Math 3380: Algorithms for Applied Math
Spring 2022
Course Meeting Times:
Sec. 001 MoWeFr 08:00–08:55 RBN 4019

Instructor Information

Professor:	Dr. Stephen Graves	**Office Hours**
Office:	RBN 4011	MoWe 11:15 – 12:10
Email:	sgraves@uttyler.edu	Fr 09:05 – 09:55
Dept. Phone:	(903) 565-5839	

Canvas can be accessed at http://uttyler.instructure.com

Any announcements posted to Canvas are equivalent to being announced in class; Canvas and your Patriots email are the official digital communication platforms of UT Tyler.

Course Information

Official Course Description. Study of applications selected from descriptive statistics, combinatorics, numerical methods, and matrices utilizing the computer.

Course Prerequisites. MATH 2414 completed with a grade of C or better, or concurrent enrollment.

Student Learning Outcomes. Upon completion of this course, students should be able to do the following:

- Implement and apply basic numerical algorithms.
- Implement and apply basic symbolic algorithms.
- Be able to differentiate between types of algorithms and to both apply and assess them in different contexts.
- Be comfortable enough using the computer to explore mathematics to select a topic of mathematical interest and complete a programming project on that topic.

Important Dates

10 Jan.	First Day of Classes
17 Jan.	Martin Luther King, Jr. Day (No classes)
24 Jan.	Census Date
7 – 12 Mar.	Spring Break (No Classes)
28 Mar.	Withdrawal Deadline
24 Apr.	Study Day
25 – 30 Apr.	Final Exams
7 May	Spring Commencement

Course Content

Required Text. There is no official textbook for this course, currently. Notes will be provided, and the following resources may be extremely useful:

- The Python Tutorial, https://docs.python.org/3/tutorial/index.html
- Google's Python Class, https://developers.google.com/edu/python/
- How to Think Like a Computer Scientist: Python 3 Edition, http://openbookproject.net/thinkcs/python/english3e/

Recommended Reading. Burger, E. B. and Starbird, M. *The 5 Elements of Effective Thinking*, Princeton University Press, 2012. ISBN 978-0-691-15666-8.

Course Policies

Academic Honesty. All work submitted must be your own. If this is determined not to be the case, you will be referred to the Director of Judicial Affairs, with a consequence appropriate to the level of the infraction.

Civil Environment. The free exchange of ideas is an integral part of a university education, and should be limited only with the utmost care. This being said, I will conduct my class in a civil and professional manner, and I expect you to behave accordingly. Disruptive behavior will not be tolerated and is judged at my sole discretion. Persistent incivility will result in your removal from the classroom.

Grading Policy. Your course grade will be determined by your performance on homework, midterms, and the final. You will be graded by no harder standard than the regular 10% scale:

Percentage p	[0,60]	(60,70)	[70,80)	[80,90)	[90,∞)
Letter	F	D	C	B	A

Homework. All homework will be assigned and collected via Canvas.

- 5% of your grade will be based upon writing meaningful class notes and uploading a scan of your notes to Canvas; there are 39 non-exam days and your grade for class notes will count 35 of these. Your notes can earn 0 points (less than half of content), 1 point (half or more of content), or 2 points (approximately all of content).
- 15% will be based upon *complete, correct, high quality* projects. These will be diligently checked for plagiarism.

In the event of a missed class, please contact a classmate to obtain notes. Copy them into your own handwriting and then submit them to Canvas before the deadline.

Extra Credit. Submit notes for more than 35 days of class to receive extra credit. A student submitting all 39 days of notes and earning 2 points on each will receive 39/35 of 5% for their Class Notes score. This is the only extra credit for the course.

Midterm Exams. There will be two in-class comprehensive midterms, each counting for 25% of your final grade, the dates of which are 14 February and 28 March. These will be graded for correctness.

Final Exam. The final exam will be mandatory, in-person, comprehensive, count for 30% of your grade, and will be held between 08:00 and 10:00 on Wednesday, 27 April. There may additionally be a programming portion of the exam which is to be completed at home and which will be due no later than 23:59 on Friday, 22 April.

Late Work and Make-Ups. Late work will not be accepted under any circumstances. Absences due to University-sponsored activities or religious reasons must be discussed at least two weeks prior to the date of the absence. In the event that you must miss class due to illness or personal emergency, you must notify me via email prior to the absence, and provide documentation of the events after the fact. A student who misses exactly one midterm exam <u>due to excused absence</u> will be permitted to count the final exam for 50% of the grade, replacing the missed exam grade. If a midterm exam is missed without excuse you will receive a zero. If you miss more than one midterm exam due to illness or personal emergency, you are expected to withdraw from the course.

Personal Electronics. Personal electronics are permitted in class only for the purpose of our coursework. Otherwise I expect not to see them.

Extra Help

Office Hours. Students who need extra help in the course are encouraged to form study groups and to come to my office hours. My office hours are open to all students in any of my classes, and operate on a first-in–first-out basis. If you come to my office hours on a busy day, I will make every effort to help you in the order you arrive.

University Policies

Syllabi at UT Tyler are required to contain certain information, which changes periodically. The most current version can be found at
https://www.uttyler.edu/academic-affairs/files/syllabuspolicy.pdf

This syllabus was typeset using the Open Dyslexic typeface. To download, or for more information, visit opendyslexic.org.