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BUSA 545 81E 81859
Machine Learning

COURSE SYLLABUS: Fall 2024

INSTRUCTOR INFORMATION

Instructor:	Dr. Yuehua Wang
Office Location:	JOUR 230
Office Hours:	Monday 11:30 am - 12:30 pm and 3:10 pm – 3:30 pm in Dallas, Tuesday 8:20 am-10:00 am, 1: 00 pm-3:00 pm in office, online or by appointment
Office Phone:	903-886-5802
Office Fax:	903-886-5404
University Email Address:	Yuehua.Wang@tamuc.edu
Preferred Form of Communication:	Email subject line must contain ***F24-BUSA545***
Communication Response Time:	1~ 2 business days

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings

Lecture: Room 2038, 8750 North Central Parkway, Dallas
Credit Hours: 3

Textbook(s)

There is no required textbook for the class.

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References

In most cases, the instructor's slides are sufficient for understanding all topics this course covers. The following books and websites may be useful as references or tutorials for Python studying.

Books:

- Hands-On Machine Learning with Scikit-Learn and TensorFlow: Concepts, Tools, and Techniques to Build Intelligent Systems by Aurelien Geron
  ISBN-10: 1492032646 ISBN-13: 978-1492032649
- Python Crash Course, 2nd Edition: A Hands-On, Project-Based Introduction to Programming by Eric Matthes
  ISBN-10: 1593279280 ISBN-13: 978-1593279288
- Intro to Python for Computer Science and Data Science: Learning to Program with AI, Big Data and The Cloud by Paul J. Deitel , and Harvey Deitel
  ISBN-13: 978-0135404676 ISBN-10: 0135404673
- Practice of Computing Using Python, The, Student Value Edition,3rd Edition, by William F. Punch, and Richard Enbody
  ISBN-13: 978-0134380315 ISBN-10: 0134380312
- Python for Everyone, 2nd Edition by Cay S. Horstmann, Rance D. Necaise
  ISBN-13: 978-1119056553 ISBN-10: 1119056551
- Python for Data Analysis: Data Wrangling with Pandas, NumPy, and IPython 2nd Editionby Wes McKinney
  ISBN-13: 978-1491957660 ISBN-10: 1491957662
- Python for Software Design: How to Think Like a Computer Scientist 1st Edition by Allen B. Downey (Author). Available at http://www.greenteapress.com/thinkpython/thinkpython.html
  ISBN-13: 978-0521725965 ISBN-10: 0521725968
- Automate the Boring Stuff with Python: Practical programming for total beginners by Al Sweigart. Available at https://automatetheboringstuff.com/
  ISBN-10: 1593275994 ISBN-13: 978-1593275990

Websites:

- Python for beginners: https://www.python.org/about/gettingstarted/
- Jython: https://www.jython.org/
- Learnpython: https://www.learnpython.org/
- Google's Python Class: https://developers.google.com/edu/python/

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- The Python Tutorial: https://docs.python.org/3/tutorial/
- Tutorialpoint: https://www.tutorialspoint.com/python/index.htm

Software Required

Students may develop your programs on any machine that you like: we encourage you to use your own equipment. We provide instructions for setting up a Python programming environment under Windows, OS X, and Linux.

You can use one of the several excellent Python IDEs available, with instructor materials covering PyCharm and Anaconda that are freely available for academic use and works on the major computing platforms (Windows, OS X, and Linux)

Course Description

This course is aimed at developing practical machine learning and data science skills which are quintessential for future professionals in the field of analytics. The course will cover theoretical concepts of the broad range of machine learning and deep learning concepts and methods. The tutorials, assignments, and projects provide students with practical knowledge to solve real-world problems.

Prerequisites:
Basic knowledge of Python and understanding of probability and linear algebra.

