

## Math 232, Discrete Mathematics II, Winter 2016

<b>Class Time:</b>	MTuWF 10-10:50a.m. in 301 Deady
<b>Instructor:</b>	Dr. Marcin Bownik
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<b>Office Phone:</b>	346-5622
<b>Office Hours:</b>	Monday 11-12, Tuesday 9-10, and Friday 9-10, or by appointment
<b>Textbook:</b>	<i>Discrete and Combinatorial Mathematics</i> , by Ralph P. Grimaldi, 5th ed., Pearson

1. **Outline.** This course, which is the second of three in the sequence, introduces students to the subject of discrete mathematics. Topics include: recurrence relations, graph theory, trees, generating functions, sorting, shortest path and minimal spanning tree algorithms. The course, which is the second in the sequence, covers most of the chapters 10–13.
2. **Course Learning Goals.** A successful student in this course should be able to:
  - solve first and second order linear recurrence equations,
  - state and apply basic concepts in graph theory; solve problems involving subgraphs, complements, graph isomorphism, Euler trails and circuits, planar graphs, Hamilton path and cycles,
  - state properties and solve problems involving spanning trees, pendant vertices, labeled trees, ordered rooted trees, lexicographic order, and Polish notation,
  - understand and perform algorithms in graph theory such as Dijkstra's shortest path algorithm, Prim's minimal spanning tree algorithm, and merge sort sorting algorithm.
3. **Exams.** There will be a midterm in-class exams on Wed. 2/10, and a final exam on Thur. 3/17, 10:15a.m.–12:15p.m.
4. **Quizzes.** In addition to weekly MWF lectures, on Tuesday there is a discussion class and a quiz (except the first and midterm exam week). Quizzes are meant to test understanding of the material from the last few classes. There will be no make-up quizzes, since the lowest quiz score will be dropped. In addition to weekly lectures, there is a discussion class on Tuesday. Quizzes are given weekly in the last 15 minutes of Tuesday class.
5. **Homework.** Homework problems will be assigned each week and be due in on the following Wednesday. No late homework will be accepted.

6. **Grading.** The grading distribution will be as follows:

Homework:	20%
Quizzes:	20%
Midterm Exam:	20%
Final Exam:	40%