COLORADO MOUNTAIN COLLEGE

I. Course and Instructor

Fall 2020 Syllabus

I. Course and Instructor
Format: Classroom
Course Title: Corequisite for Math For Liberal Arts
Course Code:
Semester: Fall
Meeting Days & Times:
Class Location:
Syn. Number:
Credits: 2.0
Corequisite: MAT-120 (Math For Liberal Arts)
Start Date:
End Date:
Refund Date:
Withdraw Date:
* See your online course schedule, found here: *https://coloradomtn.edu/classes/* or contact your campus for the calculated Refund & Withdraw Dates
No-Show Reporting Date: _____

I am required to report any "no-show" student to the Registrar's office. No-Show is determined based on your attendance and engagement in the first seven days of this course. You will be reported as a no-show for this course if you have not attended our first In-Person or virtual class (Flex or Online) meeting nor logged into Canvas and completed Insert the specifics of your No Show assignment here within the first seven days from the course start date.

As per the CMC catalog, if you are dropped for non-attendance, a refund is not automatic nor guaranteed. If you have not attended, be sure to check Student Planning to see whether you are still registered in the class. If you are still registered and you do not attend, you risk receiving a failing grade.

If you are dropped as a no-show student, class reinstatement cannot occur without significant documentation of extenuating circumstances. You would first need to contact the course instructor for approval. If reinstatement is approved, you would need to proceed with the Late Registration process.

No-Show Reporting & Financial Aid: If a student is dropped from a course (or courses) for non-attendance, the resultant loss in credit hours may cause a reduction and/or cancellation of his/her financial aid award. Like class reinstatement, financial aid awards can only be reinstated with documentation of extreme extenuating circumstances. Reinstatement in a class DOES NOT guarantee financial aid reinstatement.

Instructor Information

Instructor Name

CMC Phone: Other Phone:

CMC Fax:

CMC e-mail:

Office Number: Delete if you don't have an office

Office Hours: FT Faculty state actual office hours. All other faculty use "Office hours by appointment only."

Required Course Materials

SAME AS MAT-120 (NO ADDITIONAL LEARNING MATERIALS TO BUY). There is an OER text available for all students and instructors in the Canvas shell for the course.

Credit-based students participate in CMC's Learning Materials Program (LMP). It is through this program that all physical or digital textbooks, digital required course materials and relevant custom materials listed above are provided to students an all-inclusive flat per credit fee. (There are a few exceptions to included materials such as Lab Kits and a selected number of excluded courses.) Detailed information about the Learning Materials Program, including how to ensure you receive your textbooks and how to return texts at the end of a course, can be found at https://coloradomtn.edu/classes/textbooks/

MP REMINDERS: To ensure proper shipment, you must verify your shipping address on the LMP dashboard in Basecamp. Instructors should specify relevant details for their respective classes. Tell students how to access any digital content. By the last date of the course or within 7 days of dropping a course, all materials from LMP must be returned if you are not choosing to buy them out. Students will incur fees for late or missing returns. Questions or concerns about LMP? Use one of the customer service contact methods listed here. Students with LMP order questions should call CMC LMP Customer Service: 844-523-9056

There are faculty resources for correct set up of integrated LMP digital materials on Canvas. Adoption and material questions for faculty should be directed to teamcmc@ecampus.com

II. Course Description (# CR)

Supports skill development for students registered in MAT 120. Topics covered in this course include those that bridge the gap between MAT 050 and MAT 120. It is designed to strengthen critical thinking skills and develop basic math pre-requisites for students not fully prepared to take MAT120.

III. Student Learning Outcomes, Competencies, and Skills

1. Demonstrate mathematical organization, and critical thinking skills.
2. Utilize appropriate use of technology and internet resources.
3. Apply satisfactory study skills, and test taking strategies.
4. Demonstrate an understanding of mathematical notation.
5. Develop techniques for graphing functions without the use of technology
6. Analyze, differentiate and evaluate commonly used formulas.
7. Construct and analyze statistical graphs.

IV. Student Feedback to Instructors

Near the end of the semester, you will be asked to complete a survey about your experiences in this course. The survey will be available through Canvas.