Course Objectives

By the end of this course, students will be able to:

- Determine to which problems machine learning is applicable and which model or models would be most appropriate in each case.
- Develop an understanding of training a machine learning algorithm including over-fitting, noise, convergence and stopping criteria.
- Understand and implement the training, testing, and validation phases of learning algorithms development and deployment.
- Apply machine learning algorithms for a wide-range problems in data analysis, text mining, computer vision and prediction.

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COB SLO-Course Objective Alignment

COB STUDENT LEARNING OUTCOMES (SLOS)	COURSE OUTCOMES - AFTER SUCCESSFULLY COMPLETING THIS COURSE, STUDENTS WILL BE ABLE TO:	MEASUREMENT METHODS (OUTCOME ASSESSMENTS)
1,2,5	• Identify and describe complex business problems in terms of analytical models • Understand and apply statistical concepts and methods of business analytics • Develop models in excel and other analytical tools for various decision-making problems • Interpret results/solutions and identify appropriate courses of action for a given problem • Communicate technical information in the form of visualizations and detailed reports.	• Machine Learning Final Project and Presentation Assignments

COURSE REQUIREMENTS

Minimal Technical Skills Needed

Using computers, operating systems, program compilers, IDE, and Microsoft Word

Instructional Methods

This course is a lecture supplemented by text and D2L. To get started with the course, go to: https://leo.tamuc.edu. You will need your CWID and password to log in to the course.

Student Responsibilities or Tips for Success in the Course

1. Make-up examinations for exams will not be given with valid documents. If you have a compelling and documented reason for not being able to attend the exam, you must make the alternative arrangements before the examination. Grades will not be curved for the course, and you will receive the grade that you earn through your performance on the assignments, exams, project, and bonus questions. There will be no individual exceptions to the grading policy, and, therefore grades of a C or F are possible.

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2. No late work will be accepted except under special extenuating circumstances when prior arrangements have been made with the instructor.
3. Grades will be posted within one week after assignment due date.
4. You are responsible to check your grades after each assignment. Please report any error or inconsistency to the instructor within 7 days if possible.
5. All assignments must be submitted using D2L if applicable. Students must adhere to the following rules when submitting assignments. Failure to do so will affect their grades.

   - File Name

     Should be named according to the following pattern: LastFirstX.**, where Last is the student's last name, First is the student's first name, and X is the assignment number.
     - For example, student John White would submit WhiteJohn3.py for programming assignment 3.
   - File Header
     - The first lines of the submitted file should include a comment with the following information and format:

       ```
       # A short description of the program.
       #
       # @author     Last Name, First Name
       # @assignment BUSA545 Assignment X
       # @date       Date
       #
       ```

6. All students are requested to access their university e-mail account regularly. You may be contacted when important matters arise. If you have any questions about the course or need assistance, please contact the instructor and/or the TA in person during office hours or by e-mail at any time.

GRADING

Letter grades for the course will be assigned according to this scale of the percentages given below.

A	90% -100%
B	80% - 89%

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C	70% - 79%
D	60% - 69%
F	59% or Below

Note: At the end of this semester, if your total is between 90 and 100, you will get an A; if it's between 80 and 89, you will get a B, and so on. Please note that the actual points will be used to calculate your final grade. No curving will be used in this class.

Assessments

End-of-semester numeric scores will be weighted as follows.

- Assignment/lab 50%
- Exam 01 15%
- Exam 02 15%
- Project 20%
- Quiz 5%

Notes:

A. Assignments/Labs:

Each week there would be an assignment and/or lab that should be solved independently and tightly related to the class materials and topics. The labs will be handed out in class and are usually due at the end of the class (or at the end of the day – instructor discretion). The purpose of the labs is student learning, rather than student testing. Submissions are always expected to be finished in good shape by deadlines. All assignments must be formally submitted to the assignment folder. Email or any other formats of submissions do not count and will not be graded. If you have difficulty accessing D2L temporarily, you can email me your assignment as proof of on-time submission. However, you still need to upload it to the assignment folder as soon as the issue is resolved to receive credit.

