

## **MATH 138: College Algebra**

### **School of Health and Social Sciences**

5 Credits

Effective Date: 4/1/2024

Grading Type: Decimal

List any Pre-requisite or Co-Requisite: N/A

*Access to the Internet is required.*

*All written assignments must be in Microsoft-Word-compatible formats.*

*See the library's APA Style Guide tutorial for a list of resources that can help you use APA style.*

## Faculty Information

Professional experience information for instructors is found under *Syllabus, Schedule, and Course Team* in the online course menu.

## Contact Information

Contact information for instructors is found under *Syllabus, Schedule, and Course Team* in the online course menu.

## Course Description

As a foundation in college mathematics, this course provides students with a solid foundation in the mathematics of college-level algebra, providing essential mathematical knowledge and skills for real-world applications in multiple domains and fields. Topics include equations and inequalities, properties of functions (inverse, linear, quadratic, polynomial, rational, exponential, and logarithmic), graphs with transformations, systems of equations, and matrices. Learning is reinforced through real-world application problems. The focus of the curriculum is on enhancing quantitative literacy and empowering students with the mathematical knowledge and skills necessary for success in various disciplines, while emphasizing critical thinking, practical problem-solving, and reasoning.

This course fulfills the college mathematics requirements at CityU. It is essential as preparation for certain degree programs that require higher level mathematics courses. Students should consult their advisors to determine if MATH 138 meets their program requirements. Students needing only to fulfill the university's general education or college mathematics requirement may take MATH 107 instead of MATH 138.

## Course Resources

Required and recommended resources to complete coursework and assignments are found on the course [Reading List](#). Access is provided through the *Reading List* link in your online course as well as from the library homepage ("Reading List" button).

**Note:** Required resources that must be purchased by the student are tagged "Purchase from a vendor of your choosing." Required resources with a direct link, "Available through CityU Library", are available electronically at no cost to students.

Students in Canada may purchase course resources from the [Canada Bookstore](#), and students outside the U.S. and Canada should contact their advisor or textbook coordinator for additional information.

## Course Outcomes

This course will prepare students to:

- CO.1 – Apply a variety of problem-solving strategies, including verbal, algebraic, numerical, and graphical techniques, to solve real-world problems involving equations and inequalities. [Apply]
- CO.2 – Interpret quantitative/mathematical information from multiple representations of real-world scenarios. [Evaluate]
- CO.3 – Construct mathematical models from relevant information extracted from real-world scenarios. [Apply]
- CO.4 – Examine real-world applications of mathematical knowledge and skills in different personal and professional contexts. [Analyze]

## Using Generative AI Tools

In all academic work completed in this course, the ideas and contributions of others (including generative AI tools) must be acknowledged and provided with proper attribution. Work that is presented as original must be, in fact, created by the learner. The use of generative AI tools, such as Bard or ChatGPT, when completing coursework without proper attribution is a form of academic dishonesty and violates the university's Academic Integrity policy. Unless otherwise explicitly noted, all work on graded tasks must be the sole work of the learner without assistance or collaboration with others (including generative AI tools). If learners have questions about what constitutes academic dishonesty or plagiarism, they should contact the instructor.

## Grading Scale

The grades earned for the course will be calculated using City University of Seattle's decimal grading system, found in the current [University Catalog](#).

Grading rubrics with details on how each assignment will be graded are located under *Assignments* and/or in *My Grades* in the online course menu. Students should review the rubric for each assignment prior to completing their work in order to understand how it will be assessed.

## Course Assignments and Grading

Overview of Required Assignments	% of Final Grade
Course Activities	30%
Homework	30%
Quizzes	20%

Final Exam	20%
<b>TOTAL</b>	<b>100%</b>

## **Course Activities (30% of Final Grade)**

### **Purpose:**

Class participation through discussion is an integral part of this online course. Participation is defined as active engagement in a discussion or other online activity. Discussions provide students the opportunity to collaborate in constructing new knowledge about applied mathematics through their online interactions with the instructor and peers.

### **Task:**

During the discussions, students will identify either a personal or professional context for their applied learning about mathematics. In each discussion, students will share examples of their work from the previous module and how the topics of the previous module apply to their identified context or one that is closely related to it. Students will compile reflections about the application of mathematics to their personal or professional context into an online portfolio, which will be part of the graded activity, and provide them with an artifact showcasing their work.

