Mathematics 120: College Algebra, Fall 2024 Syllabus

Class Meetings. Varies by Section:
Section 001: -T-H- 8am-9:15am
Section 002: -T-H- 9:30am-10:45am
Section 003, 103, 104: M-W-F 10am-10:50am
Section 004: M-W-F 11am-11:50pm
Section 005: M-W-F 12pm-12:50pm
Section 006: M-W-F 2pm-2:50pm
Section 008: M-W-F 4pm-4:50pm
Course Coordinator. Jason DeMoulpied.
Instructor. Varies by section.
Office Hours. Varies by section.
Office. Varies by section.
Course Learning Assistants. Varies by section.

Course Information:

Prerequisites and Placement:
Math Placement Tool or ELM Tutorial required

Course Description
Examine ideas of quantity, variable, rate of change, and formula. Develop meaningful formulas and graphs to represent the patterns (linear, quadratic, exponential, polynomial, rational) of how two quantities change together, and develop and interpret function formulas and graphs to represent quantitative relationships in applied contexts.

Workbook/Online Resources
A workbook with an associated online text is required for this course. The workbook includes investigations and supplemental homework problems. The Canvas page also includes slideshows with embedded videos and interactive applets to help further your understanding of the concepts covered, as well as a supplemental textbook with additional examples. With inclusive access, you have already purchased the workbook through the campus bookstore. The title of the workbook is: Precalculus: Pathways to Calculus, **10th edition** (Carlson, O'Bryan, Oehrtman, & Moore). Workbooks will be distributed in-class during the first week of classes.

Learning Objectives
The learning objectives for the course can be found on the official syllabus at

https://www.math.colostate.edu/syllabi/MATH120Syllabus.pdf

Required Equipment and Software

- **Smart phone (or tablet) and scanner app:** In case you need to submit written assignments online as a single PDF file, you should download a scanner app for a smart phone or an internet-connected tablet, if your smart phone or tablet does not already have one. Many of these apps are available for free, such as Genius Scan or CamScanner. You must have this device accessible both in class and out of class.

- **Calculators and Other Technology:**
  You are required to have an electronic device that can access the internet, so a smart phone, laptop, or tablet with a webcam and microphone for in-class activities and online assessments. You are required to bring it to class. The device you use should be capable of graphing functions so you will need a graphing application, including the free app Desmos. **Absolutely no such devices will be allowed on exams. Nor will they be needed on exams.**

- **Other:** You will receive more information about software that will be used for in-class activities and projects. This software will be free to you, either open source or through the University's subscription.

Canvas

See our course's Canvas https://canvas.colostate.edu/ for up-to-date course information related to exams, homework assignments, the course schedule, lists of instructors, a copy of this syllabus, and links to additional resources.

Course Structure:

Research shows that people learn mathematics best when they are actively participating. In other words, you learn by doing, not by watching. Therefore, MATH 120 frequently allows for individual and group work in which you will be actively engaged with solving problems, making discoveries and understanding connections. This course and the book we are using are designed for a classroom which does not follow a traditional lecture format. Do not be surprised if your instructor often spends only half a class period lecturing or solving problems: the rest of the time, you should expect to be working at your desk or online, either individually or in groups, presenting your work.

In this vein, you will be expected to complete preview lessons before concepts are discussed in class. Lectures are intended to highlight aspects of the text, not to replace it. In this course you will learn a number of useful formulas, though their mastery is not the primary purpose of mathematics any more than correct spelling is the primary purpose of literature. Our goal is to have you learn how to understand mathematics conceptually so you can build your own approaches to solving practical problems.

College Algebra and Precalculus Support Center:
The mission of the College Algebra and Precalculus Support (CAPS) Center, **located in the TILT Great Hall**, is to improve learning and academic performance for all students in Math 120 and Math 127. We support instruction that carefully considers student thinking and engages students as active participants in their learning process. One of the ways we support our mission is through individual tutoring and small group mentoring.

The CAPS Center is staffed by instructors, graduate students, and learning assistants. Tutors are trained to help assist with specific questions. They are not able to work through homework assignments. The CAPS Center is extremely busy before assignments are due, so make a habit of visiting the CAPS Center well before assignments are due, and start a conversation with our wonderful staff.

Assignments and Assessments:

The only effective way to learn mathematics is to do lots and lots of problems. Besides working on problems in class every day, you will have assignments and assessments in this course to enhance your skills and understanding.

Grades: The grade distribution will be calculated based on the following weightings:

- Exams (45%)

- Quizzes (15%)

- Attendance and Class Participation (10%)

- iMathAS Preview Lessons (15%)

- iMathAS Online Homework (15%)

Attendance and Participation
It is critical that you attend every class session. Your success in this class is dependent on your participating in lecture and small group work. You should bring your workbook to class and record your thinking and solutions to problems assigned and worked during class. Since homework will be similar to problems worked in-class it will be helpful to review your workbook solutions before beginning your homework. Your two lowest weeks of attendance and participation will be dropped.

iMathAS Preview Lessons
All of the course investigations include a lesson assignment which is designed to get you thinking about the concepts in the upcoming class investigation. These preview lessons are to be completed *BEFORE* the class session for that investigation. The iMathAS Lessons will require you to build core quantitative understanding and to create meaning in new situations. They will definitely require some creative thinking on your part!

