Discrete Math: Mathematical Structures for Computer Science with Shannon Harbert

MTH 231 Winter 2021 CRN : 30280

Course Information

Shannon's Office Zoom Meeting ID: 266-855-221 Password: mathrocks

Zoom Meeting Times: Tuesday and Thursday 1-1:50pm

Our Class Discord: https://discord.gg/e4bHqZ59HR

You will be using edfinity….

Office hours by appointment. In our same classroom space.

Here is what the **Learning Center** has to offer:

- Tutoring - Students are eligible for up to 3 free tutoring appointments a week! Meet one-on-one over Zoom with a trained academic tutor.
- Academic Coaching - Learn time management, test prep, note-taking, study strategies, and assignment planning to realize your academic goals. Available by appointment. Look for study skills workshops for success!
- Writing Support - The Writing Center offers one-on-one support for any student, for any writing project, in any class, and at any stage in the writing process. Available by drop-in Zoom room, appointment, and through the Online Writing Lab.
- Math Support - Students can learn math in the safety of their own homes with the help of our Virtual Math Desk. Drop-in math help is available seven days a week!
- Science Support - Get help with chemistry, astronomy, geology, and physics at the Remote Science Help Desk. Various science tutors are available by drop-in Zoom room.

Do your students want to keep support resources nearby while working through a difficult concept? Do they want a place to connect with other students? Then our

LEARNING CENTER DISCORD SERVER

is for you!

HIGHLY RECOMMEND:
Math Help Desk Zoom
"drop in math help"
Open from 9am - 7pm Monday through Friday, 11am - 4pm Saturday, and, 11am - 3pm on Sunday.

Course Materials:

- Regular access to a computer and the internet.
- Edfinity Access – **LOG IN THROUGH MOODLE!!!**
  (can be purchased from the bookstore or online with a credit card).
- *A WEBCAM!!*

Course Description:
MATH 231 is the first course in discrete mathematics for mathematics and computer science majors. Topics include elementary logic, mathematical induction, functions and sequences, finite and infinite sets, counting techniques, basic matrix algebra, relations, graphs and trees.

Prerequisite: MTH 112 or equivalent with a grade of C or better with Math 251, Differential Calculus recommended.

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

- Apply the definitions of elementary set theory to finite and infinite sets.
- Construct both negations and contrapositives of compound and qualified statements using propositional calculus.
- Construct both direct proofs (from definitions) and indirect proofs of simple statements.
- Apply the First and Second Principles of Mathematical Induction to construct proofs of appropriate mathematical statements.
- Construct and explain solutions to elementary combinatorics problems.
- Relate concepts of elementary graph theory to problems in computer science.

Course Grades: Your grade in this class is based on the following:

Online Homework (Edfinity)	20 %
In Class Work (ICA)	10 %
Quizzes (Edfinity)	20%
2- Midterms	30 %
Final Exam	20 %

Final Grade: 90%-100%=A, 80%-89%=B, 70%-79%=C, 60%-69%=D, <60%=F
All grades will be posted in the gradebook in the Moodle Website for student viewing.
A grade of Incomplete may be assigned at the discretion of the instructor under special circumstances. The student must have completed the majority of the course, been in regular attendance and passing the course prior to the "special circumstance."

Online Homework (Edfinity):
Online homework will be completed and submitted electronically using Edfinity. You must register for this through MOODLE!! To get 100% on your homework, you must turn it in on time. You may turn in work (up to two days late) for 80% of the points.

We will be using Edfinity for this course, integrated with Moodle. To enroll in our Edfinity section, please follow the steps below:
1. Important: Upgrade to the latest version of Google Chrome or Firefox on a Windows/Mac computer. Other browsers like Safari and devices like Chromebooks can cause issues when you access Edfinity via Moodle.

2. If you already have created an account on Edfinity, make sure you are signed out of edfinity.com.

3. Log into Moodle.

4. Click on the links in Moodle to launch into Edfinity.

5. Start working on your assignments! :)

In Class Work (ICAs):
These are short assignments or activities, given and completed the same week the material is covered. Typically you will work in small groups, putting what you just learned into immediate practice. I highly recommend you meet with class mates in zoom or discord. The ICAs are due the day that they appear in our calendar (unless otherwise noted) by midnight. **No late ICAs accepted.**
Please be prepared to upload your completed work as a pdf file. Please be sure items are numbered and pages are in order. One single combined document for each assignment. Find an easy to use PDF converter if needed (Cam Scanner works nicely), you can also use Moodle, see my Moodle tutorials in Moodle on our page.

Quizzes:
There will be approximately weekly quizzes. They will be in Edfinity. You may work with your classmates! I will give you a window to access the quiz and then it will be timed. **No late Quizzes are accepted.**

Tests: (more info. on this coming as I figure out proctoring…)
- Edfinity Tests (Midterm(s) and Final) must be completed in one sitting. There will be a window for you to log in and complete the test. Your supporting, written work for each problem will be submitted to me as a pdf as soon as you complete the test (in Moodle).
- The *tentative* test dates will be listed on the course calendar. If you have been missing class prior to a test, it is your responsibility to confirm the date of the test as it may change.
- I believe we have been given proctoring access through Moodle. I will put more information here when I have it!!

