MATH 1187 Applied Discrete Structures

Sections 01

Spring 2023

Class Meeting Times & Venue:	MWF 11:00 - 11:50 & PS 303
Instructor & Office:	Dr. Wenxiang Zhu & PS 314C
E–mail & Phone:	zhuwenx@isu.edu & (208) 282-2998
Office Hours:	MW 14:00 - 14:50, T 11:00 - 11:50, or by appointment
Course Web Page:	See Moodle ISU
Textbook:	*Applied Discrete Structures*, by Al Doerr and Ken Levasseur
Textbook Free Download Link:	https://discretemath.org/ads-latex/ads.pdf
Prerequisite:	CS 1181

Course Description. Discrete structures in CS and EE. Boolean algebra and logic; sets, functions, and relations; iteration, recursion, and induction; algorithms; programming in pseudocode; basic counting principles; graphs and trees; and other selected topics from discrete mathematics. Equivalent to CS 1187.

Course Topics. The following topics (chapter 1 to 10 and chapter 13) will be covered: Set theory, combinatorics, logic, method of proofs, introduction to matrix algebra, relations and functions, recursion and recurrence relations, graph theory and trees, and Boolean algebra.

Exams and Quizzes. There will be three quizzes, **three** midterm exams, and a comprehensive final exam. The exams will be given on the following dates:

Exam 1	Monday, February 13, 2023
Exam 2	Monday, March 13, 2023
Exam 3	Monday, April 17, 2023
Final Exam	10:00 am - 12:00 pm, Wednesday, May 3, 2023

Makeup Exams and Quizzes. Student who has a valid documented excuse, such as a unavoidable emergency or illness during regular exam/quiz times is permitted to schedule a makeup exam/quiz with no penalty. In order to take a makeup exam/quiz, student needs to contact the instructor as soon as possible and **within 24 hours** of the regular exam/quiz date, otherwise any missed exam/quiz will be assigned a zero mark.

Homework. There will be weekly homework assignments. No late homework will be accepted.

Calculator Policy. A basic scientific calculator such as the Texas Instruments TI-30XIIS or the Casio FX 260 Solar II will be allowed for all exams. Devices that can text, phone or access the Internet are prohibited on any exam.

Grading. Student's course grades will be calculated according to on the following weights:

Homework	13%
Quizzes	12%
Exam 1	15%
Exam 2	15%
Exam 3	15%
Final Examination	30%
Total	100%

No student may pass the course without taking the final exam. A student's final course grade will be assigned according to the following grading scale:

A	90% above
A-	$87\% - -90\%$
B+	$85\% - -87\%$
B	$80\% - -85\%$
B-	$77\% - -80\%$
C+	$75\% - -77\%$
C	$65\% - -75\%$
C-	$60\% - -65\%$
D	$50\% - -60\%$
F	50% below

CoSE X policy. Students who earn a failing grade in course work and have unexcused absences that total more than 30% of class meetings will receive an X grade.

MATH Center. For more information, please click on the following link:
https://www.isu.edu/tutoring.

Accommodations. "Idaho State University is committed to providing equal opportunity in education for all students. If you have a disability or if you believe you have a disability (physical, learning, hearing, vision, psychiatric) that might require reasonable accommodation in this course, please contact the Disability Services Center, Rendezvous Building, Room 125, 282-3599 or on the web at https://www.isu.edu/disabilityservices/. It is the responsibility of students to contact instructors during the first week of each semester to discuss appropriate accommodations."

Student Code of Conduct. All Idaho State University students are held to the Student Code of Conduct including academic dishonesty, cheating and plagiarism. Definitions can be found in the Student Code of Conduct Handbook:
https://www.isu.edu/deanofstudents/student-conduct/

Academic Complaints/Grievances. Students with academic complaints/grievances should first meet with the instructor responsible for the policy, procedure or decision that resulted in the student's initial complaint/grievance. If the student is still dissatisfied after that meeting, the student should next meet with the instructor's department head (Dr. Rault, PS 318B, patrick-rault@isu.edu) and then with the dean of the college (Dr. Snyder, PS 120A, sdsnyder@isu.edu). For more information, see: https://www.isu.edu/deanofstudents/advocacy-services/.

Inclement Weather. In the event of inclement weather, I may need to change our class mode from in-person to Zoom. If this happens, I will send an email and Moodle notification by 8 am the day of class, and will send a Zoom link via email and post the Zoom link on our Moodle page roughly an hour before our scheduled meeting time. I will try to record the Zoom session for all who are unable to attend, and post a link to the recording on Moodle within 24 hours of the class session. (Note that if ISU cancels all classes, then we will simply cancel our class.)

Title IX. Idaho State University (ISU) is committed to fostering an environment in which students, faculty and staff from all backgrounds can live, work and learn free from the insidious and debilitating effects of prejudice, discrimination and marginialization. As such, ISU is committed to providing an environment free of all forms of discrimination, including sexual and gender-based discrimination, harassment, and violence such as sexual assault, dating violence, domestic violence, and stalking. If you (or someone you know) has experienced or is experiencing these types of behaviors, we have resources available to help.

ISU faculty and staff are concerned about the well-being and development of our students. If you inform me of any experience regarding harassment or discrimination, I am obligated to share information with the ISU Title IX Coordinator to ensure that the student's safety and welfare is being addressed, consistent with the requirements of law.

If you would like to talk to the Title IX Coordinator, Ian Parker directly, you may contact him at (208) 282-1439 or ianparker@isu.edu, located in Rendezvous 235. If you would like more information regarding Title IX or to make an online report please visit the Title IX homepage at https://www.isu.edu/title-ix/how-to-report/.

This syllabus is subject to change during the semester by the instructor. Any change will be informed to all of the students in the class.

References

[1] Richard Johnsonbaugh (2005) *Discrete Mathematics*, Pearson, Eighth Edition.