FLORIDA ATLANTIC UNIVERSITY

COURSE CHANGE REQUEST
Undergraduate Programs

Department Mathematics and Statistics

College Science

UUPC Approval 9-14-2026
UFS Approval _____
SCNS Submittal _____
Confirmed _____
Banner Posted _____
Catalog _____

***Current* Course Prefix and Number**	MAD 2502	***Current* Course Title**	Intro. to Computational Mathematics

*Syllabus must be attached for **ANY** changes to current course details. See Template. Please consult and list departments that may be affected by the changes; attach documentation.*

Change title to:

Change prefix
From: **To:**

Change course number
From: **To:**

Change credits*
From: **To:**

Change grading
From: **To:**

Change Writing Across Curriculum (WAC) **
Add ☐ **Remove** ☐

Change General Education Requirement***
Add ☐ **Remove** ☐

*See Definition of a Credit Hour.
**WAC criteria must be indicated in syllabus and approval attached to this form. See WAC Guidelines.
***GE criteria must be indicated in syllabus and approval attached to this form. See General Education Guidelines.

Change description to:

Change prerequisites/minimum grades to:
MAC 2311 OR MAP 2491 with a minimum grade of C

Change corequisites to:
Remove the corequisite of MAP 2492.

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:	Spring 2027	**Terminate course? Effective Term/Year for Termination:**	

Faculty Contact/Email/Phone Kevin Drees, kdrees@fau.edu

Approved by		***Date***
Department Chair	Vincent NAUDOT	08/31/2026
College Curriculum Chair		9/2/2026
College Dean		9/3/2026
UUPC Chair	Korey Sorge	9-14-2026
Undergraduate Studies Dean	Dan Moeroff	9-14-2026
UFS President		
Provost		

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

We request the following changes:

1) Replace the current prerequisite for the course to: MAC 2311 OR MAP 2491 with a minimum grade of C
2) Remove the corequisite of MAP 2492 from the course.

Justification:

The proposed changes will better align with the prerequisite requirements for computational mathematics.

1) Change of prerequisite to: MAC 2311 or MAP 2491 with a minimum grade of C

   The course emphasizes mathematical modeling and computational problem solving. Students who have been successful in MAC 2311 or MAP 2491 have demonstrated the mathematical maturity and problem-solving skills necessary to engage successfully with the course material.

2) Removal of corequisite MAP 2492

   The content of MAP 2492 is not essential for students to successfully complete MAD 2502, and the course outcomes do not depend on concepts covered in MAP 2492. Consequently, maintaining the corequisite imposes an unnecessary restriction on students and may delay their academic progress.

MAD 2502-001
Introduction to Computational Mathematics

MWF 11:00 – 11:50
3 credits

Semester, Year
Prof. XXXXX YYYYY
Office: XXXXXX
Office hours: MWF 11-12
Classroom: XXXX
Telephone: 561-297-XXXX
Email: zzzzz@fau.edu

TA name	xxxxxx xxxxxxxxx
Office	xxxxxxxx
Office hours	MWF xx:xx – xx:xx
Telephone	561-297-xxxx
Email	xxxxxx@fau.edu

Course Description

An introduction to mathematical computation by means of algorithmically solving a number of mathematical problems. The emphasis is on the mathematical algorithms involved with problems from analysis, number theory, combinatorics, algebra, linear algebra, numerical analysis and probability. Practical assignments in a specified programming language are given.

Instructional Method

In-Person. There is no remote option for this course.

Prerequisites/Corequisites

Prerequisite: MAC 2311 or MAP 2491 with minimum grade of "C"

Course Objectives/Student Learning Outcomes

Computational mathematics comprises the study, development, implementation, and application of algorithms for solving mathematical problems. We will have two objectives in this course: (1) To learn about computational mathematics by surveying and implementing algorithms from various mathematical subjects, and (2) To learn some practical programming basics via the Python programming language.