Neither late assignments nor labs would be allowed without the instructor's permission. The instructor should be prior notified with adequate verifiable documentation (e.g., medical letters or police reports). For the documentation, it will depend on the type of problems that you have experienced. The department and instructor reserve the right to check on the validity of the documents you submit and reject your requests/claims due to the lack of the evidence. Without any valid

documentary evidence, a 10% per day late penalty would be applied to submissions including assignments and labs. Submissions will NOT be accepted or even considered more than 4 days after the due date. If it is the case, a grade of zero will be awarded to the submission or missed work.

B. Attendance

For the face-to-face course, students are required to attend both lectures and labs for cooperative learning, active engagement, and effective communication. Attendance will be evaluated based on class participation, while lab participation will be counted as part of lab grade.

For the online course, students should make an effort to attend the live lecture if possible, or listen to the recorded lecture. Students are required to keep up with class materials and announcements made during live lectures or via emails, including changes to due dates or assignments. Attendance will be evaluated based on the submission of assignments and labs.

C. Quizzes and Exams

You should do your own work on exams, assignments and labs. Copying another student's work is not acceptable. Any indication of cheating or plagiarism on an exam/assignment will result in an automatic 0 (zero) for the exam/assignment for all students involved. Yet, based on cheating and plagiarism activity in any section of class, instructor holds the right to give F grade to the identified student(s). Regarding codes in assignments, you may be required to explain the code you submitted. In case of discursive explanation, the instructor holds the right to lower your grade.

Quizzes and exams are graded based on the correctness of the answers. Quizzes are unannounced pop-up quizzes. The time of each quiz will be announced at the beginning of the class. There will be no make-ups for any missed in-class quizzes. All exams are comprehensive. The time and location of each exam will be announced one week before the exam. All students are expected to be present for exams. The instructor should be notified in advance in the event that students will be absent with adequate verifiable documentation (e.g., medical letters or police reports). Failure to do so may result in the student receiving zero for the missed exam.

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D. Final project

The final project consists of problems, solutions, source code, and a project report. More details are provided in the final project guideline. The main goal of this course is to prepare you to apply machine learning algorithms on real-world problems and the final project is intended for that purpose. Each student will select a specific topic of their interest to analyze. After data exploration, you'll develop, train, and test the relevant machine-learning models. Project demonstration is required for each project in the classroom given the modality of the class. The submission guidelines for the project will be posted on the course page along with example projects and resources to find datasets.

E. Bonus credit

According to the quality, completion, and/or creativity of assignments, labs, and exams, students may be awarded bonus credit in some cases.

Additional notes:

You must earn an A on your own. Assume that you have completed all assignments, lower borderline grades may be affected positively or negatively by factors such as:

- the class grade distribution
- your class attendance, participation, and behavior (including what should be common courtesies: no sound-producing device use in class, arrive on time, stay until class is over, avoid distracting other students)

You need to give me a reason to think you deserve a grade higher than your percentage indicates and that you've made every effort to help yourself (you're attending class, are at least attempting programs, and participating in the current events discussions).

This is an online class. The D2L portal will be used for information and resource sharing. Assignments will be uploaded to D2L course shell. Students are responsible for obtaining and setting up their D2L account using their TAMUC student login. They need to follow the D2L course shell daily for the course announcements, downloading and uploading the assignments, and other course activities.

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Artificial Intelligence Software, Misuse, and Writing Detention

Artificial Intelligence, ChatBots, or other Software

Texas A&M University-Commerce acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

13.99.99.R0.03 Undergraduate Academic Dishonesty
https://inside.tamuc.edu/aboutus/policiesproceduresstandardsstatements/rulesprocedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf

13.99.99.R0.10 Graduate Student Academic Dishonesty
https://inside.tamuc.edu/aboutus/policiesproceduresstandardsstatements/rulesprocedures/13students/graduate/13.99.99.R0.10.pdf

AI Misuse and AI Writing Detection in this course

Academic integrity is a fundament aspect of our learning. There might be AI misuse in this course, particularly plagiarism and unethical behavior. As your instructor, I would like to remind you of the serious consequences of such activities. AI should be used wisely to help produce authentic and original work and promote productivity and creativity. No one wants to witness the misuse of AI.

