[CSE 6389](#) - Image and Video Databases - Summer 2010
Syllabus

Course web page: http://vlm1.uta.edu/~athitsos/courses/cse6389_summer2010/
Lecture times: Monday and Wednesday, 3:30pm - 5:20pm
Classroom: NH 110

Instructor:
> [Vassilis Athitsos](#)
> **E-mail:** athitsos@uta.edu
> **Office:** NH 309
> **Office hours:** MW 5:30pm-7:00pm.

Course Description

Contents and Objectives:

> The goal of this course is to study methods for comparing and identifying visual patterns. For example, these visual patterns can correspond to letters, hands, gestures, faces, or other types of objects or activities. The first question we study is: what are meaningful ways to evaluate the similarity between visual patterns? How can we tell that a pattern A is more similar to a pattern B than to a pattern C? The course covers different similarity measures, including correlation, the Euclidean distance, the chamfer distance, the Hausdorff distance, dynamic time warping, the edit distance, and shape context matching. The second question that this course addresses is: how can we find efficiently the most similar match for a test pattern in a large database of images or video? The course covers different indexing methods, that can efficiently identify the best matches without having to exhaustively compare the test image or video to every database image or video.

Prerequisites:

> CSE 5360 or CSE 6367 or consent of instructor. A strong programming background is assumed, as well as familiarity with linear algebra (vector and matrix operations), and knowledge of basic probability theory and statistics.

Course Materials:

> Course materials such as lecture notes, assignments, and solutions will be available electronically on the course web page. Changes and corrections, if any, will also be announced by e-mail.

University Policies and Services

Drop Policy:

The standard UTA drop policy applies to this course.

Americans With Disabilities Act:

The University of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 92-112 - The Rehabilitation Act of 1973 as amended. With the passage of federal legislation entitled *Americans with Disabilities Act (ADA)*, pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens.

Faculty members are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing faculty of their need for accommodation and in providing authorized documentation through designated administrative channels. Information regarding specific diagnostic criteria and policies for obtaining academic accommodations can be found at www.uta.edu/disability. Also, you may visit the Office for Students with Disabilities in room 102 of University Hall or call them at (817) 272-3364.

Academic Integrity:

It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University.

"Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts." (Regents' Rules and Regulations, Series 50101, Section 2.2)

Student Support Services Available:

The University of Texas at Arlington supports a variety of student success programs to help you connect with the University and achieve academic success. These programs include learning assistance, developmental education, advising and mentoring, admission and transition, and federally funded programs. Students requiring assistance academically, personally, or socially should contact the Office of Student Success Programs at 817-272-6107 for more information and appropriate referrals.