

CSE 6389 - Special Topics in Advanced Multimedia, Graphics, and Image Processing

Fall 2013 Syllabus

Course web page: http://vlm1.uta.edu/~athitsos/courses/cse6389_fall2013

Lecture times: Friday 1:00pm-3:50pm

Classroom: ERB 129

Instructor:

[Vassilis Athitsos](#)

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Office: ERB 623

Office Telephone: 817-272-0155

Office hours: Tue-Wed-Fri 12:00pm-1:00pm.

Course Description

Contents and Objectives:

This course will engage students in individual, student-designed projects, where students will design and implement advanced computer vision methods. Topics of interest include, but are not limited to:

- detecting and recognizing people in a scene.
- detecting and tracking individual body parts such as faces and hands.
- model-based and exemplar-based methods for recognizing gestures and signs.
- object recognition.
- camera calibration.

The main deliverable for each student will be an individual project. The project will be graded based on:

- degree of difficulty
- system performance (accuracy, efficiency, generality)
- ability to visualize and understand the behavior of the overall system as well as individual system components
- quality of the experimental evaluation
- quality of written reports and oral presentations about the project.

Students will specify their project at the beginning of the course and will deliver progress reports on a weekly basis. A second deliverable will be student presentations of their work. To compute the semester grade, a weight of 75% will be assigned on the project, and a weight of 25% will be assigned on the quality of the presentations.

Class lectures will consist of student presentations of their own work, as well as presentations of published papers highly related to students' projects. After the presentations, the students and instructor will discuss and offer suggestions for the next steps in each student's project.

Projects are due December 3. Depending on the type of project, the submission format (e-mail, web page, flash drive) will be arranged between the student and the instructor.

Prerequisites:

Students are assumed to already have adequate computer vision background, by having taken the CSE 6367 course at UTA, or equivalent courses elsewhere. Alternatively, for students who do not have formal background in computer vision, they must meet with the instructor to discuss their background and obtain permission to register.

Course Materials:

Course materials will be available electronically on the course web page. Changes and corrections, if any, will also be announced by e-mail to the course mailing list.

Emergency Exit Procedures

Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit:

- Safely and calmly exit the classroom using either of the two doors.
- After exiting the door turn left, and walk to the end of the hallway, which is approximately 50 feet away from ERB 129.
- At the end of the hallway turn left again, to exit the building. An illuminated EXIT sign at the end of the hallway points towards the exit.

When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist handicapped individuals.

University Policies and Services

Grade Grievances:

Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current undergraduate catalog.

Drop Policy:

The standard UTA drop policy applies to this course. Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. Students will not be automatically dropped for non-attendance. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://wwwb.uta.edu/ses/fao>).

Americans With Disabilities Act:

The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the Americans with Disabilities Act (ADA). All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Academic Integrity:

All students enrolled in this course are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence. I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

Instructors may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System Regents' Rule 50101, paragraph 2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University.

Student Support Services:

UT Arlington provides a variety of resources and programs designed to help students develop academic

skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at www.uta.edu/resources.

Electronic Communication:

UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

Student Feedback Survey:

At the end of each term, students enrolled in classes categorized as lecture, seminar, or laboratory shall be directed to complete a Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit <http://www.uta.edu/sfs>.

Final Review Week:

Student projects will be due on December 3, 2013, which is during the Final Review Week. This is in accordance to the UTA policy stated below.

A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week unless specified in the class syllabus. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.