To provide a structure for balanced participation and allow students to maximize the benefit of the discussion activities, it is recommended that students follow these guidelines:

1. Update their portfolio before posting and include a link in the initial posting
2. Post responses to discussion questions in the first three days of a module (Monday through Wednesday).
3. Post three or more thoughtful and topic-relevant replies to the initial posts made by classmates during the last four days of the module (Thursday through Sunday).
4. Reply to questions the instructor or peers have regarding the initial post by the end of the module.

### **Criteria for Success:**

As a rule, to score high and exceed standard:

- Participation should be early and consistent throughout the module week.
- Initial posts should respond to all parts of the prompt.
- Required replies to classmates' initial posts should be submitted before Sunday and contribute more to the discussion than already provided.
- Participation should be more than the minimum expectations. In other words, to *exceed* standard, students should participate at a level beyond *meeting* standard.

Course activities are evaluated using the following criteria. A detailed rubric is included at the end of the syllabus.

<b>Criteria</b>	<b>% of Grade</b>
Initial Post: Content & Contribution	25%

Initial Post: Timeliness	5%
Replies: Content & Contribution	35%
Replies: Timeliness	5%
Portfolio: Thoroughness & Reflection	20%
Grammar, Style, & Mechanics	10%
<b>TOTAL</b>	<b>100%</b>

## **Homework (30% of Final Grade)**

### **Purpose:**

Homework provides guided exercises to help students learn mathematical terminology and properly identify and apply mathematical knowledge and skills to solving problems. Guided exercises are key to success in learning mathematics, as well as enhancing critical thinking, problem-solving skills, and resilience. By actively engaging with math homework, students cultivate a foundation for analytical reasoning and develop math knowledge and skills for tackling real-world challenges and solving real-world problems.

### **Task:**

Students complete nine equally weighted homework assignments, one in each of Modules 1-9. Students may use a calculator when completing homework.

### **Criteria for Success:**

Students have two attempts to complete each quiz. Answers are graded on correctness.

## **Quizzes (20% of Final Grade)**

### **Purpose:**

Quizzes reinforce the course materials and test students' ability to utilize math knowledge and skills learned in the homework. These focused assessments help students sharpen their mathematical knowledge and skills, provide immediate feedback for reinforcing concepts, and identify areas for improvement. In sum, quizzes are where students demonstrate their learning.

### **Task:**

Students complete nine equally weighted online quizzes, one in each of Modules 1-9. Students should endeavor to complete quizzes without the use of the textbook or resources other than a calculator.

### **Criteria for Success:**

Students have two attempts to complete each quiz. Answers are graded on correctness.

## **Final Exam (20% of Final Grade)**

### **Purpose:**

The final exam is a comprehensive assessment of the student's mathematical knowledge and skills relevant to the topics covered in the course. This focused assessment tests the student's long-term retention of math knowledge and applied skills for solving contrived and real-world problems. In sum, the final exam provides an opportunity for students to demonstrate the culmination of their learning, mastery of the learning objectives, and synthesis of math knowledge.

**Task:**

Students complete a comprehensive final exam. Students should endeavor to complete the final exam without the use of the textbook or resources other than a calculator.

**Criteria for Success:**

Students have two attempts to complete the final exam. Answers are graded on correctness.

## **Course Policies**

### **Late Assignments**

Per School of Health and Social Sciences policy, undergraduate students are required to submit all assignments by the due dates stated in the syllabus. A late assignment is one that is submitted after the due date and time or after any extension has expired.

If circumstances prevent a student from meeting the due date, the student is obliged to contact the instructor and request an extension at least 48 hours prior to the date the assignment is due. Emergency situations will be considered on a case-by-case basis. Being busy, pressured with outside work, or having competing academic commitments are not valid reasons to grant extensions. A student who receives an extension in advance of the due date and abides by the agreement with the instructor is not subject to late penalties.

Without prior arrangement with the instructor, students who submit assignments late will receive a 15 percent deduction in grade each day or part of the day that the assignment is late. For example, if the assignment is submitted two days late, 30 percent of the grade will be deducted. No late submission is accepted beyond 48 hours past the final day of the course, without instructor approval. Coursework received after one week (seven days) will not be graded and will receive a zero grade.

