

## Sum I 2022 TAMU-Commerce Math 2305 – Discrete Math

This is the syllabus for Math 2305-Discrete Mathematics, Section 01W for Summer I 2022. Please read it carefully. You will be responsible for all information given in the syllabus, and for any modification to it that may be announced in the semester.

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Office hours: MW: 10:30am-12:00pm, TR: 4:00-5:00 pm,  
and by appointment.

All office hours will be held virtually by Zoom meeting (A video meeting in which we can have instantaneous communication with my screen sharing so that you can see my writing in answering your questions just like you see me face-to-face).

**Class schedule and room:** This is an fully online class. Students may (1) attend the live video lecture (Mon-Thur, 8:00-10:00am), or (2) watch the recorded video lectures with study guidance and expectations uploaded on D2L course shell. Students have flexible time to complete and progress the study of the course material on a weekly basis.

**Technology Requirements:** All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements  
LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

[https://documentation.brightspace.com/EN/brightspace/requirements/all/browser\\_support.htm](https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm)

YouSeeU Virtual Classroom Requirements:

<https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements>

**Access and Navigation** You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or [helpdesk@tamuc.edu](mailto:helpdesk@tamuc.edu).

**Note:** Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home

or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

**Technical Support:** If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

**Text:** DISCRETE MATHEMATICS, 5th Edition, by Kenneth A. Ross and Charles R. B. Wright. Tentatively, chapters 1, 2, 3, 4 of the text will be covered. If time permits, parts of Chapter 6 will also be covered.

**Course Description:** Mathematical models, mathematical reasoning, sets, binary relations, counting and algorithm analysis, infinite sets. Prerequisites: CS 151 and Math 2414.

**Learning Outcomes:** Upon successful completion of this course, the students will be able to:

1. Construct mathematical arguments using logical connectives and quantifiers.
2. Verify the correctness of an argument using propositional and predicate logic and truth tables.
3. Solve problems involving recurrence relations and generating functions.
4. Perform operations on discrete structures such as sets, functions, relations, and sequences.
5. Construct proofs using direct proof, proof by contraposition, proof by contradiction, proof by cases, and mathematical induction.
6. Apply algorithms and use definitions to solve problems and to prove statements in elementary number theory.

**Tests:** Students will take online proctored exams via zoom meeting with video camera on during the exams.

There will be two midterm tests and a final exam for the course. The tentative schedules for the exams are:

Test 1: Jun. 15, Wednesday 4:00pm-5:15pm.

Test 2: Jun. 27, Monday 4:00pm-5:15pm.

**Final exam:** The comprehensive final exam is scheduled on  
**July 7, Thursday, 8:00am-10:00am.**

**Homework & Quizzes:** Homework for the course has been assigned (see the last page of this syllabus). You are strongly recommended to work out homework

assignments on a regular basis since **No one can learn mathematics without doing it!** The assigned homework problems will be collected to grade **every Sunday (before 11:30)** through D2L (detailed instructions on how to scan your homework in PDF and upload to D2L has been given in an announcement on course shell. Some homework problems or their similar forms will be used as test questions.

**Course grades:** The course grade consists of

Homework & Quizzes:	20%
Two Tests :	50%
Final exam:	30%.

The letter grades will be assigned using the following scale:

A: 90-100%   B: 80-89%   C: 70-79%   D: 60-69%   F: 0-59%

**Withdrawal Policy:** Concerning the deadlines and consequences of withdrawals please check on <https://calendar.tamuc.edu/academic>

**Academic Integrity:** I have a **NO TOLERANCE** policy for cheating and if you are caught cheating you will fail this course. Cheating in this course includes the following:

- Giving or receiving answers from others or sources from internet during an exam or test.
- Viewing the exam or test answers of others.
- Having notes/practice work available during exams or tests.
- Possession or access to test items before the test is given.
- Deception in getting an excused absence to obtain the undeserved opportunity to make-up work.
- Use of cell phones or text messaging technology during exams or quizzes. You may not use the calculator on your cell phones.
- Improper citations in written works, or using another person's ideas and words as your own without giving proper credit.
- **Any** method, no matter how well rationalized or accepted, which improves a person's grade by any means other than study and skillful performances on exams and/or other assignments.

Students found guilty of an act of academic dishonesty in this course will be subject to receiving an "F" in this course.

**Classroom Behavior:** "All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment" (See Student's Guidebook). A&M-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran

status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

**The information for students with disability:** The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact: Office of Student Disability Resources and Services, Texas A&M University-Commerce, Gee Library, Room 132, Phone (903) 886-5150 or (903) 886-5835, Fax (903) 468-8148, email: [StudentDisabilityServices@tamuc.edu](mailto:StudentDisabilityServices@tamuc.edu)

**Counselling & Help:** The Counseling Center at A&M-Commerce, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit [www.tamuc.edu/counsel](http://www.tamuc.edu/counsel)

**Tutoring & Help:** A better way to learn math is to keep progress and leave no gaps in one's study. So please get help as soon as you need it and do not wait until it is too late. You are welcome to see me (virtually) or go to Math Skills Center located in **Bin 328** where you can find free tutors for help. The tutoring hours of Math Skills Center for the current semester are: **MTWR**, 10am-2pm.

**Campus Concealed Carry** Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to (<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>) and/or consult your event organizer). Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

	Weekly Progress	Homework Due
W1	1.1-1.7	
W2	2.1-2.5, Test 1	
W3	3.1-3.5	
W4	4.2-4.5, Test 2	
W5	6.1-6.3, Final Exam	

## Sum-I 2022 Math 2305 Homework Assignments

- Section 1.1: 3, 4, 7(b), (d), 19.  
 Section 1.2: 2, 5 [first 3 items in (a) and (b)], 9, 14.  
 Section 1.3: 1 (a), (c), (d), (f), 3, 10.  
 Section 1.4: 1, 2, 8.  
 Section 1.5: 2, 4, 11, 13(a), (e), (f).  
 Section 1.6: 3, 5, 6, 7.  
 Section 1.7: 3, 4, 11, 15.  
 Section 2.1: 1, 2, 6, 7, 9, 12 (a), (b).  
 Section 2.2: 2, 3, 8, 9, 10.  
 Section 2.3: 10, 11, 12, 13(a), (b).  
 Section 2.4: 2, 3 (a), (b), 13.  
 Section 2.5: 1 (a), (b), 5, 10 (a), (b).  
 Section 3.1: 1 (a), (c), (d), 4 (a), (b), 7 (a).  
 Section 3.2: 2, 3, 6, 10 (b), (d), (f).  
 Section 3.3: 3(a), (c), (e), (f), 5(b), (c), 16(a), (c), 18(a), (d).  
 Section 3.4: 7, 8(a), 10, 13.  
 Section 3.5: 1 (c), (e), 2 (d), (f), 6, 12.  
 Section 4.2: 4(a), 5, 9, 24.  
 Section 4.3: 1 (a), (c), 2 (b), (d), 3 (b), (c), 13  
 Section 4.4: 5, 8, 11, 16, 19.  
 Section 4.5: 2, 4, 11 (a), (c)  
 Section 6.1: 1, 2, 9, 10.  
 Section 6.2: 1, 2, 7.  
 Section 6.3: 1, 2, 3.  
 To be continued