

# **MATH 107: Mathematical Reasoning and its Applications**

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

5 Credits

Effective Date: Winter 2022

*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 *Meet Your Team* in the online course menu.

## Contact Information

Contact information for instructors is found under *Meet Your Team* in the online course menu.

## Course Description

In this course, students learn how to apply mathematical knowledge and skills for problem-solving, reasoning, and making connections between mathematics and real-world applications. Students are introduced to algebraic expressions, linear equations, polynomials, factoring, inequalities, systems of equations, and geometry. This course serves as a bridge between elementary mathematics and real-world applications of algebra, and it prepares students for success in college mathematics.

## Course Resources

Blitzer, R. F. (2020). Pathways to College Mathematics plus MyLab Math - 18 week access card package: (required access code available only with new copies of text) (2<sup>nd</sup> ed.). Boston, MA: Pearson.

Here is the link to the book as listed at CityU:

[https://cityu.alma.exlibrisgroup.com/leganto/public/01CITYUNIV\\_INST/citation/2435520660004251?auth=SAML](https://cityu.alma.exlibrisgroup.com/leganto/public/01CITYUNIV_INST/citation/2435520660004251?auth=SAML)

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 (“Find Your 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:

- Use mathematical properties and rules for evaluating equations, formulas, and inequalities
- Solve and evaluate real-world scenario-based problems involving one and two variables
- Apply mathematical reasoning for justifying mathematical solutions to real-world scenarios

## 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 *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.

<b><i>Overview of Required Assignments</i></b>	<b><i>% of Final Grade</i></b>
Course Activities	50%
Reflections	20%
Weekly Quizzes	20%
Final Exam	10%
<b>TOTAL</b>	<b>100%</b>

## Course Assignments and Grading

### **Course Activities (50% of Final Grade)**

Students will demonstrate an understanding of course concepts through knowledge check quizzes and practice activities that allow content engagement through instructional videos, animated and interactive activities, and homework assignments.

<b>Components</b>	<b>% of Grade</b>
Engagement	100%
<b>TOTAL</b>	<b>100%</b>

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

Students will complete quizzes to reinforce course concepts. The quizzes test mathematical terminology and the identification and application of mathematical tools. All quizzes are open book and students may use a calculator. Each weekly quiz requires a passing score of 75% in order to move forward in the course. Weekly quizzes can be taken an unlimited number of times to achieve a passing 75% or higher score. To prepare for these quizzes, students will complete self-assessments through daily knowledge checks and hands-on course activities.

<b>Components</b>	<b>% of Grade</b>
Accuracy	100%
<b>TOTAL</b>	<b>100%</b>

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

Students will answer weekly writing prompts that support their reflection on course concepts learned during the week. Each response will be at least 300 words and address each of the prompts thoroughly.

<b>Components</b>	<b>% of Grade</b>
Reflection	40%
Transfer	30%
Context & Assumptions	30%
<b>TOTAL</b>	<b>100%</b>

### **Final Exam (10% of Final Grade)**

Students will demonstrate an understanding of course concepts through 25 multiple choice, fill-in-the-blank, true/false, multiple answer, and matching questions on a final exam. All questions come from the weekly quizzes.

<b>Components</b>	<b>% of Grade</b>
Accuracy	100%
<b>TOTAL</b>	<b>100%</b>

# Course Policies

## Late Assignments

Late assignments are accepted. Students can submit or resubmit any assignments up until the last day of class. In all Flex Courses, late assignments are accepted through the last day of the course, which is Sunday at midnight at the end of Week 5. A late assignment is one that is submitted after the due date and time or after any extension has expired. 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.

There are suggested due dates in the Course Map that students are highly advised to adhere to as this allows them to keep on track and enables them to complete everything with the best retention of information and educational experience. However, students can submit assignments as early as they wish or as late as the last day of class.

## Final Assignment Due Date

According to policy, 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. Note that in Flex Courses, students are encouraged to submit all assignments by the suggested due date listed in the Course Map and to adhere to the final day of the course as the deadline for any assignments including the final assignment.

## Practice Assignments

Each lesson contains a practice assignment. These assignments are not graded but will be evaluated for accuracy. Practice assignments have two purposes: students may demonstrate their understanding of course concepts and develop micro-skills required for graded assignments including Creates, Reflections, Weekly Quizzes and the Final Exam. Targeted feedback on Practice assignments will be given by the instructor that is vital for success in the course. Completing Practice Assignments is highly encouraged, as Practice assignments often contain tasks that are part of a larger, graded Create or Reflection assignment.

## Participation

Students are expected to participate in the course each week in one of the following ways: submission of graded and Practice assignments, taking Knowledge Check and Weekly Quizzes, communicating with the instructor via email, office hours, or phone call to discuss course material or ask for assistance in an assignment. Failure to do these tasks each week will result in being marked absent (see attendance policy below).

# 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 [Title IX](#) portal page 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 the [CityU website](#) under the Policies section or 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*.

### Flex Attendance Policy

The Flex Program attendance policy follows the same criteria as other CityU delivery modes. Here is a description of the attendance criteria for Flex courses.

Each week, attendance will be measured by participation in one or more of the following activities:

- Submitting an academic assignment for feedback (Practice, Reflection, Create)
- Taking a Knowledge Check or Quiz
- Interacting with the instructor regarding the academic subject studied in the course (such as attending an online Office Hours session; and/or attending an arranged video chat/scheduled call with the instructor to discuss course material, assignments, or other academic subject matter).

Completing one or more of these activities each week counts towards participation in a Flex course. This will result in being marked as present in class attendance each week.

Please note that not participating in any of the course activities listed above may result in an administrative withdrawal from the course and may also negatively impact students who are receiving financial assistance.

## **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 or visit the [Disability Support Services](#) page in the my.cityu.edu portal.

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.

### **Smarthinking Tutoring**

CityU students have access to free online tutoring offered through Smarthinking, including writing support, from certified tutors 24 hours a day, seven days a week. Contact CityU's Student Support Center at [mycityusupport@cityu.edu](mailto:mycityusupport@cityu.edu) to request a user name and password.

## **Course Schedule**

Please refer to the Course Map. This can be found in every Flex Course by opening the Course Content tab and clicking on Syllabus and Schedule from the course home page.