

 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 6673		Current Course Title Data Mining and Machine Learning	
<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 _____ <i>M. Cardie</i> 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.

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1. Course title/number, number of credit hours	
Data Mining and Machine Learning / CAP 6673	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	
Term: Spring 2021 . Class location and time:	
4. Instructor contact information	
Instructor's name Office address Office Hours Contact telephone number Email address	
5. TA contact information	
6. Course description	
Course deals with the principles of data mining and machine learning. Topics to be covered include machine learning methods, knowledge discovery and representation, classification and prediction models.	
7. Course objectives/student learning outcomes/program outcomes	
Course objectives	To enable students to understand basic concept of data mining and machine learning algorithms with an emphasis on real world applications.
BSCS program outcomes	Proficiency in the areas of Artificial Intelligence, data mining and machine learning.
8. Course evaluation method	
Four assignments worth 80% total Take-Home Exam 20%.	
9. Course grading scale	
Grading Scale: 92 and above: "A", above 88 and below 92: "A-", above 85 but below 89: "B+", 82-85: "B", 79-81: "B-", above 75 but below 79: "C+", 73-75: "C", 70-72: "C-", above 65 but below 70: "D+", 60-65: "D", above 55 but below 60: D-, 55 and below: "F."	
10. Policy on makeup tests, late work, and incompletes	
Assignments are to be submitted on time, with possible point penalties for late submissions. In no case will an assignment be accepted after the graded papers for that assignment have been returned to the	

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students. However, appropriate accommodations will be made for students having a valid medical excuse for being unable to work on an assignment during its two week period.

Unless there is solid evidence of medical or otherwise serious emergency situation incomplete grades will not be given.

11. Special course requirements

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, are to be disabled in class sessions, and laptops are only to be used for note taking and related activities.

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 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

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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

- (1) Data Mining: Practical Machine Learning Tools and Techniques, by I.H. Witten and E. Frank
- (2) Selected articles and papers are posted on the course web site.

18. Supplementary/recommended readings

19. Course topical outline, including dates for exams/quizzes, papers, completion of reading

Topics:

1. What's all about?
2. Input: Concepts, instances, attributes
3. Output: Knowledge representation
4. Algorithms: The basic methods
5. Divide and conquer: Constructing decision trees
6. Credibility: Evaluating what's been learned
7. Implementations: Real machine learning schemes
8. Transformations: Engineering the input and output
9. Moving on: Engineering the input and output
10. Nuts and bolts: Machine learning algorithms in JAVA