Attendance:
Your attendance is mandatory twice a week in our zoom room. See course description for how I plan on using these times (as well as our class calendar). I will be reaching out if I do not "see" you in class. Also, please plan on having your video ON! If there is some reason for you to not have your video on, I please ask that you send me something via email. It makes it very difficult to connect and build a community when all I see are silent black squares. It's ok if you are eating! It's ok if you are holding a cat! In your pajamas? That's ok! Drinking tea with a blanket around your shoulders? Hey, I do that too! Can't wait to see your lovely faces.

Expectations:
- I expect that my students will be involved in and working on this class several times a week. This includes asking questions and participating in group discussions, watching videos, etc.
- Spend **at least 8-12 hours per week working on this class.**
- You should log into Zoom meetings prepared (this means you should have your notebook, table/laptop, work, etc. ready).
- I expect you will be respectful of everyone in the class, in word as well as behavior. and Discord board posts should be respectful and supportive of the success of everyone in the class. We will all need extra patience and kindness this term.

How to be successful in this class:

- Even though this term classes are delivered remotely, make a school schedule and stick to it!

· Be prepared for class by reading the assigned materials promptly when asked. Class lectures will be richer for you when you have background information about the subject.

· Review the syllabus and learn policies and procedures for this class. Understand your rights and responsibilities as a student and as a class member.

· When confused, challenged, frustrated or having an "aha" moment, contact the instructor during their 'virtual' office hours or via email.

· Don't hesitate to ask questions, whether during 'virtual' office hours or through email.

· Be engaged! You will get out of this class what you put into it. This will be a challenge with the online format adopted this term. Your instructors are here to help you succeed, stay connected with them

------What can you do to be successful in this class?-----

Attend Class:
There is a strong link between good attendance and success in math courses. Attending an online class means logging in and making some progress on the course most days, it also means that you participate in the class discussions and activities. Your peers rely on your feedback and input. *Attendance, effort and attitude will be noted by the instructor and may be used to help determine "borderline" grades.*

Complete your work on time:
The work in this course has been planned to help you learn. When work is completed late or last minute you miss out on fully engaging in the learning opportunity. Completing the work on time also helps prepare you for the next topic.

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Get HELP!
If you have questions, PLEASE ask me! I (will) have scheduled office hours but you're welcome to drop in at other times too. You can also reach me by email.

Form a study group:
Your classmates are important resources for understanding and completing the homework. Often a fellow student can explain things in a different way than your instructor. You gain a deeper understanding of mathematical concepts when you express them in your own words and explain them to someone else. It is strongly recommended that you study together with other students in small groups.

Use the Learning Center:
The Math Desk WILL be operating Spring Term to support students working remotely via Zoom, with drop-in help available during their standard hours:

- 8am - 9pm Mon - Thu; 8am - 5pm Fri; 11am - 4pm Sat
- The link to connect to the remote Math Desk is https://linnbenton.zoom.us/j/579890953

The URL for the Learning Center Remote Resources site is https://www.linnbenton.edu/current-students/study/learning-center/hours-and-locations/index.php. This will have all relevant Zoom meeting links, hours, and updated information.

Class Policies

Attendance

Your regular attendance and thoughtful participation in class are essential for your success in learning. Your regular online attendance is mandatory. If you do not somehow contact me during the first week (TBD), you will be dropped for nonattendance. If there is a week that you will be unable to log in and participate, please let your instructor know. Students are responsible for any material, updates, or other information available in Course Notes and the class calendar.

Special Circumstances or Accommodations

You should meet with your instructor during the first week of class if:

- You have a documented disability and need accommodations.
- Your instructor needs to know medical information about you.
- You need special arrangements in the event of an emergency.

If you have documented your disability, remember that you must make your request for accommodations through the Center for Accessibility Resources (CFAR) Online Services webpage every term in order to receive accommodations. If you believe you may need accommodations but are not yet registered with CFAR, please visit the CFAR Website for steps on how to apply for services or call (541) 917-4789.

Basic Needs

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Roadrunner Resource Center for support at 541-917- 4877, or schedule an appointment on the web at www.linnbenton.edu/rrc . Our office can help students get connected to resources to help. Furthermore, please notify the instructor if you are comfortable in doing so. This will enable them to provide any resources that they may possess.

LBCC Comprehensive Statement of Nondiscrimination

LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, marital status, disability, veteran status, age, or any other status protected under applicable federal, state, or local laws.

Statement of Inclusion

The LBCC community is enriched by diversity. Each individual has worth and makes contributions to create that diversity at the college. Everyone has the right to think, learn, and work together in an environment of respect, tolerance, and goodwill. (related to Board Policy #1015)

Academic Honesty

I assume that you are ethical and honest. However, if there is an incident of academic dishonesty (cheating), you will receive a score of zero for that test/assignment and the incident will be reported to the college administration for possible further disciplinary action. If there is a second offense, you will receive a grade of F for the course and the incident will be reported to the college administration with a recommendation for disciplinary action.