

 FLORIDA ATLANTIC UNIVERSITY	COURSE CHANGE REQUEST Undergraduate Programs	UUPC Approval <u>3-29-21</u> UFS Approval _____ SCNS Submittal _____ Confirmed _____ Banner Posted _____ Catalog _____
	Department Computer & Electrical Eng & Comp Sci College Engineering & Comp Science	
Current Course Prefix and Number CAP 4770	Current Course Title Introduction to Data Mining and Machine Learning	
<i>Syllabus must be attached for ANY changes to current course details. See Checklist. 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: _____ Change WAC/Gordon Rule status** Add <input type="checkbox"/> Remove <input type="checkbox"/> Change General Education Requirements*** Add <input type="checkbox"/> Remove <input type="checkbox"/> <small>*Review Provost Memorandum</small> <small>**WAC/Gordon Rule criteria must be indicated in syllabus and approval attached to this form. See WAC Guidelines.</small> <small>***General Education criteria must be indicated in syllabus and approval attached to this form. See GE Guidelines.</small>	Change description to: Change prerequisites/minimum grades to: (EEE 4541 OR STA 4821 or STA 2023 or equivalent) AND COP 3530 Change corequisites to: Change registration controls to: Please list existing and new pre/corequisites, specify AND or OR and include minimum passing grade (default is D-).	
Effective Term/Year for Changes: Fall 2021	Terminate course? Effective Term/Year for Termination:	
Faculty Contact/Email/Phone Hari Kalva, hkalva@fau.edu, 561-297-0511		
Approved by Department Chair <u>Hanqi Zhuang</u> <small>Digitally signed by Hanqi Zhuang Date: 2021.03.05 18:32:13 -05'00'</small> College Curriculum Chair <u>Dan Meeroff</u> College Dean <u>Frederick Bloetscher</u> UUPC Chair <u>Jerry Haky</u> Undergraduate Studies Dean <u>Edward Pratt</u> UFS President _____ Provost _____	Date _____ <u>3-18-21</u> _____ <u>3-18-21</u> _____ <u>3-29-21</u> _____ <u>3-29-21</u> _____ _____ _____	

Email this form and syllabus to mjenning@fau.edu seven business days before the UUPC meeting.

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

1. Course title/number, number of credit hours	
Introduction to Data Mining and Machine Learning CAP4770-001 CRN 14116, 002 CRN 14117	3 credit hours
2. Course prerequisites, corequisites, and where the course fits in the program of study	
(EEE 4541 OR STA 4821 or STA 2023 or equivalent) AND COP 3530	
3. Course logistics	
Term: Fall 2020	
This is a fully online course and is offered via CANVAS	
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>	Dr.Taghi M. Khoshgoftaar, Professor Engineering East Bldg., Room 511 Tuesday & Thursday 3:00 – 4:30 PM (by phone) 561-297-3994 khoshgof@fau.edu
5. TA contact information	
6. Course description	
This course deals with the principles of data mining. Topics covered include machine learning methods, knowledge discovery and representation, classification and prediction models.	
7. Course objectives/student learning outcomes/program outcomes	
<i>Course objectives</i>	To enable students to understand basic concept of data mining and machine learning algorithms with an emphasis on real world applications.
<i>BSCS program outcomes</i>	Proficiency in the areas of Artificial Intelligence, data mining and machine learning.
8. Course evaluation method	
Homework assignments worth 50% total Video presentation 15%	Exam 35%
9. Course grading scale	
Grading Scale: 90 and above: "A", above 85 but below 90: "B+", 80-85: "B", above 75 but below 80: "C+", 70-75: "C", above 65 but below 70: "D+", 60-65: "D", above 55 but below 60: D-, 55 and below: "F."	
10. Policy on make-up 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 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 weeks period.	

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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. 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/

14. Honor code policy

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 unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and place high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. See University Regulation 4.001 at www.fau.edu/regulations/chapter4/4.001_Code_of_Academic_Integrity.pdf

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. 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 website.

17. Supplementary/recommended readings

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

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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

Assignments will be given starting on 09/10/2020. Take home exam will be given on 10/08/2020