Math 19, Discrete Mathematics
Section 70833, Fall 2022, 4 units

Class Meetings
This class meets Tuesdays & Thursdays, 12:30 – 2:35 pm synchronously using Zoom, from Tuesday, August 30 through Thursday, December 8. We will also meet in Zoom on Thursday, December 15, from 11:50 am – 1:50 pm for the final exam. The Zoom link will be in the Canvas Calendar on each class day to take you to the class session. If you are asked for a Zoom passcode, use Math19. You are expected to be present at all Zoom sessions. If you require some flexibility in attendance, please contact me to discuss your options.

Participation expectations
Perhaps one of the reasons you are taking an online course is due to your busy schedule. I get that!

But as the instructor, I must abide by the West Valley College policy on participation:

“Students are expected to attend all sessions of each class. Instructors may drop students from the class if they do not attend the first class, or when accumulated unexcused hours of absence exceed ten percent of the total number of hours the class meets during the semester. Moreover, an instructor may drop from the class any student who fails to attend at least one class session during the first three weeks of instruction.”

So, what does this mean for our class?

Participation in the first week of class: One of the ways I know you are present for the first week of class is to have you “check-in” on Canvas. This could be done by submitting a post to the “Set of You” discussion forum or by submitting the agreement form (see Canvas Modules for Week 1) or by submitting the first homework assignment (due Tuesday, September 6). Please reach out to me if you are not able to post/submit, so that we can discuss and make other arrangements for you. Students who do not post/submit anything between August 30 and September 6 may be dropped from the class.

Ongoing participation throughout the semester: To avoid being dropped for non-attendance throughout the course, please attend Zoom sessions every Tuesday and Thursday and participate in any in-class groupwork, post questions and comments in the Zoom chat, log into our Canvas course regularly, actively take part in discussion forums, and submit graded assignments when they are due.

If you don’t contribute to two consecutive assignments and you don’t communicate with me about it, I may drop you from the course to avoid you having a failing grade on your transcript.

When I see that you have been inactive in the class, I will reach out to you; however, if a major life event or illness occurs, or you are not taking part because you don’t understand something, please contact me as soon as possible so that we can work out a strategy together. If there is anything I can do to help you get back on track, I want to do it, so please reach out if you find that you are struggling for whatever reason.

Video: Use of your video camera during our Zoom class meetings is strongly encouraged so that our sense of connection and community may be enhanced. It is OK if you need to turn off your camera
sometimes; I trust that you will be connected and taking part even when we cannot see you. Please be sure to upload your photo or avatar to Zoom so that we can still feel connected when your camera is off.

**Information about your Instructor**
- Instructor: Betty Weiss
- [WVC Faculty webpage for Betty Weiss](#)
- For more course information, please login to [Canvas](#).

**Communication Plan**
- You can contact me by [email](mailto:) or by using the Canvas Inbox and I will respond within 24 hours, often sooner. Be sure to mention your name and what math class you are in.
- You can leave voicemail at (408) 741–2596. State your full name and that you are in Math 19.
- If you cannot reach me and have an urgent concern, please reach out to the math department chairperson by email laura.plunkett@wvm.edu.
- **Student hours (to meet one-on-one with me online)** are Mondays & Wednesdays 3-4 pm and Tuesdays & Thursdays 11:30 am-12:15 pm, or at other times by arrangement. To schedule a meeting during these times, go to the Canvas Calendar and click on the Find Appointment button. When you schedule, you will see the link to a Zoom meeting for student hours that is different from the class meeting link. To arrange a meeting at other times, email me and I will do my best to accommodate your schedule.
- I will grade your submitted work and give you feedback in Canvas within one week after the due date, and often sooner.
- Please check Canvas at least once a week to see class announcements and discussions or set your Canvas notification preferences to receive class announcements either by email or text.

**Course Information**

*Catalog Description:*
This course covers fundamental topics for Computer Science, such as logic, proof techniques, sets, introduction to computer programming, basic counting rules, relations, functions and recursion, graphs and probability trees. **Prerequisites:** Math 001 or Math 002. **Advisory:** Math 3A.

*Course Objectives:*
- Solve counting problems by appropriate formulas and methods.
- Apply matrices to analyze graphs and trees.
- Use sets to solve problems in combinatorics and probability theory.
- Use mathematical induction to prove theorems.
- Use recursion to analyze algorithms and programs.
- Write proofs using symbolic logic and Boolean Algebra.
- Use finite state machines to model computer operations.
- Identify, classify and manipulate relations and functions, sequences and series, and matrices.