To address this problem, Turnitin's AI writing detection (https://www.turnitin.com/products/features/ai-writing-detection) is enabled automatically in the D2L to detect and prevent plagiarism. It employs sophisticated algorithms to compare written material to a large database of sources to find similarities or copied content. It is

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critical to understand that these tools are not intended to invade your privacy or undermine your creativity, but rather to ensure that you are producing unique and real content.

University's academic integrity policy is available at https://www.tamuc.edu/college-of-business/integrity-policy/ . It is our shared responsibility to encourage a culture of academic integrity and prevent AI abuse.

Academic Plagiarism and Avoid Academic Plagiarism in Writing

There are numerous resources available relating to academic plagiarism. Please check them all to build a better understanding of academic plagiarism and avoid academic plagiarism in writing.

[1] The Plagiarism Spectrum. https://www.turnitin.com/static/plagiarism-spectrum/

[2] Avoiding Plagiarism in Academic Writing. https://inside.tamuc.edu/academics/colleges/humanitiessocialsciencesarts/departments/literaturelanguages/documents/firstyearwritingprogram/Avoiding%20Plagiarism.pdf

[3] Plagiarism in Academia-ERIC. https://files.eric.ed.gov/fulltext/EJ909069.pdf

[4] Meo, S. A., & Talha, M. (2019). Turnitin: Is it a text matching or plagiarism detection tool? Saudi Journal of Anaesthesia, 13(Suppl 1), S48. https://doi.org/10.4103/sja.SJA_772_18 at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6398291/

Other Resources from TURNITIN are available at https://inside.tamuc.edu/facultystaffservices/academictechnology/educational-technology/turnItIn.aspx

TECHNOLOGY REQUIREMENTS

Browser support

D2L is committed to performing key application testing when new browser versions are released. New and updated functionality is also tested against the latest version of supported browsers. However, due to the frequency of some browser releases, D2L cannot guarantee that each browser version will perform as expected. If you encounter any issues with any of the browser versions listed in the tables below, contact D2L Support, who will

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determine the best course of action for resolution. Reported issues are prioritized by supported browsers and then maintenance browsers.

Supported browsers are the latest or most recent browser versions that are tested against new versions of D2L products. Customers can report problems and receive support for issues. For an optimal experience, D2L recommends using supported browsers with D2L products.

Maintenance browsers are older browser versions that are not tested extensively against new versions of D2L products. Customers can still report problems and receive support for critical issues; however, D2L does not guarantee all issues will be addressed. A maintenance browser becomes officially unsupported after one year.

Note the following:

- Ensure that your browser has JavaScript and Cookies enabled.
- For desktop systems, you must have Adobe Flash Player 10.1 or greater.
- The Brightspace Support features are now optimized for production environments when using the Google Chrome browser, Apple Safari browser, Microsoft Edge browser, Microsoft Internet Explorer browser, and Mozilla Firefox browsers.

Desktop Support

Browser	Supported Browser Version(s)	Maintenance Browser Version(s)
Microsoft® Edge	Latest	N/A
Microsoft® Internet Explorer®	N/A	11
Mozilla® Firefox®	Latest, ESR	N/A
Google® Chrome™	Latest	N/A
Apple® Safari®	Latest	N/A

Tablet and Mobile Support

Device	Operating System	Browser	Supported Browser Version(s)
Android™	Android 4.4+	Chrome	Latest

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Device	Operating System	Browser	Supported Browser Version(s)
Apple	iOS®	Safari, Chrome	The current major version of iOS (the latest minor or **point** release of that major version) and the previous major version of iOS (the latest minor or **point** release of that major version). For example, as of June 7, 2017, D2Lsupports iOS 10.3.2 and iOS 9.3.5, but not iOS 10.2.1, 9.0.2, or any other version. Chrome: Latest version for the iOS browser.
Windows	Windows 10	Edge, Chrome, Firefox	Latest of all browsers, and Firefox ESR.