V. Evaluation Methods

Note: MAT-175 Corequisite for Math For Liberal Arts has a unique grading policy. Any student receiving a passing grade (C- or better) in MAT-120 will also be given a passing grade in MAT-175 (at least C- or better) regardless of the percent earned in MAT-175. The converse of this statement does not apply. In this section you should include a statement about this unique grading policy.

The grade breakdown will be: 40%/40pts. Attendance/Groupwork/Class Participation, 30%/30 pts Assessment in class (summative/formative, retakes/test corrections allowed), 30%/30 pts of the overall grade from the Gateway course.

VI. Class Management

Class management deals with the management or structure of the class. This section may include some or all of these items:

- Communication with the instructor: via e-mail, office hours, Canvas?
- How will a class session cancellation be communicated?
- What might each class session look like?
- Tardiness? (Don't wait for the students who aren't there, reward those who are there by starting class on time.)
- How will Canvas be used?
- Do papers have to be word processed?
- Are there specific requirements for assignment submittal?
- Will assignments be returned?
- Are there certain expectations of the students by the instructor (decorum)?
- Are assignments accepted early, or late?
- Is there a date after which no assignments will be accepted?
- Is there a penalty for missing class?
- Is there a minimum/maximum number of classes that can be missed without a grade penalty?
- What about emergencies?
- Will the class have field trips?
- Are there special arrangements for laboratories?
- Will the class meet in a different location for some class sessions?

VII. Student Consumer Information

a. You have a right to know certain information that the College is required by law to provide. Links on [this page](#) will connect you with helpful information including disability services, complaint processes, policies and procedures, textbook information, registration, attendance and grading, graduation rates and much more.

b. **Students Rights and Responsibilities**: The CMC Student Handbook, published annually and available online at https://coloradomtn.edu/student-services/, outlines the expectations for student conduct on campus and in classes as well as the college's academic policies and expectations. *Instructors should add additional language here in alignment with CMC policy that make explicit the consequences for engaging in academic dishonesty in relation to their work in this course.*

c. **Notice of Nondiscrimination**: Colorado Mountain College does not discriminate on the basis of age, color, disability, gender identity, marital status, national or ethnic origin, political affiliation, race, religion, sex (including pregnancy), sexual orientation, veteran status, and family and genetic information, or in its programs and activities, as required by Harassment and Discrimination Prevention (Title IX) of the Education Amendments of 1972, Title II of the Americans with Disabilities Act of 1990, as amended, Section 504 of the Rehabilitation Act of 1973, Titles VI and VII of the Civil Rights Act of 1964, the Age Discrimination Act of 1975, and as provided in other applicable statutes and College policies. The College prohibits sexual and gender-based harassment, including sexual assault, and other forms of interpersonal violence. To obtain more information regarding non-discrimination policies, visit **http://coloradomtn.edu/about-cmc/notice-of-nondiscrimination/** or contact Lisa Doak, Harassment and Discrimination Prevention (Title IX) Coordinator, ldoak@coloradomtn.edu, 970-947-8351, or Angela Wurtsmith, Director of Human Resources, awurtsmith@coloradomtn.edu, 970-947-8311.

VIII. CMC Libraries

Online library resources and services are available at http://library.coloradomtn.edu or from the Libraries link in Basecamp and Canvas.

You have 24/7 access to thousands of online journals, magazines, and newspapers, e-books and audiobooks, videos and images, career resources and practice tests.

Librarians are here to help you. You can use any or all of these ways to get help!
- Via email, 24/7 chat (AskAcademic), telephone, or video conferencing http://library.coloradomtn.edu/home/help
- Video tutorials http://library.coloradomtn.edu/home/modules

Consult your local campus for in-person services.

IX. Tentative Course Schedule

NOTE: This schedule is subject to change at any time, depending on instructor evaluation of student skills/understanding/knowledge. See Canvas for more information.

Note: Your schedule should include 100% of the "Required Topical Outline" (given below), and as much of the "Recommended Topical Outline" as you feel best fits your MAT-121 course. The order in which you present the corequisite topics should coincide with the order in which you present the gateway topics.

Required Topical Outline
1. Mathematical organization, and critical thinking skills.
   a. Organization of various sets of data.

b. Breakdown of application (word) problems into their basic components.

c. Study a variety of real-world applications, and find various methods for solving.

d. Apply linear models and regression to real-world application problems. Applied geometry.