Here are some example subtopics we will possibly cover:

- Sorting
- Computational complexity of algorithms, Big-O notation
- Numerical linear algebra

- Numerical root-finding
- Regression and artificial neural networks
- Computational geometry/topology
- Monte Carlo methods and computational redistricting

Course Evaluation Method

In-class quizzes 15%
2 medium-length programming assignments 8% (each)
2 in-class exams 17% (each)
1 final exam 25%
1 final coding project 10%

Course Grading Scale

>= 92.00 A
88.00 - 91.99 A-
85.00 - 87.99 B+
80.00 - 84.99 B
77.00 - 79.99 B-
75.00 - 76.99 C+
70.00 - 74.99 C
65.00 - 69.99 C-
62.00 - 64.99 D+
55.00 - 61.99 D
50.00 - 54.99 D-
<= 49.99 F

Policy on Makeup Tests and Late Work

There will be no make-up exams except in the case of an excused absence (documentation is required). An absence may be excused for University-approved activities, or religious observances, a death in the family, or a medical emergency. You must inform me at least two weeks in advance if possible about any absence requiring a make-up exam, and as soon as possible otherwise. "As soon as possible" is relative to when you first learn about the event causing an absence, not necessarily the time of absence itself.

For medically related absences, your documentation must explicitly state that in a physician's (or equivalent) medical opinion, you were unable to complete school work on the associated dates. I am unable to assess diagnostic medical information directly. Please do not send me raw diagnostic information. An excuse note is necessary and sufficient for medical documentation.

Special Course Requirements

Software: We will use the Python integrated development environment Spyder and Anaconda package manager (https://www.anaconda.com/) for all programming assignments.

Policy on the Recording of Lectures

Because of a new Florida Statute in 2021, the following model language is suggested for inclusion in course syllabi, at the discretion of individual faculty:
Students enrolled in this course may record video or audio of class lectures for their own personal educational use. A class lecture is defined as a formal or methodical oral presentation as part of a university course intended to present information or teach students about a particular subject. Recording class activities other than class lectures, including but not limited to student presentations (whether individually or as part of a group), class discussion (except when incidental to and incorporated within a class lecture), labs, clinical presentations such as patient history, academic exercises involving student participation, test or examination administrations, field trips, and private conversations between students in the class or between a student and the lecturer, is prohibited. Recordings may not be used as a substitute for class participation or class attendance and may not be published or shared without the written consent of the faculty member. Failure to adhere to these requirements may constitute a violation of the University's Student Code of Conduct and/or the Code of Academic Integrity.

Attendance Policy

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.

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/

Disability Policy

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/.

Code of Academic Integrity

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 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.

If your college has particular policies relating to cheating and plagiarism, state so here or provide a link to the full policy—but be sure the college policy does not conflict with the University Regulation.

Artificial Intelligence Preamble

FAU recognizes the value of generative AI in facilitating learning. However, output generated by artificial intelligence (AI), such as written words, computations, code, artwork, images, music, etc., for example, is drawn from previously published materials and is not your own original work.

FAU students are not permitted to use AI for any course work unless explicitly allowed to do so by the instructor of the class for a specific assignment. [Policy 10.16 Artificial Intelligence]

Class policies related to AI use are decided by the individual faculty. Some faculty may permit the use of AI in some assignments but not others, and some faculty may prohibit the use of AI in their course entirely. In the case that an instructor permits the use of AI for some assignments, the assignment instructions will indicate when and how the use of AI is permitted in that specific assignment. It is the student's responsibility to comply with the instructor's expectations for each assignment in each course. When AI is authorized, the student is also responsible and accountable for the content of the work. AI may generate inaccurate, false, or exaggerated information. Users should approach any generated content with skepticism and review any information generated by AI before using generated content as-is.

If you are unclear about whether or not the use of AI is permitted, ask your instructor before starting the assignment.

Failure to comply with the requirements related to the use of AI may constitute a violation of the Florida Atlantic Code of Academic Integrity, Regulation 4.001.

Proper Citation: If the use of AI is permitted for a specific assignment, then use of the AI tool must be properly documented and cited. For more information on how to properly cite the use of AI tools, visit https://fau.edu/ai/citation

AI Language Specific To This Course

AI Flexible: The use of AI to assist in work assigned in this specific course is permitted only for specific assignments as indicated by the instructor. Use must be properly documented and cited per University standards guidelines (https://fau.edu/ai/citation).

AI use in this course

- AI is prohibited for use on exams.
- AI ***may*** be used on the homework (but this is not encouraged and if used must be cited).
- You are ***encouraged*** to use AI to supplement your learning and find additional exercises and uses.

Required Texts/Readings

There is no formal textbook for the course. Links to electronic resources will be provided.

Course Topical Outline

Here are some example subtopics we will possibly cover:

- Sorting
- Computational complexity of algorithms, Big-O notation
- Numerical linear algebra
- Numerical root-finding
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