- You will need regular access to a computer with a broadband Internet connection. The minimum computer requirements are:
    - 512 MB of RAM, 1 GB or more preferred
    - Broadband connection required courses are heavily video intensive
    - Video display capable of high-color 16-bit display 1024 x 768 or higher resolution

- You must have a:
    - Sound card, which is usually integrated into your desktop or laptop computer
    - Speakers or headphones.
    - *For courses utilizing video-conferencing tools and/or an online proctoring solution, a webcam and microphone are required.

- Both versions of Java (32 bit and 64 bit) must be installed and up to date on your machine. At a minimum Java 7, update 51, is required to support the learning management system. The most current version of Java can be downloaded at: JAVA web site http://www.java.com/en/download/manual.jsp

- Current anti-virus software must be installed and kept up to date.

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Running the browser check will ensure your internet browser is supported.

Pop-ups are allowed.
JavaScript is enabled.
Cookies are enabled.

- You will need some additional free software (plug-ins) for enhanced web browsing. Ensure that you download the free versions of the following software:
  - Adobe Reader https://get.adobe.com/reader/
  - Adobe Flash Player *(version 17 or later)* https://get.adobe.com/flashplayer/
  - Adobe Shockwave Player https://get.adobe.com/shockwave/
  - Apple Quick Time http://www.apple.com/quicktime/download/

- At a minimum, you must have Microsoft Office 2013, 2010, 2007 or Open Office. Microsoft Office is the standard office productivity software utilized by faculty, students, and staff. Microsoft Word is the standard word processing software, Microsoft Excel is the standard spreadsheet software, and Microsoft PowerPoint is the standard presentation software. Copying and pasting, along with attaching/uploading documents for assignment submission, will also be required. If you do not have Microsoft Office, you can check with the bookstore to see if they have any student copies.

LMS

All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:
https://community.brightspace.com/s/article/Brightspace-Platform-Requirements

LMS Browser Support:
https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

YouSeeU Virtual Classroom Requirements:
https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements

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ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu**.**

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

COMMUNICATION AND SUPPORT

Brightspace Support

Need Help?

Student Support

If you have any questions or are having difficulties with the course material, please contact your Instructor.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

https://community.brightspace.com/support/s/contactsupport

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System Maintenance

D2L runs monthly updates during the last week of the month, usually on Wednesday. The system should remain up during this time unless otherwise specified in an announcement. You may experience minimal impacts to performance and/or look and feel of the environment.

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Interaction with Instructor Statement

Interaction with Instructor Statement: For general questions and assistance with the course, the instructor will keep a schedule of 6 regular office hours per week. If a student cannot meet during the designated schedule, arrangements can be made to meet at a more convenient time. An email should be sent to the instructor at least 24 hours prior to the time the student plans on meeting. Generally, I will reply to your e-mail messages in a timely manner. A reply can be expected within 24 hours.

My responsibilities:

1) Make sure to accommodate all your learning needs
2) Try my best to answer your questions and resolve other related issues
3) Give feedback and your grade on assignments within one week of the due date.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

Class Decorum Civility in the classroom or online course and respect for the opinions of other is very important in an academic environment. It is likely you may not agree with everything that is said or discussed in the classroom/online course. Courteous behavior and responses are expected. To create and preserve a learning environment that optimizes teaching and learning, all participants share a responsibility in creating a civil and non-disruptive forum. Students are expected to conduct themselves at all times in a manner that does not disrupt teaching or learning. Faculty have the authority to request students who exhibit inappropriate behavior to leave the class/online course and may refer serious offenses to the University Police Department and/or the Dean of Students for disciplinary action. (See Student Guidebook)

