CSCI 4023: Machine Learning Syllabus

Spring 2025

Computer Science, Petree College of Arts & Sciences, Oklahoma City University

1. Instructor Information & Course Material

Instructor: Tashfeen, Ahmad (SSM 202C, tashfeen@okcu.edu[1]).
Office Hours: Mondays, Wednesdays during 12–2:30 PM or by appointment.[2]
Textbook: Mitchell, Tom. *Machine Learning.* McGraw Hill, 1997.[3]
Time & Location: Monday, Wednesday during 4–5:15 PM in room 103 of the Sarkey's Center.

2. Tentative Schedule

Week	Topics	Event	(%)
1	Maths & Python Refresher	Homework 1	10
2	Numpy, Matplotlib & Metrics	Homework 2	10
3	Naïve Bayes		
4	Naïve Bayes	Homework 3	10
5	Linear Regression		
6	Linear Regression	Homework 4	10
7	Review		
8	Review	Midterm	15
9	Ridge Regression		
10	Ridge Regression	Homework 5	10
11		Sprint Break	
12	K-means		
13	K-means	Homework 6	10
14	Artificial Neural Networks		
15	Artificial Neural Networks	Homework 7	10
16	Review	Reading Week	
17	Review	Final	15

Table 1. This may change depending upon class progress.

3. Grading Criteria

When accepted, work that is $n < 3$ days late will receive no more than $100(1 - 0.1n)\%$ of credit. That is 10% deduction for each day late. For certain assignments and tasks, late work will not be accepted. Any submission that is not easy to read will receive a zero. We highly encourage you to typeset your homework.

Total $t\%$	Grade	Total $t\%$	Grade	Total $t\%$	Grade
		$t \geq 93$	A	$93 > t \geq 90$	A$^-$
$90 > t \geq 85$	B$^+$	$85 > t \geq 82$	B	$82 > t \geq 80$	B$^-$
$80 > t \geq 75$	C$^+$	$75 > t \geq 72$	C	$72 > t \geq 70$	C$^-$
$70 > t \geq 65$	D$^+$	$65 > t \geq 62$	D	$62 > t \geq 60$	D$^-$
$60 > t$	F				

Table 2. A grade of Incomplete ("I") will only be assigned in case of documented extenuating circumstances. The "I" will be removed in accordance with university policy stated in the online undergraduate catalogue. Please also see subsection 4.3.

[1] Prefix `[CSCI4023]` followed by a space to all emails sent to the instructor.
[2] Click `[ HERE ]` for a virtual meeting.
[3] You may find a copy at https://www.cs.cmu.edu/~tom/mlbook.html.
Note that the class is called "Logic and Artificial Intelligence" in the course catalogue.

4. Policies & Resources

4.1. **General Academic Guidelines.** For an up-to-date version of the guidelines please visit the university sharepoint. Please see the OCU course schedule website for the finals week schedule and click here for the online classroom.

4.2. **Course Requirements & Objectives.** Introduction to classification, regression and the evaluation metrics via supervised, unsupervised and semi-supervised algorithms covering both the mathematical models and the Python implementations using *only* Numpy and Matplotlib libraries.

4.3. **Academic Integrity.** The cheating rule for this class is simple: *don't turn in anything you did not understand*. I don't care if you use ChatGPT, Google, ask your grandma or get help from elsewhere. I encourage you to get help and exhaust your resources. Though, if you turn in something (or answer a question with something you do not understand; can not explain) and I unsuccessfully ask you to explain your work, that will result in an *automatic F in the course* and disciplinary action will be taken. If you've been asked to demonstrate your work to the professor then you'll need to do so in his office hours or make an appointment. If you've been asked to demonstrate your work and you fail to do so, you will receive a zero in the assignment. For more, read the *Academic Honesty* section of the courses' catalogue.

4.4. **Religious Accommodation.** Oklahoma City University seeks to be supportive of religious observance among the members of our diverse campus community and to be as accommodating as possible. Students should discuss with their instructor at the beginning of the semester forms of religious observance (dress, fasting, specific prayer times) that may affect their full participation in the course. Students should also compare the class schedule to their own religious calendar to determine if there will be any class days in which the student expects to be absent due to the observance of a religious holiday. *Students must notify the instructor, in writing, of the expected absence within the first two weeks of the semester.* The instructor will then work with the student to develop a plan to reschedule any exams, assignments, or course activities for that day. The instructor, at his/her own discretion, will make reasonable accommodations wherever possible. Students should recognize, however, that there may be some course aspects that cannot be rescheduled or accommodated, and it will therefore rest upon the student to determine whether they wish to remain enrolled in the course or have their grade potentially affected.

4.5. **Mission Statement.** The Petree College of Arts and Sciences provides a supportive, student-centered learning environment. Through an interdisciplinary curriculum that promotes active learning and individualized instruction, students are encouraged to think broadly, to find their passion, to collaborate with others, and to connect with the broader community.

4.6. **Grook.**

> Put up in a place
> where it's easy to see
> the cryptic admonishment
> T.T.T.
>
> When you feel how depressingly
> slowly you climb,
> it's well to remember that
> Things Take Time.
>
> —Piet Hein