*Student Learning Outcomes:*
- Determine whether two expressions in either propositional or predicate logic are equivalent through the use of truth tables or rules of logical equivalence.
- Given a graph find a Hamilton or Euler path.
• Given two graphs, check to see if they are isomorphic.

Why Take Math 19?
Discrete Mathematics involves the study of logic, sets, algorithms, proof techniques, counting techniques, recursion, sequences, functions, relations, discrete graphs, trees, and finite state machines, among other topics. It can help prepare you for future coursework in computer science as well as for upper-division math classes that may involve mathematical proofs. A strong discrete math background is important for many careers including data analytics, computer security, software engineering, graphics, and many other STEM fields.

Required Course Materials
• Purchase the textbook “Discrete Mathematics and its Applications” by Kenneth Rosen, ISBN 9781259676512. You can use either the 8th or the 7th edition of the textbook. An e-book (Smart Book) is also available from the publisher. To buy the e-book, go directly to the publisher’s website rather than through the campus bookstore: https://connect.mheducation.com/paamweb/index.html#/registration/signup/b-weiss-2019. Fill out the Connect registration information and on the next page click on the BUY IT or RENT IT button.

The college Library has textbooks for many courses available to loan out for the term as well as laptops, Surface Gos, hotspots and graphing calculators. Go to the library’s Textbooks ‘n’ Technology page to find out which courses have books available for loan this term and complete the forms to check out technology.

• You will need a calculator that can do factorials, combinations, and permutations.

Graded Coursework
• Homework: You will be doing homework from the textbook and then submitting your written answers as an assignment on Canvas, as a single pdf file. The list of homework problems to complete will be posted in Canvas Modules. Due dates for homework will be on Mondays and Fridays; these dates will appear in the Canvas calendar and syllabus. The lowest two homework grades will be dropped from the Canvas gradebook. I will be grading some homework problems from each section for correctness and completeness; the graded work with comments for you will be visible in Canvas.
• Homework corrections: Each graded homework problem can be redone once; submit your corrections (as a new upload to the same assignment box) to make up points that you missed. These “redos” are due by the date of the exam that includes that section, but it is recommended that you turn them in before the exam, to get graded feedback and be able to study them.
• Lateness: Homework and redos are accepted late but you will lose 10% of the points each day.
• Discussion forums: We will have 7 graded Canvas Discussions, typically requiring one post and one reply. Check in early each week (by Tuesday evening) to see what that week’s discussion is
about and make a first post by Wednesday. Then check back later in the week to read classmates’ posts and reply by Sunday.

- **Exams:** There will be 4 timed exams during class meeting times. **The exam dates are September 22, October 13, November 10, and December 1.** Contact me as soon as possible if you are not able to make one of these dates. If you miss one exam with a valid excuse, I will replace that exam score with your final exam score. If you miss a second exam, you will have earned a 0 on that exam.

- **Final exam:** The cumulative final exam will be **Thursday, Dec. 15 from 11:50 am – 1:50 pm.**

- **About due dates:** Due dates are very important, both to help keep you on track to learn the material and to be fair to all students. However, if you have extenuating circumstances let me know as soon as possible. We can work together to find solutions.

**Grading**

Your grade will be a weighted average of homework (15%), discussion forums (10%), exams (60%), and the final exam (15%). The grade scale will be 90–100% A, 80–89% B, 70–79% C, 60–69% D, 0-59% F. Grades will be recorded in the Canvas gradebook; check there to track your progress.

**Integrity is the foundation of academic work**

Occasionally, you may feel overwhelmed by the amount of work you need to carry out, but do not use this as an excuse to cheat. If you are caught cheating, you may get a warning, receive no credit for the assignment, or be referred to the Vice President of Student Services for disciplinary action. You would also be devaluing your resulting degree when you enter the workforce or transfer and cannot meet the expectations that your degree requires.

Here are some examples of what you should and should not do in relation to academic integrity:

**What not to do**

- Do not pay someone to take an exam for you. Recent reports show that people who take exams for pay by students may end up "blackmailing" those students in a variety of situations. For example, if the student defaults on the agreed amount of compensation, does not buy more services, etc., these people have been known to notify the college of the misbehavior of students caught in this kind of trap.

