

*Course Information*

<b>Course Number:</b>	Math 1395
<b>Course Name:</b>	Applied Mathematics for Business
<b>CRN:</b>	12126 & 24197
<b>Location:</b>	12126: MWF MCS 111 24197: TTh MCS 110
<b>Class Hours:</b>	12126: MWF 10:00am-10:50am 24197: TTh 10:50am-12:05pm
<b>Textbook:</b>	Access to MyMathLab (Associated with Finite Mathematics 12th Edition, by Lial, Greenwell, & Ritchey)
<b>Prerequisites:</b>	Math 1390 (C or higher)
<b>Calculator:</b>	TI-84 suggested (But you can use whatever you like – it should have a TVM solver and you're on your own to figure out how it works on other calculators)

*Instructor Information*

<b>Name:</b>	Dr. Jeffrey Beyerl
<b>Office Location:</b>	MCS 231
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**Course Description**

As a component of the business foundation, this course is a requirement for all majors in the College of Business. The course builds on College Algebra by applying finite mathematics to business, finance, and economics. Topics include linear functions, systems of equations, matrices, optimization by means of linear programming, and finance. Problem solving and calculator technology will be emphasized.

**UCA Core**

This course is part of the Critical Inquiry component of the Lower-Division Core. Critical Inquiry courses promote the ability to analyze new problems and situations to formulate informed opinions and conclusions. For more information, go to <http://uca.edu/core>.

**Office Hours**

My availability changes every day. Go to the website below for up to date availability.

While appointments are preferred, 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/>



## 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 Presentation**

There will be a video presentation. You will illustrate the solution to a problem and your understanding of it.

- **Tests**

There will be four unit tests. The due dates for the unit tests will be announced in class. Unit tests will open only after that unit's quizzes reach a 70% grade. All tests will be administered on the computer using a test proctoring service using a working webcam and microphone. Details about all tests will be announced in class.

All tests will be open over a large window of time and thus no make-up exams will be needed.

- **Final Exam**

The [optional] final exam will be a written in-class exam during the university specified final exam period. It will not count against you, but can replace the lowest two tests.

- **Borderline Grades**

Borderline grades will be rounded up if the final exam is the higher score; no borderline grades will be bumped up without the final exam.

Test 1	12%
Test 2	12%
Test 3	12%
Test 4	12%
Video Problem Presentation	12%
Coursework	40%

**Question:** What will homework be like?

**Answer:** All the homework will be on MyMathLab. Some will be relatively simple computations. Others will be more involved. Like any computer system, it will be annoyingly frustrating at times – I apologize for that, but we must work with the tools that we have.



**Question:** What will tests be like?

**Answer:** The tests will be administered on MyMathLab using proctoring software. Please be sure you have a stable internet connection.



## Student Learning Objectives

Upon Successful completion of this course, students will be able to

- Solve linear equations, systems of linear equations, and linear inequalities.
- Convert a system of linear equations into an equivalent matrix form.
- Perform matrix arithmetic and row operations on a matrix.
- Graph equations, inequalities, and systems of inequalities.
- Use concepts of Linear Programming to find the maximum/minimum value of an objective function.
- Find probability of theoretical events, observed events, and conditional events.
- Find probability trees.
- Analyze Markov Chains to find long-term predictions.
- Utilize appropriate financial tools to solve problems using simple interest, compounded interest, annuities, and amortizations.
- Appropriately use technology to solve application problems.

## Important Dates

Last day to Drop Drop means the course is not on your record	Wednesday, August 31 <sup>st</sup>
Midterm Grades Posted	Monday October 3 <sup>rd</sup>
Midterm Grades Posted	Tuesday, November 15 <sup>th</sup>
Last day to Withdraw Withdraw means the course is on your record with a "W" but does not factor into your GPA. Talk to your professor, advisor, and financial aid officer before withdrawing.	Wednesday, November 16 <sup>th</sup>
Asynchronous Day	12126: Monday, November 21 <sup>st</sup> 24197: Tuesday, November 22 <sup>nd</sup>
Prefinal Grades Posted	Saturday, December 10 <sup>th</sup>
[Optional] Final Exam	12126: Monday, December 12 <sup>th</sup> 8am-10am 24197: Thursday, December 15 <sup>th</sup> , 11am-1pm
Final Grades Posted	Saturday, December 17 <sup>th</sup>

## Outside of class resources

- MyMathLab
  - Electronic copy of the textbook
  - 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
- The Math Resource Lab
  - Study Area
  - Tutors available throughout the day
- Academic Success Workshops
  - <https://uca.edu/studentsuccess/online-learning-success/>
- Peer Coaching (time management skills, study skills, motivation!)
  - <http://uca.edu/studentsuccess/successcoaching/>
- Communication Skills (oral and written)
  - <http://uca.edu/cwc/>

## Study Groups

Formal study groups will be offered on an ad-hoc basis. Each student may lead up to 2 study groups for 5 bonus points each. See Blackboard for details and signups.

## 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.

**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.

### **Departmental Program Assessment**

Toward the end of the semester there may be an assessment that will be used both for this course and for program assessment. Program here refers to the math major program that the department of mathematics runs.

### **Pandemic Information**

- All students are expected to know and comply with university policy related to Covid-19. For information and resources, see <https://uca.edu/coronavirus/>. At the time of this writing, masks are optional.
- 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.
- 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.