### **Participation**

Participation is an active engagement in class discussions and activities in the form of sharing new ideas, examples and resources, as well as constructive disagreement and incorporation of course materials and concepts in comments. This requires frequent monitoring of the discussion forum, timely responses, integration of course material and other sources, and ongoing conversations that extend, modify, and add to understanding, creating a vibrant learning community.

Participation through course activities and discussions to exchange knowledge, ideas, and thoughts is an integral, mandatory part of this course. It enhances the student's learning process and experience in this course. Lack of participation will result in a reduction in grade (see grading rubric).

### **Professional Writing**

Assignments require error-free writing that uses standard English conventions and logical flow of organization to address topics clearly, completely, and concisely. CityU requires the use of APA style.

## **University Policies**

Students are responsible for understanding and adhering to all of City University of Seattle's academic policies. The most current versions of these policies can be found in the [University Catalog](#) that is linked from the CityU Web site.

### **Antidiscrimination**

City University of Seattle and its staff and faculty are committed to supporting our students. We value equity, diversity, and inclusion as a way of life as well as the educational opportunities it provides. City U will not tolerate any form of discrimination based on race, color, ethnicity, sexual orientation, gender identification, socioeconomic status, or religious values. If you have experienced any discrimination based on any of the above, we encourage you to report this to the University. Please report this to your instructor. If you do not feel safe reporting this to your instructor, please report to the Provost or to the Vice President of Student Affairs.

### **Non-Discrimination & Prohibition of Sexual Harassment**

City University of Seattle adheres to all federal, state, and local civil rights laws prohibiting discrimination in employment and education. The University is committed to ensuring that the education environment is bounded by standards of mutual respect and safety and is free from discriminatory practices.

In the U.S., the University is required by Title IX of the Education Amendments of 1972 to ensure that all of its education programs and activities do not discriminate on the basis of sex/gender. Sex include sex, sex stereotypes, gender identity, gender expression, sexual orientation, and pregnancy or parenting status. Sexual harassment, sexual assault, dating and domestic violence, and stalking are forms of sex discrimination, which are prohibited under Title IX and by City University of Seattle policy. City University of Seattle also prohibits retaliation against any person opposing discrimination or participating in any discrimination investigation or complaint process internal or external to the institution. Questions regarding Title IX, including its application and/or concerns about noncompliance, should be directed to the Title IX Coordinator. For a complete copy of the policy or for more information, visit the [CityU website](#) or contact the Title IX Coordinator.

In Canada, in compliance with the British Columbia Human Rights Code, the Alberta Human Rights Act, WorksafeBC, and the Workers' Compensation Board of Alberta, the University believes that its environment should at all times be supportive and respectful of the dignity and self-esteem of individuals. Discrimination, harassment and bullying conduct, whether through person-to-person behaviour or via electronic communications such as email or social media is not acceptable and will not be tolerated. As an educational institution, it is our responsibility to cultivate an environment of excellence, equity, mutual respect and to recognize the value and potential of every individual. The University will take all necessary steps to meet or exceed the requirements of the law to prevent discrimination, harassment and bullying. The Respectful Workplace Policy for the prevention of discrimination, harassment and bullying policy and procedure can be found at [CityU in Canada](#) website.

### **Religious Accommodations**

City University of Seattle has a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The University's policy, including more information about how to request an accommodation, is available in the University Catalog and on the my.cityu.edu student portal. Accommodations must be requested by the 20% mark of this course (e.g. day 14 of a ten-week course, day 7 of a 5-week course) using the Religious Accommodations Request Form found on the student dashboard in the my.cityu.edu student portal.

### **Academic Integrity**

Academic integrity in students requires the pursuit of scholarly activity that is free from fraud, deception and unauthorized collaboration with other individuals. Students are responsible for understanding CityU's policy on academic integrity and adhering to its standards in meeting all course requirements. A complete copy of this policy can be found in the [University Catalog](#) under *Student Rights and Responsibilities* on the page titled *Academic Integrity Policy*.

### **Attendance**

Students taking courses in any format at the University are expected to be diligent in their studies and to attend class regularly.

Regular class attendance is important in achieving learning outcomes in the course and may be a valid consideration in determining the final grade. For classes where a physical presence is required, a student has attended if they are present at any time during the class session. For online classes, a student has attended if they have posted or submitted an assignment. A complete copy of this policy can be in the [University Catalog](#) under *Student Rights and Responsibilities* on the page titled *Attendance*.