- Do not use applications or websites to find answers on exams or homework. If I suspect that your work is copied from an app or website or another student, you will receive a zero on that problem and be reported to the college.

- Do not copy answers from an answer key.

- Do not ask another student to do your work for you.

**What to do**

- Trust the value of your own intellect.

- Show your own achievement and abilities.

- Ask for help from me if you feel overwhelmed, or ask for more time if you need it.
You will be asked to agree to an honor code at the beginning of the semester and on each exam saying you will only turn in your own work and not share questions or answers. It is fairly easy to tell when you are cheating, but some students have had to learn this the hard way; they did not pass the class.

**Learning Support/Tutoring**
West Valley College’s [Success Center](#) and [Math Resource Center](#) offer FREE tutoring! Visit their websites for more information about tutoring support available to you online. To receive free tutoring through the Success Center, visit their Canvas course. For the Math Resource Center tutoring, you must add the free 0-unit course LRSV 110M, CRN 70770 through the Portal.

**Important Dates**
- Last day to ADD this class: September 11
- Last day to DROP this class without a “W” and with a refund: September 11
- Last day to DROP this class with a “W:“ November 18
- FINAL EXAM for this class: Thursday, December 15, 11:50 am – 1:50 pm.

**Accommodations for a Disability**
West Valley College is here to support you, and we want to make all learning experiences as accessible as possible. If you think you may run into academic barriers because of your disability (including permanent disabilities or chronic or temporary medical conditions), please let me know so we can privately discuss your options and create a plan that works for you. You may also want to register with the Disability and Educational Support Program (DESP). West Valley College’s DESP program is known for going the extra mile to support students, and they will work with you to set up reasonable accommodation for qualifying disabilities.

*Disability and Educational Support (DESP) Contact Information*
The [DESP office](#) is in the Student Services building. Their phone number is (408) 741-2010 (voice) or (408) 741-2658 (TTY).

**Student Help and Support**
West Valley College has many [Student Services](#) that are here to support your success and help you achieve your goals. College students often experience issues that may interfere with academic success such as stress, juggling responsibilities, life events, relationship concerns, sleep problems, or feelings of anxiety, hopelessness, or depression. All of us benefit from support during times of struggle – you are not alone. Helpful, effective resources are available for all students, and an important part of the college experience is learning how to ask for help. Getting help is the smart and courageous thing to do – for yourself, and for those who care about you.

- You can learn more about the broad range of confidential mental health services for students on the [Health Services](#) webpage, including tele-mental health, anonymous online screenings, training and resources such as TAOConnect and Kognito, and online/local information and resources.
- National Suicide Prevention Lifeline (800) 273-TALK (8255)
- National Crisis Text Line: text “COURAGE“ to 741741
West Valley College Policies
It's important for you to be aware of policies in the West Valley College Catalog. Below are a few key policies from the Rights and Responsibilities section you should know about.

- **Attendance:** Know that instructors may drop any student who does not attend the first class, who has missed any one class during the first three weeks of instruction, or who has missed more than ten percent of the total class hours for the semester.
- **Registration and Drops:** Understand that it is your responsibility to make sure you are registered and/or dropped from any class by the deadlines listed in the schedule of classes.
- **Withdrawal from a class:** Make sure you know the last day to drop with a W (put that date in your calendar!). Even if you ask an instructor to drop you, it is still your responsibility, so double-check your enrollment status in the Portal. It’s important to know that instructors must issue a grade for any student still enrolled after the last day to drop.
- **Academic Dishonesty:** Understand what this means—it includes in-class cheating, out-of-class cheating, plagiarism, helping another student in cheating or plagiarism, or knowingly giving false information to college staff, faculty, administrators or other officials. You can receive a failing grade for the assignment if there is reasonable proof or documentation of academic dishonesty. Please seek help with your coursework from your instructor or a tutor instead of cheating.

West Valley College Nondiscrimination Statement
The District, and each individual who represents the District, shall provide access to its services, classes and programs without regard to national origin, religion, age, sex or gender, race, color, medical condition, ancestry, sexual orientation, marital status, physical or mental disability, or because he/she is perceived to have one or more of the foregoing characteristics, or based on association with a person or group with one or more of these actual or perceived characteristics.