2. Appropriate use of technology and internet resources
   a. Introduction of selected technology such as scientific calculators, graphing calculators, Desmos, Wolfram Alpha, and Photomath.
   b. Graph linear and exponential functions.
   c. Linear regression.
   d. Use of technology to evaluate models and formulas used in MAT-120 (e.g. graphing and scientific calculator).
   e. Use of technology to perform statistics (e.g. scientific and graphing calculators).

3. Study skills, and test taking strategies.
   a. Incorporate Growth Mindset strategies in learning
   b. Engage in appropriate math learning and testing strategies
   c. Develop confidence in learning and doing mathematics
   d. Identify academic support
   e. Review as needed

4. Understanding of mathematical notation.
   a. Review of Order of operations relating to sets and statements.
   b. Review of mathematical notation as it applies to MAT120.

5. Techniques for graphing functions without the use of technology
   a. Intro to different graphing techniques.
   b. Graphing of linear and exponential functions.

6. . Analyze, differentiate and evaluate commonly used formulas.
   a. Basic review of exponential models with a complete breakdown of each component.
   b. Analysis of linear models.
   c. Review of solving linear equations.
   d. Review of percent.
   e. Formulas for simple and compound interest.
   f. Formulas for savings plan and loan payments.
   g. Geometric formulas, including perimeter/circumference, area, and volume.
   h. Formulas used in probability.

7. Construct and analyze statistical graphs.
   a. Understanding how to read a variety of statistical graphs.
   b. Labeling the normal distribution bell curve given the mean & standard deviation.
   c. Labeling the area of the bell curve of interest.

Recommended Topical Outline:

1. Mathematical organization, and critical thinking skills.
   a. Apply exponential modeling to real-world applications other than compound interest.

2. Appropriate use of technology
   a. Quadratic regression
   b. Exponential regression.

3. Understanding of mathematical notation.
   a. Determining rows/columns for truth tables.
   b. Understanding the difference between truth tables and truth values.

4. Techniques for graphing functions without the use of a calculator
   a. Graphing quadratic functions.

MAT-120 Math For Liberal Arts Topic	

(Not all of these topics are CCCS MAT-120 required CLO's; however, I am including the union of topics from the syllabi that I have collected from various CMC instructors)	MAT-175 Corequisite Support Topic
Formal Logic: Inductive and Deductive Reasoning	Required Topic 1a: Organization of various sets of data. Required Topic 3a: Incorporate Growth Mindset strategies in learning Required Topic 3b: Engage in appropriate math learning and testing strategies Required Topic 3d: Identify academic support Required Topic 6c: Review of solving linear equations.
Formal Logic: Subset, Union, intersection and complement	Required Topic 1a: Organization of various sets of data. Required Topic 4a: Review of Order of operations relating to sets and statements. Required Topic 4b: Review of mathematical notation as it applies to MAT120.
Formal Logic: Venn Diagrams	Required Topic 1b: Breakdown of application (word) problems into their basic components. Required Topic 2a: Introduction of selected technology such as scientific calculators, graphing calculators, Desmos, Wolfram Alpha, and Photomath. Required Topic 3c: Develop confidence in learning and doing mathematics
Formal Logic: Introduction to Conjunction, Disjunction, & Negation	Required Topic 3e: Review as needed. Especially 4b. Required Topic 1c: Study a variety of real-world applications, and find various methods for solving. Recommended Topic 3b: Understanding the difference between truth tables and truth values.

Formal Logic: Introduction to Conditional & Biconditional	Required Topic 3e: Review as needed. Especially 4b. Required Topic 3e: Review as needed
Formal Logic: Introduction to Converse, Inverse, & Contrapositive	Required Topic 3e: Review as needed. Especially 3b, and 4b.
Formal Logic: Tests for validity Truth Tables	Recommended Topic 3a: Determining rows/columns for truth tables. Recommended Topic 3b: Understanding the difference between truth tables and truth values.
Math Modeling/Real World Applications: Graph analysis in the context of an application	Required Topic 3e: Review as needed especially 2a. Required Topic 2b: Graph linear and exponential functions. Required Topic 2d: Use of technology to evaluate models and formulas used in MAT-120 (e.g. graphing and scientific calculator). Required Topic 5a: Techniques for graphing functions without the use of technology, i.e. Intro to different graphing techniques. Required Topic 5b Techniques for graphing functions without the use of technology, i.e. Graphing of linear and exponential functions. Recommended Topic 2a: Appropriate use of technology/ Quadratic regression Recommended Topic 4a: Techniques for graphing functions without the use of a calculator/ Graphing quadratic functions.
Math Modeling/Real World Applications: Appropriate use of linear and exponential models	Required Topic 6a: Basic review of exponential models with a complete breakdown of each component Required Topic 6b: Analysis of linear models Required Topic 6c: Review of solving linear equations. Required Topic 3e: Review as needed especially 5b.

