FLORIDA ATLANTIC UNIVERSITY

COURSE CHANGE REQUEST
Undergraduate Programs

Department Mathematics and Statistics

College Sceince

UUPC Approval 10-12-2026
UFS Approval _____
SCNS Submittal _____
Confirmed _____
Banner Posted _____
Catalog _____

***Current* Course Prefix and Number**	MHF 3202	***Current* Course Title**	Intro. to Adv. 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:

Add MAD 2104 with minimum grade of C.

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

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

Approved by		***Date***
Department Chair	Vincent NAUDOT	09/23/2026
College Curriculum Chair		10/01/26
College Dean		10/1/26
UUPC Chair	Korey Sorge	10-12-2026
Undergraduate Studies Dean	Dan Mecroff	10-12-2026
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) Add to the prerequisite: MAD 2104 with a minimum of C

Justification:

The proposed changes will better align with the prerequisite requirements for an introduction to mathematics proofs.

1) Add to the prerequisite to: MAD 2104 with a minimum grade of C
   Adding discrete mathematics as a prerequisite for an introduction to proofs course will expose students to a broader range of mathematical concepts before enrolling in the course. In addition, it will provide students with greater mathematical maturity and problem-solving experience prior to taking a core course in their major. This change is expected to strengthen student preparedness and improve success in the course. As a result, students would follow the following course sequence

   1) Discrete Mathematics (MAD 2104)
   2) Introduction to Advanced Mathematics (MHF 3202)
   3) Modern algebra (MAS 4301)

Catalog Change:

Introduction to Advanced Mathematics (MHF 3202) 3 credits
Prerequisite: MAC 2312 and MAD 2104 with a minimum grade of C
This course serves as a transition into advanced mathematics courses. Students learn the formalism for correctly doing and writing proofs in mathematics. Topics include logic and language of proofs, set theory, mathematical induction, relations and orders, functions, and foundations of advanced calculus.

MHF 3202-001
Introduction to Advanced 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
This course serves as a transition into advanced mathematics courses. Students learn the formalism for correctly doing and writing proofs in mathematics. Topics include logic and language of proofs, set theory, mathematical induction, relations and orders, functions, and foundations of advanced calculus.

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

Prerequisites/Corequisites
MAC 2312 and MAD 2104 with a minimum grade of C

Course Objectives/Student Learning Outcomes
Students who successfully complete this course will be able to:

- Understand definitions of some fundamental terms such as countable and uncountable sets, indexed families, functions, equivalence relations, partitions, sequences and convergence, algebraic structures.
- Understand some of the fundamental theorems in mathematics.
- Master some of the basic techniques commonly used in writing mathematical proofs such as the Principle of Mathematical Induction, the Pigeonhole Principle, the Contradiction Method of Proof.
- Read, write, understand proofs and fallacious arguments.

Course Evaluation Method
The course grade will be based on the following weights:

- 10% Class participation,
- 20% Homework/Quizzes,
- 20% Exam 1 (Wednesday, September 23),
- 20% Exam 2 **(Monday, November** 2), and
- 30% Final exam

Course Grading Scale

Letter Grade	Percentage
A	90 – 100%
A-	88-89%
B+	85 – 87%
B	80 – 84%
B-	78 -79%
C+	75 -77%
C	70 – 74%
C-	65 – 69%
D	60 – 64%
F	<60%

Policy on Makeup Tests, Late Work, and Incompletes (if applicable)

Make-up exams will be given only under exceptional circumstance, and written, verifiable excuses must be provided in advance of the scheduled exams. No late work will be accepted. Grades of Incomplete ("I") are reserved for students who are passing a course, but have not completed all the required work, because of exceptional circumstances. A grade of " I" will only be given under certain conditions and in accordance with the academic policies and regulations put forward in FAU's University Catalog. The student must show exceptional circumstances why requirements cannot be met. A request for an incomplete grade has to be made in writing with supporting documentation, where appropriate.

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

A Transition to Advanced Mathematics
ISBN: 9798214029986
Publisher: Cengage Learning
Edition: 8th

Transition to Advanced Mathematics
ISBN: 9781285463261
Publisher: Cengage Learning
Edition: 8th

Course Topical Outline

Dates	Material
Week 1	Propositions and quantifiers
Week 2	Basic proof methods. Strategies. Proof from number theory
Week 3	Set theory
Week 4	Mathematical induction
Week 5	**Exam** 1. Relations
Week 6	Partitions
Week 7	Functions
Week 8	Sequences. Limits and continuity

Week 9	Algebraic structures: Group theory. Homomorphisms
Week 10	Algebraic structures: Rings and Fields
Week 11	**Exam** 2. Cardinality: equivalent sets, finite and infinite sets, countable sets
Week 12	Ordering of cardinal numbers. Axiom of choice
Week 13	Concepts of Analysis: the completeness property
Week 14	Classical results in analysis.
Week 15	Review