

QFO-AP-FI-MO02	اسم النموذج: Course Syllabus	جامعة فيلادلفيا
رقم الاصدار: 1 (Revision)	الجهة المصدرة: كلية تكنولوجيا المعلومات	 Philadelphia University
التاريخ: 2017/11/05	الجهة المدققة: عمادة التطوير والجودة	
عدد صفحات النموذج:		

Course Title: Multimedia Systems	Course code:731241
Course Level: year 2	Course prerequisite (s) and/or co requisite (s): 731111
Lecture Time: 12:10 – 13:00	Credit hours: 3

Academic Staff Specifics

Name	Rank	Office Number and Location	Office Hours	E-mail Address
Dr. hasan Al- Refai	Ass. Prof	7326	14:00 – 15:00 M+ W 11:00 -12:00 + 13:00 – 14:00 Su +Tu + Th	halrefai@philadelphia.edu.jo

Course module description:

This module is an introduction to the major topics related to multimedia (desktop publishing, hypermedia, presentation media, graphics, animation, sound, video, and integrated authoring techniques), multimedia concepts devices and development tools. It emphasizes hands-on experience for students to familiarize them with a range of tools used in creating computer-based multimedia.

Course module objectives:

A Student completing this module should:

1. Understand basic multimedia concepts, devices and the current trends in multimedia.
2. Understand the preproduction process including content acquisition and development, process flow, team management and integration, and legal issues surrounding multimedia.
3. Has the ability to build a multimedia project.

Course/ module components

Books (title , author (s), publisher, year of publication)

1. Multimedia: Making it work
Vaughan Tay, , Berkeley Osborne
McGraw-Hill, 7th Edition 2008.
2. Multimedia fundamentals Volume 1: Media coding and content processing Ralf Steinmetz & Klara Nahrstedt, Prentice-Hall, 2002.

Support Material

- Macromedia flash 2004
- Programming Language
- Photoshop Application
- Study guide** :Not applicable
- laboratory guide** : Manual of macromedia flash 2004

Teaching methods:

DURATION: 16 weeks, 80 hours in total

LECTURES AND TUTORIALS: 48 hours

LABORATORIES: 32 hours, 2 hour per week

Practical Submissions:

There are two practical hours weekly

The assignments that have work to be assessed will be given to the students in separate documents including the due date and appropriate reading material

Learning Outcomes:

- Knowledge and understanding**
 - Understand basic multimedia concepts.
 - Acquire basic knowledge on Multimedia devices.
 - Understand current trends in multimedia by experiencing a variety of applications and development packages.
- Cognitive skills (thinking and analysis)**
 - Understand the preproduction process including content acquisition and development, process flow, team management and integration, and legal issues surrounding multimedia
- Communication skills (personal and academic).**
 - Demonstrate technical knowledge and limited proficiency in designing production elements in each of the multimedia disciplines.
- Practical and subject specific skills (Transferable Skills)**
 - Be able to design different application in M.M and use different tools like macromedia flash and mat lab to express image processing

Assessment Instruments

- Short reports and/ or presentations, and/ or Short research projects (5 marks)
- Quizzes. (5 marks)
- Home works (10 marks)

<u>Allocation of Marks</u>	
Assessment Instruments	Mark
First examination	15% + 5% Lab.
Second examination	15% + 5% Lab.
Final examination: 50 marks	40%
Reports, research projects, Quizzes, Home works, Projects	20%
Total	100%

Documentation and academic honesty

□ Documentation style (with illustrative examples)

Submit your home work covered with a sheet containing your name, number, course title and number, and type and number of the home work (e.g. tutorial, assignment, and project).

Any completed homework must be handed in to my office (room IT 325) by 12:00 on the due date. After the deadline “zero” will be awarded. You must keep a duplicate copy of your work because it may be needed while the original is being marked.

You should hand in with your assignments:

- 1- A printed listing of your test programs (if any).
- 2- A brief report to explain your findings.
- 3- Your solution of questions.

For the research report, you are required to write a report similar to a research paper.

It should include:

- **Abstract:** It describes the main synopsis of your paper.
- **Introduction:** It provides background information necessary to understand the research and getting readers interested in your subject. The introduction is where you put your problem in context and is likely where the bulk of your sources will appear.
- **Methods (Algorithms and Implementation):** Describe your methods here. Summarize the algorithms generally, highlight features relevant to your project, and refer readers to your references for further details.
- **Results and Discussion (Benchmarking and Analysis):** This section is the most important part of your paper. It is here that you demonstrate the work you have accomplished on this project and explain its significance. The quality of your analysis will impact your final grade more than any other component on the paper. You should therefore plan to spend the bulk of your project time not just gathering data, but determining what it ultimately means and deciding how best to showcase these findings.
- **Conclusion:** The conclusion should give your reader the points to “take home” from your paper. It should state clearly what your results demonstrate about the problem you were tackling in the paper. It should also generalize your findings, putting them into a useful context that can be built upon. All generalizations should be supported by your data, however; the discussion should prove these points, so that when the reader gets to the conclusion, the statements are logical and seem self-evident.
- **Bibliography:** Refer to any reference that you used in your assignment. Citations in the body of the paper should refer to a bibliography at the end of the paper.

□ Protection by copyright

1. Coursework, laboratory exercises, reports, and essays submitted for assessment must be your own work, unless in the case of group projects a joint effort is expected and is indicated as such.
2. Use of quotations or data from the work of others is entirely acceptable, and is often very valuable provided that the source of the quotation or data is given. Failure to provide a source or put quotation marks around material that is taken from elsewhere gives the appearance that the comments are ostensibly your own. When quoting word-for-word from the work of another person quotation marks or indenting (setting the quotation in from the margin) must be used and the source of the quoted material must be acknowledged.