Math Modeling/Real World Applications: Application of linear models	**Required Topic 3e:** Review as needed especially 6b and 6c. **Required Topic 3e:** Review as needed especially 1b and 1c. **Required Topic 1d:** Apply linear models and regression to real-world application problems. **Required Topic 3e:** Review as needed especially 2b.
Math Modeling/Real World Applications: Construction of linear models	**Required Topic 3e:** Review as needed especially 5b, 6b and 6c. **Required Topic 3e:** Review as needed especially 1d: **Required Topic 2b:** Appropriate use of technology and internet resources, i.e. Graph linear and exponential functions. **Required Topic 2c:** Appropriate use of technology and internet resources, i.e. linear regression.
Math Modeling/Real World Applications: Application of basic exponential models	**Required Topic 6a:** Basic review of exponential models with a complete breakdown of each component. **Required Topic 3e:** Review as needed. **Required Topic 6e:** Formulas for simple and compound interest. **Recommended Topic 1a:** Apply exponential modeling to real-world applications other than compound interest. **Recommended Topic 2b:** Appropriate use of technology/ Exponential regression.
Math Modeling/Real World Applications: Direct and inverse variation	**Required Topic 3e:** Review as needed especially 1b and 4b.
Modeling Real-World Financial Problems: Simple and compound interest	**Required Topic 6d:** Analyze, differentiate and evaluate commonly used formulas/ Review of percent. **Required Topic 6e:** Analyze, differentiate and evaluate commonly used formulas/ Formulas for simple and compound interest.
Modeling Real-World Financial Problems:	**Required Topic 6f:**

Loans with applications	Formulas for savings plan and loan payments. Required Topic 3e: Review as needed.
Modeling Real-World Financial Problems: Annuities with applications	Required Topic 3e: Review as needed especially 1b, 1c, 6e and 6f.
Modeling Real-World Financial Problems: Applications using percentages such as budgets, sales tax and discounts	Required Topic 3e: Review as needed especially 6d and 6e.
Modeling Real-World Financial Problems: Cost estimation using applied geometry	Required Topic 6g: Analyze, differentiate and evaluate commonly used formulas./ Geometric formulas, including perimeter/circumference, area, and volume. Required Topic 1d: Mathematical organization, and critical thinking skills/ Applied geometry. Required Topic 3e: Review as needed, especially1b and 1c.
Probability and Statistics: Measures of Central Tendency	Required Topic 2e: Use of technology to perform statistics (e.g. scientific and graphing calculators).
Probability and Statistics: Measures of Variation	Required Topic 3e: Review as needed especially 2a and 2e. Required Topic 3e: Review as needs especially 4b. Required Topic 2b: Finding restrictions for radical functions
Probability and Statistics: Table and chart analysis	Required Topic 7a: Understanding how to read a variety of statistical graphs. Required Topic 7b: Labeling the normal distribution bell curve given the mean & standard deviation. Required Topic 7c: Labeling the area of the bell curve of interest.
Probability and Statistics: Sources of potential bias within research	Required Topic 3e: Review as needed especially 1a and 3a-d.

Probability and Statistics: Sampling techniques	Required Topic 3e: Review as needed especially 3a,b,c.
Probability and Statistics: Normal distribution	Required Topic 3e: Review as needed especially 2e, 4b and 5a. Required Topic 3e: Review as needed especially 7a,b,c.
Probability and Statistics: Theoretical and empirical probability	Required Topic 6h: Formulas used in probability. Recommended Topic 3e: Review as needed.
Probability and Statistics: Estimation and margin of error	Required Topic 3e: Review as needed.
Apply Math Modeling to Real World Applications: Construction of basic exponential models	Recommended Topic 1a: Apply exponential modeling to real-world applications other than compound interest. Recommended Topic 2b: Appropriate use of technology/ Exponential regression.