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Syllabus

MATH 141: Precalculus

School of Health and Social Sciences

5 Credits
Effective Date: 1/1/2023
Grading Type: Decimal

Pre-requisite: MATH 138 College Algebra

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

This course is designed for students pursuing careers in STEM-related fields and builds upon existing algebra and geometry knowledge and skills. The course covers concepts and topics of mathematical functions and relations and their application for modeling, describing, and solving fundamental real-world mathematical problems. Emphasis is placed on the development of necessary mathematical knowledge and skills needed for upper division coursework and domain- and field-specific applications of mathematics, such as those for computing, engineering, business, sciences, and technology.

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 ("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:

- Differentiate between the types of functions and their properties (linear, quadratic, polynomial, rational, exponential, logarithmic, trigonometric)

- Analyze problems and solutions involving polar coordinates and vectors using algebraic and graphical methods
- Appraise the relationships between mathematics and careers in computing and technology, engineering, science, or business.
- Apply mathematical and graphical methods for solving systems of equations and inequalities (substitution, elimination, determinants, matrices)
- Apply properties of arithmetic and geometric sequences and series
- Use mathematical models and techniques to solve applications and real-world problems

Additional Information

Homework, quizzes, and exams for this course include problems requiring the use of a graphing calculator. Any brand of graphing calculator is sufficient for homework problems, quizzes, or exams. It is not mandatory that students own a graphing calculator. There are free online graphing calculators available and free applications students can install on their smartphone.

Homework, quizzes, and exams will be completed using the online Pearson MyLab Math resources. Students are expected to have reliable Internet access and it is strongly recommended that all homework, quizzes, and exams be completed using a laptop computer or device with a similar screen size. Using a smartphone or small tablet device is not recommended.

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.

Overview of Required Assignments	**% of Final Grade**
Course activities	20%
Homework assignments	30%
Quizzes	20%
Exams	30%

TOTAL	**100%**

Course Assignments and Grading

Course Activities (20% of Final Grade)

During each of the 10 module weeks, students will participate in online discussions. Class participation through discussion and student-to-student interaction is an integral part of this online course, although it is typically less formal than other work submitted throughout the course. Participation is defined as active engagement in a discussion or other online activity.

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

1. Post your responses to discussion questions in the first three days of the assigned module week (Monday through Wednesday).
2. Post two or more thoughtful and topic-relevant comments to responses made by classmates during the remaining days of the assigned module week (Thursday through Saturday). Sunday is for wrap-up.
3. Respond to any questions that your instructor or peers have regarding your original post by the end of the assigned module week.

Components	**% of Grade**
Engagement	100%
TOTAL	**100%**

Homework assignments (30% of Final Grade)

During Modules 1–4 & Modules 6–9, students will complete homework assignments to learn course concepts and topics. Each homework assignment will cover knowledge and skills from the course content for the assigned module week. Completion of homework assignments helps students learn mathematical terminology and identify and apply mathematical knowledge and skills. Students may use a non-CAS calculator. Use of CAS calculators is not permitted when taking quizzes or exams in this course. Students are strongly advised not to use CAS calculators when completing homework.

Components	***% of Grade***
Solve mathematical problems	100%

TOTAL	**100%**

Quizzes (20% of Final Grade)

During Modules 1–4 & Modules 6–9, students will complete quizzes to reinforce course concepts and topics from the weekly homework assignments. The quizzes assess students' understanding of mathematical terminology and application of mathematical knowledge and skills. All quizzes are open notes and students may use a non-CAS calculator. Use of CAS calculators is not permitted. Students may be asked to submit their work for the quizzes and so they should maintain copies of all work for the quizzes until the final day of the course.

