

DISCRETE MODELS FOR MIDDLE LEVEL TEACHERS

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OBJECTIVES:

Students will learn and use the concepts of discrete mathematics in a discovery and inquiry-based format. The instructor will initiate new topics through CANVAS that connect to the middle school curriculum. Students will complete assignments, practice problems, quizzes, project papers, and exams. The course will cover discrete concepts in multiple contexts and formats.

STANDARDS:

The *Common Core State Standards* (2014) and *National Middle School Association* (NMSA) outline specific expectations for middle school mathematics. To meet the expectations of national stakeholders, pre-service candidates will be prepared to create learning environments that enable the best 4-9 teaching and learning possible. This will be achieved through effective instruction. Since many teachers will teach as they were taught, it is crucial that pre-service candidates, in particular, effective learning will take place when student(s) (a) pre-confer with professionals in the field, and (c) they are aware of how (and why) learning is based on discovery via inquiry and collaborative problem solving in both the classroom and in their training as future professional educators will emphasize these elements.

EVALUATION GUIDELINES:

Assessment strategies for this course are designed to inform you of your progress. The instructors will give you feedback on your progress in meeting performance

projects at 30 points each.

Exams at 10 points each, these exams can only be taken twice and must be taken

Exams at 10 points each, may retake.

Group Assignments: 8 points each, may be resubmitted.

Introduction paper: 20 points, may be resubmitted.

Multiple-choice exam: 100 points, contact instructor to take exam

1:

The first introduction module which includes the first group assignment. This module is familiar with the course content, textbook, and using Blackboard Ultra for the first part of this course has four modules and eight units of instruction. Each unit should be done in order. The course includes two cycles of learning

Group assignments (30 points each) - approximately every other week you will meet for a group assignment for approximately 45 minutes using Blackboard Ultra for the assignment. These sessions will be recorded and you will receive and in your final grade is a collaboration grade and the group grade on the one-page assignment product. You should read the "Wh

THEMATICS IN THIS COURSE?

stand what you will be required to know and be able to do in the course. You will read about *Discrete Math* and write a short paper identifying how this knowledge can be used to teach middle level students.

Understand the course math concepts and procedures explained and modeled. You will learn the math concepts and procedures through the modules which use

Practice your knowledge and procedures by doing math problems.

Students will practice their knowledge and procedures by doing textbook exercises. These exercises are not graded, so when you feel comfortable doing the *Practice Quiz* and *Procedure Fluency Check* assignment.

Check your understanding of the concepts and procedures.

After students have practiced the math exercises, they will take the *Practice Quiz* (unlimited number of time) and *Procedure Fluency Check* assignment. After a student is comfortable answering the quiz questions they may be taken twice. Contact your instructor if you do not understand or are incorrect.

Be able to explain and teach the math to other people.

Discussions and Assignments will be used to share ideas about how to teach middle level students.

Monitor your own progress in the course.

Communication

in the course. My preferred method of communication with individual students is via email. If you experience a legitimate emergency (according to my definition) preventing you from completing required coursework on time, I expect you to communicate with me as soon as possible. Please state the nature of the emergency, and when you expect to turn the assignment in.

File Formats

Assignments should be submitted in .doc or .pdf format. If you do not have Microsoft Word, you can download the free OpenOffice suite at <http://www.openoffice.org/>. This will allow you to open the instructions and save your work as a .doc or .pdf.

Late assignments will be given reduced points depending on how many days the assignment is late. After the dates I will take 1 point for 2 days late, 2 points for a week late, and 3 points for more than a week late.

All assignments must be completed before you can take the final exam, which is required for graduation. The dates for each quiz, discussion, exam and assignment are stated clearly in CANVAS.

ES:

The following is the standard set for this course. Students are expected to complete all of the assignments and to use their own original words and ideas and will properly cite the words and ideas of others. Students must be honest in their interactions with the instructor. A student found to have cheated will be failing this course and shall be subject to disciplinary action or sanctions.