

**Class Schedule:** TTR 5:00pm-6:15pm (75 minutes, period 7)  
**Class Room:** 318 Goodwyn Hall

**Professor:** ~~Dr.~~ Jerome Goddard II  
**Office:** 213 B Goodwyn Hall  
**Phone:** 334-244-3023  
**E-mail:** [jgoddard@aum.edu](mailto:jgoddard@aum.edu)  
**Website:** <http://www.jeromegoddard2.com>

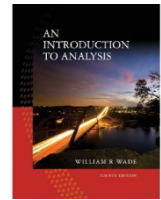


**Office Hours:** TTR 1:30pm-3:00pm & W 9:30am-12:30pm (others by appointment)

**Important Dates:**

September 7-8	Labor Day holiday & student holiday!
October 28	Last day to drop/resign classes
November 23-27	Thanksgiving holiday!
December 1	Last day of classes
Thursday, Dec 3, 5:00-7:30pm	Final Exam

**Text:** **An Introduction to Analysis.** Wade (4e), Prentice Hall 2010



**Catalog Description:**

*MATH 4210*

*3 credit hours*

*Analysis I*

The Least Upper Bound axiom and order properties of the real line, sequences, series, continuous functions, fixed point theory. Emphasis on the development of proofs by students.

**Prerequisites:** MATH 2660 (Linear Algebra) & MATH 2000 (Introduction to Higher Math)

**Course Objectives:** Selected topics from chapters 1-3 & 10. Upon successful completion of this course the student will demonstrate an understanding of and ability to apply each of the following topics (time permitting):

- Properties of the real line
  - Axioms & definitions including least upper bound axiom
  - Mathematical induction, cardinality
- Sequences in  $\mathbb{R}$ 
  - Convergence, limit theorems
  - Bolzano-Weierstrass Thm, Cauchy sequences, & limits supremum & infimum
- Functions on  $\mathbb{R}$ 
  - Limits, one- & two- sided & at infinity
  - Continuity & uniform continuity
- Fixed point theory
- Introduction to Metric Space theory
  - Interior, closure, & Boundary
  - Compact sets, connected sets, & continuity

**Methods of Instruction:** The format of class meetings will consist of interactive lectures, in-depth discussion, & group activities. Student participation is highly encouraged.

**Calculator:** According to AUM Department of Mathematics Calculator Policy, students are encouraged to possess a graphing calculator. A Texas Instrument's TI-84 (TI-83 or TI-82) is recommended. **Calculators are NOT allowed on assignments/exams** but may be used for homework and in-class discussion.

**Electronic Devices:** Cell phones, computers, tablets, and other electronic devices (except approved calculators) should be powered off, set to emit no audible sound (including vibration and messaging), and put away during class. **\*\*\*Use of cell phones for any purpose during class is in violation of class policy\*\*\***

**Free Tutoring:** Free one-on-one tutoring is available in the Learning Center (LC), located in 225 Library Tower (Phone: 334-244-3470). Students can call or stop in for an appointment. In addition, the LC hosts several calculator workshops. The Instructional Support Lab (ISL) located in 203 Goodwyn Hall (Phone: 334-244-3265) is another free tutorial center that is available to assist AUM students. Tutorial services at the ISL are available on a first come, first serve basis--no appointment necessary. Also, please feel free to come by my office during regular office hours for help.

**Academic Integrity:** Students are expected to maintain academic integrity in all work in this course. See the *AUM Undergraduate Catalog* for details. Procedures for violations are outlined in the *AUM Student Handbook*. Each faculty member is required to report student behavior that appears contrary to the standards of discipline and academic honesty as described in the *Student Handbook*. Copying solutions to homework problems (especially from the solution manual) is considered a violation of academic integrity.

**Attendance:** Class attendance is mandatory and will be taken at each class by your signing an attendance sheet. Failure to sign the attendance sheet will be counted as an absence. A student is considered to be absent if they come in after attendance has been taken or leave early. **Students are solely responsible for catching up on material that they miss due to any absence.**

**Assignments:** Homework problems will be assigned in class on a weekly basis. These problems will be due on at the beginning of Thursday's class of the week following the one in which they are assigned (unless otherwise noted). **NO LATE SUBMISSIONS WILL BE ACCEPTED.** It is recommended that all homework assignments be typed using the typesetting software LaTeX. In addition, students will be required to present solutions to specified homework questions in class.

**Grades:**

25%	Mid-term exam
40%	Homework average
10%	Class presentation(s)
25%	Comprehensive final exam

Final grades will be assigned as follows:

<b>90% – 100%</b>	<b>A</b>
<b>80% – 89%</b>	<b>B</b>
<b>70% – 79%</b>	<b>C</b>
<b>60% – 69%</b>	<b>D</b>
<b>0% – 59%</b>	<b>F</b>

\* Grades in this course are a direct measure of a student's performance in demonstrating attainment of course objectives. All rights are reserved to adjust these ranges downward or make appropriate scaling for all students, if necessary, due to excessive difficulty of assignments or tests. Additionally, all borderline cases will be determined according to student participation, class attendance, and overall student performance.

**Midterm Grade:** Your midterm grade will consist of the average of the mid-term exam and the homework grade average to date. *This grade is only meant to be an estimate of current progress in the class and can be quite different than your final class grade.*

**Makeup Work:** Makeup tests are allowed only for "excused" absences as outlined in the AUM Attendance Policy and only with appropriate verification. Arrangements must be initiated by the student (preferably with advance notice) and must be completed within one week of the original exam. There are no makeups allowed on homework assignments. However, the lowest homework grade will be dropped.

**Accommodation Notice:** It is the policy of AUM to provide appropriate modifications, accommodations or auxiliary aids to any student with a documented disability as defined by Section 504 of the Rehabilitation Act of 1973, as amended, and by the Americans with Disabilities Act (ADA) of 1990, and the ADA Amendments Act of 2008. It is the student's responsibility to request accommodations and provide appropriate documentation. Students with disabilities are encouraged to contact the Center for Disability Services (CDS) in Room 147 Taylor Center or call CDS at (334) 244-3631 prior to or upon enrollment at AUM.