

Course Information

Course Number:	Math 2335
Course Name:	Transition to Advanced Mathematics
CRN:	14194
Location:	MCS 220
Class Hours:	Tuesday and Thursday 2:40-3:55pm
Textbook:	A Transition to Advanced Mathematics by Smith, Eggen, & St. Andre. 8 th Edition
Prerequisites:	Math 1497

Instructor Information

Name:	Dr. Jeffrey Beyerl
Office Location:	MCS 231
E-mail:	jbeyerl@uca.edu
Phone:	501-450-5681

Course Description

This course is an introduction to the language and methods of advanced mathematics. The student will learn the basic concepts of formal logic and its use in proving mathematical propositions. Specific topics that will be covered may vary depending upon the instructor, but will include basic number theory and set theory.

Office Hours

My availability changes every day. Go to the website below for up to date availability. When you schedule an appointment, please specify what you're coming for.

Walk-ins are also welcome: if my office door is open, I'm available. However, if somebody with an appointment comes, they will receive priority.

Office Hours Website: <https://ucamath.youcanbook.me/>

**Computers**

- As part of this course you'll learn how to type mathematics on a computer.
- You'll see me typing mathematics during class.
- You will need to learn to type mathematics.
- Computer programming knowledge is not required.

**Course Objectives and Requirements**

The primary goal of this course is to develop an understanding of logic and the deductive thinking process used in mathematics.

Grading Policy

- **Coursework**

Coursework consists of everything that does not fall into other categories. This includes, but is not limited to:

- Homework
- Quizzes
- Projects
- Participation during in class activities and discussions
- Any extra credit given for one reason or another

- **Video Problem Presentations**

There will be five video presentations. You will illustrate the solution to a couple problems and provide peer review on other students' presentations.

- **Tests**

Three tests will be traditional in class written tests. The fourth test will be an Oral Exam. Each test will be cumulative.

- **Borderline Grades**

Borderline grades will be determined at the instructor's discretion based on the final exam and/or the quality of your work throughout the course.

Test 1	10%
Test 2	10%
Test 3	10%
Test 4 (Oral)	10%
Video Problem Presentations	15%
Coursework	20%
Final Exam	25%

Question: What will homework be like?

Answer: Homework comes in combinations of these 4 flavors:

- (1) Computational problems
- (2) Theoretical problems
- (3) Problems that focus on mathematical logic
- (4) Typed problems



Question: What will tests be like?

Answer: Testing this material is interestingly awkward. If you understand it, they are fantastically easy. If don't understand it, they are likely to seem impossible.



Student Learning Objectives

- Be able to construct mathematical proofs using formal logic and quantification.
- Be able to analyze mathematical proofs.
- Be able to illustrate relationships between sets and prove statements involving sets.
- Be able to construct and analyze mathematical proofs involving relations, functions, and cardinality.
- Be able to describe common proof techniques in a nonspecific manner.

Important Dates

Last day to Drop Drop means the course is not on your record	August 25 th
Video Problem Presentation 1 due	Sunday September 5 th
Test 1	Thursday September 16 th
Video Problem Presentation 2 due	Sunday October 3 rd
Video Problem Presentation 3 due	Sunday October 10 th
Test 2	Thursday October 14 th
Video Problem Presentation 4 due	Sunday October 31 st
Last day to Withdraw Withdraw means the course is on your record with a "W" but does not factor into your GPA	November 5 th
Test 3	Thursday November 11 th
Video Problem Presentation 5 due	Sunday November 21 st
Project Day (no synchronous meeting)	Tuesday November 23 rd
Test 4 (Oral)	Week of November 29 th – December 2 nd .
Final Exam	Thursday December 9 th 2pm-4pm

Outside of class resources

- The Textbook
 - Description of material
 - Example problems
 - Exercise problems
 - Homework problems
- Blackboard
 - Quiz/test solutions
 - Notes from class
- Office Hours
 - Individual help
 - Availability changes every day. See <https://ucamath.youcanbook.me/> for up to date availability
- Previous course materials
 - <http://faculty.uca.edu/jbeyerl/courses.html>
- The Math Resource Lab
 - Study Area
 - Tutors available throughout the day
- Academic Success Workshops
 - <https://uca.edu/studentssuccess/online-learning-success/>
- Peer Coaching (time management skills, study skills, motivation!)
 - <http://uca.edu/studentssuccess/successcoaching/>
- Communication Skills (oral and written)
 - <http://uca.edu/cwc/>

Late Work

Any late work will be accepted no questions asked for a penalty: 20% if it is only late by a couple days, 50% if it is very late. Note that late assignments may not be graded in a timely manner.