3. Sources of quotations used should be listed in full in a bibliography at the end of your piece of work.

□ **Avoiding plagiarism.**

1. Unacknowledged direct copying from the work of another person, or the close paraphrasing of somebody else's work, is called plagiarism and is a serious offence, equated with cheating in examinations. This applies to copying both from other students' work and from published sources such as books, reports or journal articles.
2. Paraphrasing, when the original statement is still identifiable and has no acknowledgement, is plagiarism. A close paraphrase of another person's work must have an acknowledgement to the source. It is not acceptable for you to put together unacknowledged passages from the same or from different sources linking these together with a few words or sentences of your own and changing a few words from the original text: this is regarded as over-dependence on other sources, which is a form of plagiarism.
3. Direct quotations from an earlier piece of your own work, if not attributed, suggest that your work is original, when in fact it is not. The direct copying of one's own writings qualifies as plagiarism if the fact that the work has been or is to be presented elsewhere is not acknowledged.
4. Plagiarism is a serious offence and will always result in imposition of a penalty. In deciding upon the penalty the Department will take into account factors such as the year of study, the extent and proportion of the work that has been plagiarized, and the apparent intent of the student. The penalties that can be imposed range from a minimum of a zero mark for the work (without allowing resubmission) through caution to disciplinary measures (such as suspension or expulsion).

Course/module academic calendar

week	Basic and support material to be covered	Homework/reports and their due dates
(1)	Introduction to Multimedia: definition, classification (discrete, continuous, passive, interactive), properties. Medium perception, representation, presentation, storage, and transmission. Lab: An overview of macromedia flash	
(2)	MM hardware, application areas, stages of MM project, design issues (speed, simplicity, clarity, consistency, ease of use, and navigation) Lab: Flash drawing tools Tutorial	
(3)	Media and data stream, transmission modes, authoring tools (types, features, card/page-based, time-based, and icon-based) Lab: Flash panels	
(4)	Text: text importance, encoding, fonts (type, size, style, leading, and kerning), text in MM (font design, menus, buttons, fields, portrait, landscape), editing design tools, hypertext vs. hypermedia. Tutorial Lab: Animation and motion tween	Homework1 Due date: 1 week later

(5)	Sound terminology (acoustic, electromagnetic wave, cycle, frequency, amplitude, decibel). Digital audio (sampling, quantization, file size, size vs. quality, formats). Lab: Guide layer and symbols in flash	
(6)	MIDI files (creation, size, advantages, disadvantages). MIDI vs. digital audio. Speech: generation (TTS), recognition (STT), applications, difficulties, program learning). Lab: Shape tweening Tutorial	
(7)	Sound summary. First Exam Lab: Demos on MIDI maker, TTS and STT.	
(8)	Digital image (bitmap, vector graphic) Bitmap (pixels, color encoding, palette, and models, resolution) Tutorial. Lab: Mask layers and text animation in flash.	
(9)	Image scanning, capturing, editing, morphing, dithering, file size, format (BMP, GIF, PNG, JPEG, ...etc) Vector graphics (types, properties, drawing, advantages, disadvantages, file size) Lab: Design and create buttons in Flash	
(10)	Bitmap image vs. vector graphic. Image processing and programming skills. Lab: Image processing (write code) Tutorial	Homework2 Due date: 1 week later
(11) Second examinati on	Animation : transition, cel animation (key frames, tweening, layers, morphing, formats) Lab: Image processing (write code) Second exam	
(12)	Video: concepts, standards, capturing, analog vs. digital, TV vs, computer video, compression and streaming. Lab: Flash action scripts	Project Due date: 3 weeks later
(13)	Encoding requirements (entropy, source, and adaptive), fixed length vs. variable length encoding, compression (HW vs. SW, lossy vs. lossless) Lab: Flash action scripts. Tutorial	
(14)	Compression (symmetric vs. asymmetric, dialogue mode vs. retrieval mode, RLE, Huffman)	

	Lab: Presentations of Flash and programming assignments.	
(15) Specimen examination on (Optional)	Compression techniques (JPEG and MPEG) Lab: Presentations of Flash and programming assignments.	
(16) Final Examination	Review	

Expected workload:

On average you should expect to spend at least (9) hours per week on this module

Attendance policy:

Lecture attendance is mandatory. Student is allowed maximally 15% absentia of the total module hours.

More than this percentage, student with an excuse will be drawn from the module. Otherwise, student will be deprived from the module with zero mark assigned.

Expected Workload**Module References****Books**

1. Multimedia: Concepts and Practice
Stephen McLoughlin
Prentice hall, 2001.
2. Fundamentals of Multimedia
Ze-Nian Li & Mark S Drew
Prentice hall, 2004.
3. Macromedia FLASH MX 2004, training from the source Jen Dehaan
Macromedia press, 2004.

Multimedia Software Packages:

Macromedia Flash (2004), Photoshop and mat lab

Journals

1- British Journal of Educational Technology ISSN 0007-1013
Cognitive style, gender and learning from multi-media materials in 11-year-old children pp. 43-56(14) **AUTHORS:** *Riding R.; Grimley M.*

2- MultiMedia Forum: an Interactive Online Journal, Germany

Websites

- 1- http://highered.mcgraw-hill.com/sites/0072230002/information_center_view0/
- 2- www.emeraldinsight.com/