Discrete Structures
Class Periods: MWF 4:05-4:55
Academic Term: Spring 2021

Instructor:
Cheryl Resch
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Office Hours: TBD

Course Description
Covers the mathematics of discrete events; i.e., events that involve distinct elements, finite structures of distinct elements or finite sampled versions of continuous phenomena (such as movement). (M) 3 credit hours

Course Pre-Requisites / Co-Requisites
Prerequisite: MAC 2233 or MAC 2311 or MAC 3472
Corequisite: COP 3504 or COP 3503
Attributes: General Education – Mathematics

Course Objectives
The purpose of this course is to introduce students to the techniques required in order to think mathematically about how a computer operates. Included within the topics of discussion will be: propositional logic, algorithms, time complexity, mathematical reasoning, relations, and trees. Weekly discussion sessions, homework exercises, and problem solving will enable you to practice and learn the techniques discussed. Due to the nature and complexity of this field of study, the course will be time consuming and requires serious dedication on the part of each student. Be careful not to fall behind, success in this course requires consistent effort and practice.

Required Textbooks and Software
• McGraw-Hill Connect
• Discrete Mathematics and Its Applications
• Kenneth Rosen
• McGraw-Hill Higher Education
• 2018
• 8th Edition
The textbook comes with Connect. Purchasing through the steps provided in MGH_Connect.pdf will link directly to the Canvas plugin.

Course Schedule

Here is a general schedule for the semester. Please refer to the Canvas Announcements and Modules for final details about each topic, exact dates, and the specific schedule we implement this semester.

Dates	Week	Topics	Readings
Jan 11, 13, 15	1	Logic	1.1-1.3
Jan 20, 22	2	Predicates, Inference	1.4-1.6
Jan 25, 27, 29	3	Proofs, Review	1.7-1.8
Feb 1, 3, 5	4	Exam 1, Sets	2.1-2.2
Feb 8, 10, 12	5	Functions, Sequences	2.3-2.5
Feb 15, 17, 19	6	Algorithms, Review	3.1-3.3
Feb 22, 24, 26	7	Exam 2, Number Theory	4.1-4.3
Mar 1, 3, 5	8	Induction	5.1-5.2
Mar 8, 10, 12	9	Recursion	5.3-5.4
Mar 15, 17, 19	10	Counting	6.1-6.2
Mar 22, 26	11	Counting, Review	6.3-6.4
Mar 29, 31 Apr 2	12	Exam 3, Probability	7.1
Apr 5, 7, 9	13	Probability	7.2-7.3
Apr 12, 14, 16	14	Graphs	10.1-10.5
Apr 19, 21	15	Review, Exam 4 April 21	

Exam Dates: Feb 1, Feb 22, Mar 29, April 21

F2F Course Policy in Response to COVID-19

We will have face-to-face instructional sessions to accomplish the student learning objectives of this course. In response to COVID-19, the following policies and requirements are in place to maintain your learning environment and to enhance the safety of our in-classroom interactions.

- You are required to wear approved face coverings at all times during class and within buildings. Following and enforcing these policies and requirements are all of our responsibility. Failure to do so will lead to a report to the Office of Student Conduct and Conflict Resolution.

- This course has been assigned a physical classroom with enough capacity to maintain physical distancing (6 feet between individuals) requirements. Please utilize designated seats and maintain appropriate spacing between students. Please do not move desks or stations.

- Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class.

- Follow your instructor's guidance on how to enter and exit the classroom. Practice physical distancing to the extent possible when entering and exiting the classroom.

- If you are experiencing COVID-19 symptoms (Click here for guidance from the CDC on symptoms of coronavirus), please use the UF Health screening system and follow the instructions on whether you are able to attend class. Click here for UF Health guidance on what to do if you have been exposed to or are experiencing Covid-19 symptoms.
- Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work. Find more information in the university attendance policies.

Attendance Policy, Class Expectations, and Make-Up Policy

This semester, our course will be delivered through Zoom and the UF Online platform.

Live lectures will be presented synchronously via Zoom:

• M, W, F 4:05 to 4:55 PM

Here are points of significance for our online lecture process this semester.

• You are responsible for all material covered during lecture.
• Lecture attendance will not be taken (attendance is not mandatory).
• Lectures will be recorded

This semester, we will implement a hybrid of the flipped classroom and include collaborative learning to enhance your comprehension of the course material. Our lectures will focus on solving problems. First, I will review content and present problem solutions. Then we will solve problems together, as a group. In order to facilitate much of our lecture time being focused on group problem solving, videos covering our core lecture content will be posted through Canvas. It is expected that you watch these videos in preparation for our lectures.

Homeworks, Reading Exercises, and Reflection may not be turned in late.

Exams may be made up with a university approved excuse given in advance.

Grades on any assignment may be discussed with me via email or in office hours up to seven days after the grade was released.

Evaluation of Grades

Assignment	Percentage of Final Grade
Exams (4)	70%
Homeworks (12, one drop)	15%
Reading Exercises (12, one drop)	10%
Reflection	5%
	100%

Grading Policy

Percent	Grade	Grade Points
93 - 100	A	4.00
90.0 – 92.9	A-	3.67
87 - 89.9	B+	3.33
83 - 86.9	B	3.00
80.0 – 82.9	B-	2.67
77 - 79.9	C+	2.33
73 - 76.9	C	2.00
70 – 72.9	C-	1.67
67 - 69.9	D+	1.33
63 - 66.9	D	1.00
60.0 – 62.9	D-	0.67
0 - 59.9	E	0.00

More information on UF grading policy may be found at:
https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Students Requiring Accommodations
Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting https://disability.ufl.edu/students/get-started/. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

University Honesty Policy

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Commitment to a Safe and Inclusive Learning Environment

The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination. It is expected that every person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind, please contact your instructor or any of the following:
• Your academic advisor or Graduate Program Coordinator
• Robin Bielling, Director of Human Resources, 352-392-0903, rbielling@eng.ufl.edu
• Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, taylor@eng.ufl.edu
• Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, nishida@eng.ufl.edu

Software Use

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: https://registrar.ufl.edu/ferpa.html

Campus Resources:

U Matter, We Care:
Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Counseling and Wellness Center: http://www.counseling.ufl.edu/cwc, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Discrimination, Harassment, Assault, or Violence
If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the **Office of Title IX Compliance**, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, title-ix@ufl.edu

Sexual Assault Recovery Services (SARS)
Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or http://www.police.ufl.edu/.

Academic Resources

E-learning technical suppor*t*, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. https://lss.at.ufl.edu/help.shtml.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. https://www.crc.ufl.edu/.

Library Support, http://cms.uflib.ufl.edu/ask. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. https://teachingcenter.ufl.edu/.

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. https://writing.ufl.edu/writing-studio/.

Student Complaints Campus*:* https://care.dso.ufl.edu.

On-Line Students Complaints*:* http://www.distance.ufl.edu/student-complaint-process.