.	4 WEEKS
6. Develop Internet Web Page	3 WEEKS

IV. REQUIRED STUDENT RESOURCES

TEXTBOOKS TO BE USED AS REFERENCE MATERIAL:

- "Creating Multimedia on Your PC" by Tom Badgett and Corey Sandler, John Wiley & Sons, 1994

ADDITIONAL RESOURCE MATERIALS

Additional reference material will either be given to the students or placed in the library for the student's use.

Handouts, Guidance, and Material as it relates to the individual topics.

Use of research modes such as INTERNET, Library Data Base Searches, and articles.

REQUIRED INDIVIDUAL STUDENT RESOURCES

- Participation & Teamwork
- Box of Disks
- Individual Research
- Documentation

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V. EVALUATION METHODS:

Tests and Quizzes	45%
Assignments and Lab Work	55%

The tentative breakdown is as follows:

2	Formal Theory Tests	at 15 % each
3	Quizzes (best 3 out of 4)	at 5 % each
1	Formal Report on Authoring Tools and Presentation	at 15 % each
1	Developed Multimedia Application and Presentation	at 25 % each
1	Developed Web Page	at 15 % each

Some minor modifications to the above percentages may be necessary. The professor reserves the right to adjust the mark up or down 5% based on attendance, participation, leadership, creativity and whether there is an improving trend.

- \* All Assignments must be completed satisfactorily to complete the course. Late hand in penalties will be 5% per day. Assignments will not be accepted past one week late unless there are extenuating and legitimate circumstances.
- \* The professor reserves the right to adjust the number of tests, practical tests and quizzes based on unforeseen circumstances. The students will be given sufficient notice to any changes and the reasons thereof.
- \* A student who is absent for 3 or more times without any valid reason or effort to resolve the problem will result in action taken.

NOTE: If action is to be taken, it will range from marks being deducted to a maximum of removal from the course.



V. EVALUATION METHODS (Continued):  
GRADING DETAILS

1. TESTS

Written tests will be conducted as deemed necessary; generally at the end of each block of work. They will be announced about one week in advance. Quizzes may be conducted without advance warning.

2. ASSIGNMENTS

Assignments not completed by the assigned due-date will be penalised by 5% per day late. All assignments must be completed satisfactorily to complete the course.

3. GRADING SCHEME

A+	90 - 100%	Outstanding achievement
A	80 - 89%	Excellent achievement
B	70 - 79%	Average Achievement
C	55 - 69%	Satisfactory Achievement
U	Incomplete: Course work not complete at Mid-term. Only used at mid-term.	
R	Repeat	
X	A temporary grade that is limited to instances where special circumstances have prevented the student from completing objectives by the end of the semester. An X grade must be authorised by the Chairman. It reverts to an R if not upgraded in an agreed-upon time, less than 120 days.	

4. UPGRADING OF INCOMPLETE

When a student's course work is incomplete or final grade is below 55%, there is the possibility of upgrading to a pass when the student's performance warrants it. Attendance and assignment completion will have a bearing on whether upgrading will be allowed. A failing grade on all tests will remove the option of any upgrading and an R grade will result. The highest grade on re-written tests or assignments will be 56%.

Where a student's overall performance has been consistently unsatisfactory, an R grade may be assigned without the option of make-up work.

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V. EVALUATION METHODS (Continued):

The method of upgrading is at the discretion of the teacher and may consist of one or more of the following options: assigned make-up work, re-doing assignments, re-writing of tests, or writing a comprehensive supplemental examination.

VI. SPECIAL NOTES

1. All students should be aware of the Special Needs Office in the College. If you have any special needs such as being visually impaired, hearing disabled, physically disabled, learning disabilities you are encouraged to discuss required accommodations confidentially with the Professor and/or contact the Special Needs Office, Room E1204, Ext. 493, or 717, or 491 so that support services can be arranged for you.
2. Your professor reserves the right to modify the course as he/she deems necessary to meet the needs of students.
3. It is the responsibility of the student to retain all course outlines for possible future use in gaining advanced standing at other post-secondary institutions.
4. Plagiarism  
Student should refer to the definition of "academic dishonesty" in the "Statement of Student Rights and Responsibilities". Students who engage in "academic dishonesty" will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course, as may be decided by the professor.
5. Substitute course information is available at the Registrar's office.
6. Students must achieve a passing grade in **both** the assignment and the test portions of the course.
7. The topics will not necessarily be covered in the order shown in this course outline.

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VII. PRIOR LEARNING ASSESSMENT

Students who wish to apply for advanced credit in the course should consult the professor.