Components	**% of Grade**
Solve mathematical problems	100%
TOTAL	**100%**

Exams (30% of Final Grade)

Students complete two exams to comprehensively reinforce course concepts and topics: (1) midterm exam during Module 5 and (2) final exam during Module 10. The midterm exam will cover knowledge and skills from the course content covered in the modules preceding the exam. The final exam will cover knowledge and skills from the course content covered in the modules following the midterm and preceding the final exam, but also relying on retained learning throughout the course. The exams assess students' comprehensive understanding of mathematical terminology and application of mathematical knowledge and skills. Exams are open notes and students may use a non-CAS calculator. Use of CAS calculators is not permitted. Students may be asked to submit their work for the exams and so they should maintain copies of all work for the exams until grades are posted to the Registrar.

Components	***% of Grade***
Solve mathematical problems	100%
TOTAL	**100%**

Course Policies

Course policies on topics such as *Late Assignments, Participation,* and *Professional Writing* are found under *Course Information* in the online course menu. Students are responsible for reviewing and applying these policies while enrolled in this course.

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 up to 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).

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.*

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* 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.ed to request a user name and password.

Course Rubrics

Course Activities

	Below Standard	Approaching Standard	At Standard	Exceeds Standard
Scale	**0.00 – 61.99**	**62.00 – 74.99**	**75.00 – 91.99**	**92.00 – 100**
Decimal grade equivalent	**0.0 – 1.9**	**2.0 – 2.6**	**2.7 – 3.6**	**3.7 – 4.0**
Engagement (100%)	Participates but does not adequately complete required parts of the activity	Completes most required parts of the activity with superficial thought or preparation	Completes all required parts of the activity with substantive thought or preparation	Completes all required parts of the activity with substantive thought or preparation, and expands on the discussions or topics

Homework Assignments

	Below Standard	Approaching Standard	At Standard	Exceeds Standard
Scale	**0.00 – 61.99**	**62.00 – 74.99**	**75.00 – 91.99**	**92.00 – 100**
Decimal grade equivalent	**0.0 – 1.9**	**2.0 – 2.6**	**2.7 – 3.6**	**3.7 – 4.0**
Solve mathematical problems (100%)	Solves less than 62% of assigned problems correctly. Does not	Solves at least 62% but less than 75% of assigned problems correctly.	Solves at least 75% but less than 92% of assigned problems correctly.	Solves at least 92% of assigned problems correctly. Demonstrates

	adequately demonstrate an understanding of course concepts.	Limited ability to demonstrate an understanding of course concepts.	Adequately demonstrates an understanding of course concepts.	an understanding of course concepts with proficiency.

Quizzes

	Below Standard	**Approaching Standard**	**At Standard**	**Exceeds Standard**
Scale	**0.00 – 61.99**	**62.00 – 74.99**	**75.00 – 91.99**	**92.00 – 100**
Decimal grade equivalent	**0.0 – 1.9**	**2.0 – 2.6**	**2.7 – 3.6**	**3.7 – 4.0**
Solve mathematical problems (100%)	Solves less than 62% of assigned problems correctly. Does not adequately demonstrate an understanding of course concepts.	Solves at least 62% but less than 75% of assigned problems correctly. Limited ability to demonstrate an understanding of course concepts.	Solves at least 75% but less than 92% of assigned problems correctly. Adequately demonstrates an understanding of course concepts.	Solves at least 92% of assigned problems correctly. Demonstrates an understanding of course concepts with proficiency.

Exams

	Below Standard	**Approaching Standard**	**At Standard**	**Exceeds Standard**
Scale	**0.00 – 61.99**	**62.00 – 74.99**	**75.00 – 91.99**	**92.00 – 100**

Decimal grade equivalent	0.0 – 1.9	2.0 – 2.6	2.7 – 3.6	3.7 – 4.0
Solve mathematical problems (100%)	Solves less than 62% of assigned problems correctly. Does not adequately demonstrate an understanding of course concepts.	Solves at least 62% but less than 75% of assigned problems correctly. Limited ability to demonstrate an understanding of course concepts.	Solves at least 75% but less than 92% of assigned problems correctly. Adequately demonstrates an understanding of course concepts.	Solves at least 92% of assigned problems correctly. Demonstrates an understanding of course concepts with proficiency.