Expected Study Time

A good rule of thumb is that to be successful in a college course, you should work on your own two hours for every one hour of lecture. This course has 3 hours of lecture per week, so you should plan on studying 6 hours per week for this course. If you are well prepared you may need to study less; if you are not well prepared you may need to study more. If this is your first semester in college, please experiment with different study techniques throughout the course of the semester to figure out what works best for you. You can schedule a study technique consultation during office hours if you would like assistance developing a study plan.

Excused Absences

If you are part of an organization that includes official university trips, you will be excused from each day that you are on travel as long as you contact me each time to make arrangements for any missed work. It is your responsibility to make arrangements to make up any missed work before you leave for the trip. If you are going to miss a test or quiz, you must contact me approximately one week beforehand to make arrangements for the make-up, preferably by email.

For personal emergencies, you should contact me when it is safe and reasonable to do so, include documentation of the emergency. At his discretion, the instructor may choose to administer a make-up, issue a zero, or use the final exam to replace the missing test or quiz.

Attendance Policy

Your active participation in this course is expected and required for you to learn the material and earn a passing grade. If you miss more than two weeks of class meetings throughout the term, you may be administratively dropped from the course.

Academic Integrity Statement

The University of Central Arkansas affirms its commitment to academic integrity and expects all members of the university community to accept shared responsibility for maintaining academic integrity. Students in this course are subject to the provisions of the university's Academic Integrity Policy, approved by the Board of Trustees as Board Policy No. 709 on February 10, 2010, and published in the Student Handbook. Penalties for academic misconduct in this course may include a failing grade on an assignment, a failing grade in the course, or any other course-related sanction the instructor determines to be appropriate. Continued enrollment in this course affirms a student's acceptance of this university policy.

Academic integrity is taken seriously: cheating on a test will result in a failing grade in the course; allowing another student to copy off of your test will result in a one-letter-grade penalty.

Americans with Disabilities Act Statement

The University of Central Arkansas adheres to the requirements of the Americans with Disabilities Act. If you need an accommodation under this Act due to a disability, please contact the UCA Office of Disability Services, 450-3613.

Title IX disclosure:

If a student discloses an act of sexual harassment, discrimination, assault, or other sexual misconduct to a faculty member (as it relates to "student-on-student" or "employee-on-student"), the faculty member cannot maintain complete confidentiality and is required to report the act and may be required to reveal the names of the parties involved. Any allegations made by a student may or may not trigger an investigation. Each situation differs and the obligation to conduct an investigation will depend on those specific set of circumstances. The determination to conduct an investigation will be made by the Title IX Coordinator. For further information, please visit: <https://uca.edu/titleix>. *Disclosure of sexual misconduct by a third party who is not a student and/or employee is also required if the misconduct occurs when the third party is a participant in a university-sponsored program, event, or activity.

Sexual Harassment and Academic Policies Statement

All students are required to familiarize themselves with the University of Central Arkansas policy on sexual harassment and on academic policies. These policies are printed in the Student Handbook.

Building Emergency Plan Statement

An Emergency Procedures Summary (EPS) for the building in which this class is held will be discussed during the first week of this course. EPS documents for most buildings on campus are available at <http://uca.edu/mysafety/bep/>. Every student should be familiar with emergency procedures for any campus building in which he/she spends time for classes or other purposes.

Pandemic Information

- You need to follow all university policies including those on masks. At the time of this writing, the university requires masks in nearly all indoor areas specifically including classrooms.
- I've been vaccinated. You are encouraged to get vaccinated if you haven't yet. If I had access to information that everyone in our course has been vaccinated for COVID, that would be stated here so that we could all be more comfortable with our classmates. As of the time of this writing, I cannot say that everyone in our class has been vaccinated and so you are encouraged to keep your distance from your classmates.
- If you are sick, do not come to class. E-mail me and I will make individual accommodations based on the information you provide.
- If we are directed to pivot online and cease in person meetings, we will meet synchronously on Zoom.
- If we are directed to limit in-person seating below the enrollment of the course, we will cease in person meetings and meet synchronously on Zoom.