

MATH:4060:0001 Discrete Mathematical Models**Spring 2019 2:30P - 3:20P MWF 218 MLH***Instructor:* [Dr. Isabel K. Darcy](#), [Department of Mathematics, AMCS](#), and [Informatics](#), [University of Iowa](#)*Office:* 25J MLH *Phone:* 319-335-0770 *Email:* isabel-darcy AT uiowa.edu*Office Hours:* See course website.*DEO Contact Information* Maggy Tomova, 14 MLH, maggy-tomova@uiowa.edu*Course WWW site:* <http://www.math.uiowa.edu/~idarcy/COURSES/4060/SPRING19/4060.html>

Check this for assignments, possible changes in the course schedule, and electronic copies of course handouts.

Description of Course: Basic combinatorics and graph theory, their applications (which may include scheduling, matching, optimization); Eulerian and Hamiltonian paths, spanning trees.**Prerequisites:** MATH:2700 or MATH:2550**Objectives and Goals of the Course:** We will cover most of Graph Theory and Complex Networks by Maarten van Steen plus some supplementary material. By the end of this course, you should

- 1.) have a good understanding of the sections covered in class and via assigned readings.
- 2.) Develop modeling skills (applied to graph theory applications).
- 3.) Improve/develop writing skills including proof writing skills.

You should read all sections/handouts/web material corresponding to covered material and/or assigned problems. There may be test questions related to this reading even if not covered in class.

Text: Graph Theory and Complex Networks by Maarten van Steen. (Available at <https://www.distributed-systems.net/index.php/books/gtcn/>)*Grading system (all dates tentative):*

HW, Quizzes, Projects: 30%	90% <= A- < 91% <= A
Mini exam 1: 12% (Feb 13)	80% <= B- < 81% <= B < 89% <= B+ < 90%
Midterm: 22% (March 8)	70% <= C- < 71% <= C < 79% <= C+ < 80%
Mini exam 2: 12% (April 12)	60% <= D- < 61% <= D < 69% <= D+ < 70%
Final: 24%	F < 60%

GRADING & EXAMS: All work must be shown in order to receive credit. This holds for all exams including the final, all quizzes, and homework. Important note: If no work is shown, you may receive zero credit even if your answer is correct.

You are required to bring identification to all exams. Calculators may NOT be allowed. You are required to pick up your exams and keep them until the end of the semester. The final exam will be cumulative.

A Word about the Date and Time of the Final Exam:

The final examination date and time will be announced by the Registrar generally by the fifth week of classes. I will announce the final examination date and time for this course at the course ICON site once it is known. Do not plan your end of the semester travel plans until the final exam schedule is made public. It is your responsibility to know the date, time, and place of the final exam.

THERE IS NO CURVE IN THIS CLASS, but improvement may be taken into consideration.

If there is a mistake in grading, you must report this mistake within one week from when the exam, homework, etc. has been handed back to the class (whether or not you picked up your exam, homework, etc).

Attendance and absences: Your attendance at each scheduled class meeting and problem section is expected. You are responsible for material covered in class and announcements made during class; these may include changes in the syllabus. Absences from exams will require a compelling reason, and must be arranged with your instructor in advance. University regulations require that students be allowed to make up examinations which have been missed due to illness, mandatory religious obligations, or other unavoidable circumstances or University activities**Student Collaboration:** You may collaborate with other students on the homework; however, each individual student is responsible for turning in your own homework in your own words. Copying is not collaboration and will be prosecuted under scholastic dishonesty. **Any significant collaboration should be acknowledged. You should also cite any sources that you use including online resources****The University policies on scholastic dishonesty will be strictly enforced.****Resources for Students**

Students will find the Writing Center and the Speaking Center very useful for this course; the Tutor Iowa site is also very valuable for students seeking extra help:

Writing Center: <https://writingcenter.uiowa.edu/>

Speaking Center: <https://speakingcenter.uiowa.edu/>

Tutor Iowa: <https://tutor.uiowa.edu/>

The College of Liberal Arts and Sciences: Important Policies and Procedures

Administrative Home

The College of Liberal Arts and Sciences (CLAS) is the administrative home of this course and governs its add/drop deadlines, the second-grade-only option, and other policies. These policies vary by college (<https://clas.uiowa.edu/students/handbook>).

Electronic Communication

Students are responsible for official correspondences sent to their UI email address (uiowa.edu) and must use this address for all communication within UI ([Operations Manual, III.15.2](#)).

Accommodations for Disabilities

UI is committed to an educational experience that is accessible to all students. A student may request academic accommodations for a disability (such as mental health, attention, learning, vision, and physical or health-related condition) by registering with Student Disability Services (SDS). The student should then discuss accommodations with the course instructor (<https://sds.studentlife.uiowa.edu/>).

Nondiscrimination in the Classroom

UI is committed to making the classroom a respectful and inclusive space for all people irrespective of their gender, sexual, racial, religious or other identities. Toward this goal, students are invited to optionally share their preferred names and pronouns with their instructors and classmates. The University of Iowa prohibits discrimination and harassment against individuals on the basis of race, class, gender, sexual orientation, national origin, and other identity categories set forth in the University's Human Rights policy. For more information, contact the Office of Equal Opportunity and Diversity at diversity@uiowa.edu or diversity.uiowa.edu.

Academic Integrity

All undergraduates enrolled in courses offered by CLAS have, in essence, agreed to the College's [Code of Academic Honesty](#). Misconduct is reported to the College, resulting in suspension or other sanctions, with sanctions communicated with the student through the UI email address.

CLAS Final Examination Policies

The final exam schedule for each semester is announced around the fifth week of classes; students are responsible for knowing the date, time, and place of a final exam. Students should not make travel plans until knowing this final exam information. No exams of any kind are allowed the week before finals. (<https://clas.uiowa.edu/faculty/teaching-policies-resources-examination-policies>.)

Making a Complaint

Students with a complaint should first visit with the instructor or course supervisor and then with the departmental executive officer (DEO), also known as the Chair. Students may then bring the concern to CLAS (<https://clas.uiowa.edu/students/handbook/student-rights-responsibilities>).

Understanding Sexual Harassment

Sexual harassment subverts the mission of the University and threatens the well-being of students, faculty, and staff. All members of the UI community must uphold the UI mission and contribute to a safe environment that enhances learning. Incidents of sexual harassment must be reported immediately. For assistance, definitions, and the full University policy, see <https://osmrc.uiowa.edu/>.