Academic Honesty

It is the policy of the University, the History Department, and the instructor that no form of plagiarism or cheating will be tolerated. Plagiarism is defined as the deliberate use of another's work and claiming it as one's own. This means ideas as well as text, whether paraphrased or presented verbatim (word-for-word). Cheating is defined as obtaining unauthorized assistance on any assignment. Collusion is defined as selling or purchasing academic products with the intention that they be submitted to fulfill an academic or course requirement. Proper citation of sources must always be utilized thoroughly and accurately. Cheating/plagiarism/collusion will result in a grade of "0" for the assignment, and may also

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result in failure of the course and/or disciplinary action by the University. Any student found guilty of violating academic integrity policy will fail the assignment in question, will automatically fail the course and will be subject to disciplinary action by the university (see Texas A&M University-Commerce Code of Student Conduct 5.b. [1,2,3]). Further information on the history department's plagiarism policy can be found on the department webpage. If you are unclear about what constitutes academic dishonesty, ask.

Writing Center

Students are encouraged to take advantage of the Writing Center's resources for assistance with drafting their written assignments. Although the center will not write your paper for you, it may help you to improve your writing skills. If you use the Writing Center, plan in advance because it can only help you if there is adequate time to incorporate their suggestions into your paper. Additionally, I am willing to read rough drafts (and even multiple drafts) of your written work so long as the drafts are submitted at least one week prior to the due date.

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the Student Guidebook.
http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: Netiquette
http://www.albion.com/netiquette/corerules.html

TAMUC Attendance

For more information about the attendance policy please visit the Attendance webpage and Procedure 13.99.99.R0.01.

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http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf

Academic Integrity

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

Undergraduate Academic Dishonesty 13.99.99.R0.03

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf

Graduate Student Academic Dishonesty 13.99.99.R0.10

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf

Students with Disabilities-- ADA Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

Texas A&M University-Commerce
Gee Library- Room 162
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
Email: studentdisabilityservices@tamuc.edu
Website: Office of Student Disability Resources and Services

http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/

The *syllabus/schedule are subject to change.*

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Nondiscrimination Notice

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.
For a list of locations, please refer to the Carrying Concealed Handguns On Campus document and/or consult your event organizer.
Web url:
http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf
Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

A&M-Commerce Supports Students' Mental Health

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Department or Accrediting Agency Required Content

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COURSE OUTLINE / CALENDAR

Meets 8/26/2024 through 12/13/2024:

- Week 1: Course Introduction, introduction to AI, ML and DL, Overview of Python, Basic Elements, Fundamental Concepts, and Scientific Libraries
- Week 2: Data Collection, Linear Regression, Logistic Regression and Regularization
- Week 3: Decision Trees and Random Forest
- Week 4: K-Nearest Neighbors (KNN) and Spatial Indexing (SI)
- Week 5: Support Vector Machines (SVM) and Kernel Methods
- Week 6: Unsupervised Learning: Clustering
- Week 7: Principle Component Analysis (PCA)
- Week 8: Association Rule Mining and Anomaly Detection
- Week 9: Dimensionality Reduction and Hierarchical Clustering
- Week 10: Neural Networks
- Week 11: Deep Learning: Computer Vision
- Week 12: Time Series Analysis: Autoregressive models, RNN, and LSTM
- Week 13: Reinforcement Learning
- Week 14: Genetic Algorithms & Fuzzy Systems
- Week 15: Generative AI and Models, ML Challenges, Risks, Implementation, and Data Ethics
- Week 16: Final Project Demonstration

Note: The right to modify the presentation order of materials is reserved. Course progress will be based on feedback and suggestions from students. We would cover the course materials, so if we slow in some topics, we must accelerate elsewhere.

HAVE A HAPPY AND SUCCESSFUL SEMESTER

The *syllabus/schedule are subject to change.*