The iMathAS Preview Lesson assignments are graded items, and form an integral part of the course. You will benefit much more from the class sessions if you have worked on the associated Lesson assignment before the class session that covers each particular investigation topic. The online iMathAS Preview lessons will greatly enhance the effectiveness of the class sessions themselves. Each problem in the lessons will have unlimited attempts, and you will be provided with the correct answer after 5 attempts.

Online Homework - iMathAS

Online lessons and homework will be completed using the Canvas Page for this course.

There will be several online homework assignments each week. You should expect to spend at least 8-10 hours weekly on homework. You should also expect that some questions will be challenging, requiring more time and effort.

If you are unable to answer all parts of a homework question you may post questions to the discussions on Canvas, email your instructor, go to office hours, go to the CAPS Center, and also watch the videos in the online text. Homework assignments will require that you demonstrate an understanding of the ideas introduced in class. You will have an unlimited number of attempts on each homework problem.

Online homework forum: You may use the forums on Canvas to ask (and answer) questions about the homework assignments. If you are asking a question on the forum you must include what you are having difficulty with and explain how you are currently thinking about the problem. You must say more than "I don't know how to do this." If you are answering a question on the forum, pose a question or provide a hint, but do not just tell the student how to get the answer.

Quizzes

There will be several in-class quizzes meant to assess your mastery of the homework and class discussions. The best way to prepare for quizzes is to complete your homework (with understanding) before the class session begins, and pay close attention during lecture. If there is a change in the assessment format for a particular week, your instructor will give you details about how this score is determined for your section. Your lowest quiz grade will be dropped. **There are no makeups for any missed quizzes without proper academic accommodations or exemptions**. The purpose of dropping a quiz grade is to account for unforeseen emergencies such as family emergencies or illness.

Exams

There will be two in-class, 50 minute exams throughout the semester. The 2 exams are worth 30% of the final course grade. Each midterm is worth 15% of the final course grade. The final exam is worth 15% of the final course grade. The exams will be held on the following dates:

- **Exam 1:** Sections 001 and 002, Thursday September 26th (in-class), 50 minutes. All other sections, Wednesday September 25th.

- **Exam 2:** Sections 001 and 002, Thursday October 31st (in-class), 50 minutes. All other sections, Wednesday October 30th.

- **Final Exam:** Wednesday December 11th, 11:50am-1:50pm (room TBD), 120 minutes

Alternate Exams: All exams must be taken at the time stated on the syllabus, which are known to not conflict with any other CSU classes. The only exceptions are conflicts with any university approved absence or events beyond your control that cannot be rescheduled (e.g. hospitalization). In either case it is the student's responsibility to inform the instructor in due course (well ahead of a conflict with a university events, or as soon as possible in case of a medical emergency) of this conflict and to provide appropriate written documentation. Students seeking an exemption from attending religious holiday will find information at http://oeo.colostate.edu/religious-accommodation

Note: If the Final Exam score is greater than the Lowest Exam score, the Final Exam score will replace the Lowest Exam score when calculating the final course grade.

Use of any outside resources, looking at another persons exam, or providing assistance to others at any time during the exams will be considered cheating.

Academic Integrity: This course will adhere to the CSU Academic Integrity Policy as found on the Student's Responsibilities page of the CSU General Catalog and in the Student Conduct Code. By handing in homework, lab reports, and exams you certify that this is your own work. You are encouraged to discuss homework solution strategies and laboratory write-ups with fellow students, but the final write-up must be your own. Misrepresenting someone else's work as your own (plagiarism; this includes submitting work from a Solutions Manual or an on-line homework web site as your own), possessing or using unauthorized reference information in any form that could be helpful while taking an exam (for example a calculator not explicitly permitted), or doing assigned problems with the aid of a computer algebra system that has not explicitly been permitted are examples of cheating. At a minimum, violations will result in a grading penalty in this course and a report to the Student Resolution Center.

COLORADO STATE UNIVERSITY

University Policies and Standards

CSU Principles of Community
Inclusion: We create and nurture inclusive environments and welcome, value and affirm all members of our community, including their various identities, skills, ideas, talents and contributions.

Integrity: We are accountable for our actions and will act ethically and honestly in all our interactions.

Respect: We honor the inherent dignity of all people within an environment where we are committed to freedom of expression, critical discourse, and the advancement of knowledge.

Service: We are responsible, individually and collectively, to give of our time, talents, and resources to promote the well-being of each other and the development of our local, regional, and global communities.

Social Justice: We have the right to be treated and the responsibility to treat others with fairness and equity, the duty to challenge prejudice, and to uphold the laws, policies and procedures that promote justice in all respects.

Diversity and Inclusion
Respect for Diversity: It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. In addition, if any of our class meetings conflict with your religious events, please let me know so that we can make arrangements for you.

Other Policies
Other policies relevant to your courses and resources to help with various challenges you may encounter, including Accommodation of Needs, Interpersonal Violence, Religious Observations, Undocumented Student Support, Food Insecurity, Student Case Management, Mental Health and Wellness. Please visit the following link https://col.st/2FA2g or use the QRN code below for further information.