

Syllabus for Math 398 - A hybrid course
Discrete Mathematics for Elementary and Middle School Teachers
Winter 2016

Instructor: Breeann Flesch, PhD

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Instructor Office Hours:

Tuesdays 9:00 - 10:00 & 12:00 - 1:00

Thursdays 9:00 - 10:00 & 12:00 - 1:00 & 4:30 - 5:30

You do not need to make an appointment to come to office hours. At times other than my listed office hours, you are welcome and encouraged to call or email me with questions about the course. If you have scheduling conflicts with my office hours and would like further help, please let me know.

Materials:

Online Text and Homework: You will need to purchase online homework and an ebook. Instructions are below.

- Go to www.webassign.net
- Click on “ENTER CLASS KEY,” which is in the upper right-hand corner
- Enter this class key in the three fields: “wou 2600 1559”
- Create a Webassign account or use one you have already created
- Click on “purchase access code”
- Pay for online homework and access to the ebook for *Essentials of Discrete Mathematics* by David J. Hunter (\$70.95)

Calculator: A scientific calculator is highly recommended. Please see me before purchasing a new calculator.

Course Description:

MTH 398 Discrete Mathematics for Elementary and Middle School Teachers (3)

Explores topics in discrete mathematics including set theory, enumeration and graph theory. Techniques in enumeration include the multiplication rule, combinations and permutations. Topics in graph theory include coloring, the traveling salesman problem and spanning trees. Two hours of lecture plus two hours lab. **Prerequisites: MTH 213 with a grade of C- or better in MTH 211, 212 and 213**

Learning Outcomes: This course is designed for students planning to be elementary or middle school teachers. Our goals for this term are to:

- improve problem solving skills by building upon and extending knowledge acquired in the foundational sequence;

*My preferred method of communication is email.

- introduce various topics in discrete mathematics, such as the pigeon hole principle, counting, graph theory, and set theory;
- understand the importance of and methods of incorporating discrete mathematics into the K-12 classroom.

In-Class Structure: Class will primarily be interactive problem solving sessions. Your attendance and participation in class is crucial and required in this course. All students will be expected to enthusiastically engage in group work and in whole class sharing discussions (including sharing work at the board or overhead).

Hybrid Structure: Since this class is hybrid, there will be much time spent on this class outside of the classroom environment. This will include online homework, online quizzes and online forum posts. It is expected you check your email daily M - F, as this will be an important means of communication in this course.

Moodle Page: This course will use a Moodle page, which you can access through portal. There you will find the schedule for the class, including due dates all assignments, along with other important information.

Online Homework: For each of the four instructional modules, there will be an online homework, which will be completed in Webassign. For each of the questions you get many tries to get question correct. It is expected you continue to work on each question until you get it correct. To get each problem correct you will may need to: read the ebook, use the webassign resources, post questions in the moodle forum, ask peers for help or come to office hours.

Quizzes: For each of the four instructional modules, there will be an online quiz. The problems on the quiz will be very similar to the questions on online homework, but for the quiz you only get one chance to get it correct.

In-class Activities and Follow-up Questions: Many class periods will have activities as well as follow-up questions. Some of these questions will be answered in class and the rest will be answered on your own outside of class. Each time we have an in-class activity and follow-up questions, it is due on the Thursday after it was assigned.

Article Discussion: There will be assigned articles throughout the term, which you will need to read and then answer questions. The answers to theses questions should be thoughtful and include citations. A more detailed rubric is on the Moodle page.

Reflection Discussion:

There will be assigned discussion reflections throughout the term, which will be posted on Moodle.

Exams: There will be one midterm exam and one final exam. Makeup exams are generally not given. If you must miss an exam due to a documented emergency or a documented university sanctioned absence from class please inform me ASAP. Cell phones may not be used as calculators during an exam and must be turned off.

Grade: The standard grading scale will be used for this class. Your grade will be assessed on the following criteria. Grades are posted on Moodle and it is your responsibility to check it regularly.

Exams - midterm and final	2x15% = 30%
Quizzes	15%
Online Homework	10%
In-class Activities and Follow-up Questions	20%
Reflection	10%
Article Discussion	15%

Appropriate Classroom Behavior: You are ultimately responsible for your own attendance and performance. It is expected that electronic devices such as cell phones will be turned off during class. Proscribed Conduct for all students is described in the University Catalog.

Incomplete Policy: An Incomplete can only be granted for a student who is passing a class and has a documented emergency that prevents them from completing a small component of the course.

Accommodations: Any student who feels s/he may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs. Please contact the Office of Disability Services at 503-838-8250 to coordinate accommodations. Students needing medical or mental health care can access the Student Health and Counseling Center by calling 503-838-8313, emailing at health@wou.edu, or by walking in to schedule an appointment.

Veterans and Active Military Personnel: Veterans and Active Military Personnel with special circumstances are welcome and encouraged to communicate these, in advance if possible, to the instructor.