### **Final Assignment Due Date**

Final assignments for each class at CityU must be due on or before the final date of the course as indicated in the university's course information system. Due dates that extend beyond the final date of the course may negatively impact tuition funding for students.

# Support Services

## Disability Services Accommodations Statement

Students with a documented disability who wish to request academic accommodations are encouraged to contact Disability Support Services to discuss accommodation requests and eligibility requirements. Please contact Disability Support Services at [disability@cityu.edu](mailto:disability@cityu.edu) or 206.239.4752 visit the [Disability Support Services](#) page in the my.cityu.edu portal or in the *Start Your Course Here* module in your course under *Support Services*. Confidentiality will be observed in all inquiries. Once approved, information about academic accommodations will be shared with course instructors.

## Library Services

CityU librarians are available to help students find the resources and information they need to succeed in this course. Contact a CityU librarian through the [Ask a Librarian](#) service, or access [library resources and services online](#), 24 hours a day, seven days a week.

## Online Tutoring

CityU students have access to free online tutoring offered through Brainfuse, including writing support, from certified tutors 24 hours a day, seven days a week. Visit the [Brainfuse](#) page on the my.cityu.edu portal for more information.

# Course Rubrics

## Course Activities

	Below Standard	Approaching Standard	At Standard	Exceeds Standard
<b>Percentage scale:</b>	<b>0.00 – 61.99%</b>	<b>62.00 – 74.99%</b>	<b>75.00 - 91.99%</b>	<b>92.00- 100.00%</b>
<b>Scaled score</b>	<b>0.0 – 0.6</b>	<b>0.7 - 1.9</b>	<b>2.0 - 3.6</b>	<b>3.7 - 4.0</b>
<b>Initial Post: Content &amp; Contribution  25%</b>	Initial post is mostly superficial or undeveloped and does not adequately respond to all	Initial post is generally competent and reasonably developed, but lacking detailed connection to	Initial post provides a competent and adequately developed response to all parts of the	Initial post provides an insightful and well-developed response to all parts of the prompt with

	parts of the initial prompt.	relevant course topics or does not adequately respond to all parts of the initial prompt.	prompt with detailed connection to relevant course topics and resources.	detailed connection to relevant course topics/resources and includes new ideas or real-world examples.
<b>Initial Post: Timeliness</b>  5%	Initial post is late and submitted on Saturday or Sunday.	Initial post is late but submitted before Saturday.	Initial post is submitted on Wednesday.	Initial post is submitted early, before Wednesday.
<b>Replies: Content &amp; Contribution</b>  35%	Replies are mostly superficial or undeveloped and do not contribute beyond what is already provided in the discussions.	Replies are generally competent and reasonably developed, but do not contribute beyond what is already provided in the discussions.	Replies are competent, adequately developed, and provide limited contribution beyond what is already in the discussions.	Replies are insightful, well-developed, and provide new or extended contributions beyond what is already in the discussions.
<b>Replies: Timeliness</b>  5%	Some, or all, required replies are missing or submitted late on Sunday.	Fewer than three replies submitted before Sunday or replies on the same day.	Three replies submitted by Saturday and on at least two separate days.	At least four replies submitted by Saturday and on at least three separate days.
<b>Portfolio: Thoroughness &amp; Reflection</b>  20%	Entry lacks adequate detail, submitted late, or not incorporating feedback from instructor and peers. No personal reflection included.	Entry is detailed and submitted on time, but not adequately incorporating feedback from instructor and peers. Personal reflection is included but lacking detail.	Entry is detailed and submitted on time, and adequately incorporating feedback from instructor and peers. Personal reflection is	Entry is well-detailed, submitted on time, and clearly incorporates feedback from instructor and peers as well as additional insights and understanding. Personal reflection

			adequately detailed.	includes substantial detail.
<b>Grammar, Style, &amp; Mechanics</b>  <b>10%</b>	Pervasive obvious errors in grammar or style/mechanics interfere somewhat with readability or understanding. No sources provided (if applicable)	Multiple obvious errors in grammar or style/mechanics interfere somewhat with readability or understanding. No or incomplete sources provided (if applicable).	Several errors in grammar or style/mechanics, but not interfering with readability or understanding. Credit provided for sources used (if applicable).	Few, or no, errors in grammar with proper writing style/mechanics ensuring readability and understanding. Credit provided for sources used (if applicable).