

*Course Information*

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|-----------------------|---|
| <b>Course Number:</b> | Math 3330   |
| <b>Course Name:</b>   | Discrete Structures II                                  |
| <b>CRN:</b>           | 26602   |
| <b>Location:</b>      | MCS 212   |
| <b>Class Hours:</b>   | MWF 12:00-12:50am                                       |
| <b>Textbook:</b>      | Discrete Mathematics by Johnsonbaugh (7 <sup>th</sup> ) |
| <b>Prerequisites:</b> | Math 2330 or Math 2335                                  |

*Instructor Information*

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|-------------------------|--------------------|
| <b>Name:</b>            | Dr. Jeffrey Beyerl |
| <b>Office Location:</b> | MCS 237            |
| <b>E-mail:</b>          | jbeyerl@uca.edu    |
| <b>Phone:</b>           | 501-450-5652       |

**Office Hours:** By appointment or walk-in. Designated walk-in times are:

|           |                            |
|-----------|----------------------------|
| Monday    | 10:00-10:50am; 1:00-1:50pm |
| Tuesday   | 9:25-10:40am               |
| Wednesday | 8:00-8:50am; 1:00-1:50pm   |
| Thursday  | 9:25-10:40am               |
| Friday    | 8:00-8:50am                |

**Course Description**

This course in discrete mathematics is designed for mathematics and computer science majors. The topics include recursion, graph theory, matrices, algorithms, basics of formal languages and automata theory. Applications leading to the development of algorithms are emphasized.

**Course Objectives and Requirements**

The primary objective in this course is to study problems of a discrete nature and understand techniques that can be used in various settings.

## Grading Policy

Your grade will be computed from coursework, three tests, and a final exam. Quizzes cannot be made up for any reason, however when missed due to an excused absence a quiz may be dropped.

Tests will be administered approximately one-third into the semester, two-thirds into the semester, and the last week of class. Make-up tests will only be given for official university events or personal emergencies. In the former case the test must be taken before official test date, in the latter case a short letter explaining why you missed the test, why this justifies a make-up, and supporting documentation must be turned in by the next class day.

The final exam is cumulative and is a significant portion of your course average; it can replace the lowest test grade or three quarters of the coursework (but not both).

The professor reserves the right to add up to two percentage points to the course average for any student that has shown genuine mastery of the course concepts.

|            |     |
|------------|-----|
| Coursework | 20% |
| Test 1     | 15% |
| Test 2     | 15% |
| Test 3     | 15% |
| Final Exam | 35% |

| Course Average | Course Grade |
|----------------|--------------|
| [90,100]       | A            |
| [80,90)        | B            |
| [70,80)        | C            |
| [60,70)        | D            |
| [0,60)         | F            |

## Student Learning Objectives

- Be able to apply combinatorial techniques to solve advanced counting problems.
- Be able to explain and trace algorithms on graphs; also be able to apply related theoretical results.
- Be able to solve recurrence relations.
- Be able to apply number theoretic results to solve problems.
- Be able to analyze a formal language or automata.

**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 fail to regularly and actively participate it will demonstrate that you are not making a reasonable effort to complete this course, and you will be administratively dropped for non-attendance with a grade of WF.

**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.

**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.

**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.