

 FLORIDA ATLANTIC UNIVERSITY	COURSE CHANGE REQUEST Graduate Programs		UGPC Approval _____ UFS Approval _____ SCNS Submittal _____ Confirmed _____ Banner _____ Catalog _____
	Department CEECS College Engineering and Computer Science		
Current Course Prefix and Number CAP 6010	Current Course Title Multimedia Systems		
<i>Syllabus must be attached for ANY changes to current course details. See Guidelines. Please consult and list departments that may be affected by the changes; attach documentation.</i>			
Change title to: Change prefix From: _____ To: _____ Change course number From: _____ To: _____ Change credits* From: _____ To: _____ Change grading From: _____ To: _____ Academic Service Learning (ASL) ** Add <input type="checkbox"/> Remove <input type="checkbox"/>		Change description to: Change prerequisites/minimum grades to: Graduate standing for CEECS students, and instructor's approval for students from other major Change corequisites to: Change registration controls to: Please list existing and new pre/corequisites, specify AND or OR and include minimum passing grade.	
Effective Term/Year for Changes: Spring 2021		Terminate course? Effective Term/Year for Termination:	
Faculty Contact/Email/Phone Hanqi Zhuang/zuang@fau.edu/ 297-3413			
Approved by Department Chair _____ Hanqi Zhuang College Curriculum Chair _____ Francisco Presuel-Moreno College Dean _____ M. Cardai UGPC Chair _____ UGC Chair _____ Graduate College Dean _____ UFS President _____ Provost _____		Date _____ _____ 10/25/2020 _____ _____ _____ _____	

Email this form and syllabus to UGPC@fau.edu 10 days before the UGPC meeting.

**Department of Computer & Electrical Engineering and Computer Science
Florida Atlantic University
Course Syllabus**

1. Course title/number, number of credit hours	
Multimedia Systems CAP 6010	3 credit hours
2. Course prerequisites, corequisites, and where the course fits in the program of study	
Prerequisites Graduate standing for CEECS students, and instructor's approval for students from other major.	
3. Course logistics	
<i>Term:</i> Spring 2020 <i>Class location and time:</i>	
4. Instructor contact information	
<i>Instructor's name</i> <i>Office address</i> <i>Office Hours</i> <i>Contact telephone number</i> <i>Email address</i>	
5. TA contact information	
<i>TA's name</i> <i>Office address</i> <i>Office Hours</i> <i>Contact telephone number</i> <i>Email address</i>	
6. Course description	
Components of multimedia systems. Fundamental techniques for multimedia compression and multimedia synchronization. Multimedia networks. Video retrieval and indexing techniques. Overview of multimedia tools and applications, such as on-demand services and video conferencing, and questions of suitability of problems for expert systems solution and of means of attack.	
7. Course objectives/student learning outcomes/program outcomes	
<i>Course objectives</i>	To provide an in-depth survey of the state-of-the-art in multimedia system design and applications. The student shall learn the basic techniques and standards for image and video compression (such as JPEG and MPEG), multimedia networking and communications, multimedia security and mining, and operating system support for multimedia.
<i>Student learning outcomes & relationship to ABET a-k objectives</i>	<ol style="list-style-type: none"> 1. The student will understand the concepts of multimedia systems 2. The student will be able to understand techniques and standards for image and video compression 3. The student will learn characteristics of multimedia networks 4. The student will understand and use multimedia tools and techniques for developing and designing multimedia applications 5. The student will be able to effectively communicate in conducting multimedia experiments and writing a report.

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8. Course evaluation method	
Programming/ Research Assignment 25% Three exams (25%, 25%, 25%) 75% Discussion board and homeworks (bonus) 5% ----- TOTAL 100%	
9. Course grading scale	
Grading Scale: 92 and above: "A", 89-91: "A-", 85-88: "B+", 80-84: "B", 76-79: "B-", 73-75: "C+", 69-72: "C", 64-69: "D", 51-63: "D-", 50 and below: "F."	
10. Policy on makeup tests, late work, and incompletes	
<p><i>Makeup tests</i> are given only if there is solid evidence of a medical or otherwise serious emergency that prevented the student of participating in the exam. Makeup exam should be administered and proctored by department personnel unless there are other pre-approved arrangements</p> <p><i>Incomplete grades</i> are against the policy of the department. Unless there is solid evidence of medical or otherwise serious emergency situation incomplete grades will not be given.</p>	
11. Special course requirements	
Students have to perform at least 1 project.	
12. Classroom etiquette policy	
University policy requires that in order to enhance and maintain a productive atmosphere for education, personal communication devices, such as cellular phones and laptops, are to be disabled in class sessions.	
13. Attendance policy statement	
Students are expected to attend all of their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance. Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.	
14. Disability policy statement	
In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's campuses – Boca Raton, Davie and Jupiter – however disability services are available for students on all	

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campuses. For more information, please visit the SAS website at www.fau.edu/sas/

15. Counseling and Psychological Services (CAPS) Center

Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual counseling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to <http://www.fau.edu/counseling/>

16. Code of Academic Integrity Policy Statement

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see [University Regulation 4.001](#).

17. Required texts/reading

Lecture notes (PowerPoint presentations)

18. Supplementary/recommended readings

Research papers
(recommended readings)
Optional text: Ze-Nian Li and Mark Drew, "Fundamentals of Multimedia", Prentice Hall, 2004, ISBN D-13-061872-1

19. Course topical outline

1. Introduction to multimedia systems
2. Audio, image, and video concepts
3. Image compression techniques: Lossless compression
4. Image compression techniques: Lossy compression
5. Video compression techniques and standards
6. Introduction to MPEG-4, H.264 and HEVC compression techniques
7. Motion estimation algorithms
8. Processor architectures for multimedia
9. Image and video indexing and retrieval
10. Multimedia networking and communications
11. Multimedia operating systems: Process management
12. Multimedia operating systems: Disc scheduling
13. Wireless multimedia
14. Advanced topics in multimedia