MTH 148 – 7101 - Online College Algebra

University of Massachusetts Dartmouth

Course Information

Course Name: College Algebra
Course ID: MTH 148
Semester: Summer 2019
Mode: Online

Instructor Information

Name: Adriano Marzullo
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Phone: 882-999-8323
Office Hours: online

Weekly Course Structure

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Online Coursework	Online Coursework Online Office Hours: by appointment	Online Coursework Online Office Hours: TBA	Online Coursework	Online Coursework Online Office Hours: TBA	Online Coursework Online Office Hours: by appointment	Online Coursework

Course Description

An introduction to the main concepts and techniques of college algebra. Topics include linear, quadratic, exponential and logarithmic functions, as well as modeling of data using functions. This is the first semester of the college math sequence designed for students interested in Biology and Life Sciences. This course fulfills the general education core requirements for Biology and Life Sciences majors who matriculated prior to Fall 2012 and has been approved by University Studies Curriculum for students matriculating in Fall 2012 or later.

Prerequisite:
None

Course Credits:
Number of credits: 3;

Required Text:
Stewart|Larson, *College Algebra, Custom edition for University of Massachusetts Dartmouth*, Cengage 2018.

Except for the book, there is no additional material for this class. Since all the assignments will be administered through WebAssign, It is important for the students to buy the textbook with the WebAssign Access Code included

 If students prefer to purchase just the WebAssign code for this class and have access to the text electronically:
- WebAssign code ISBN: 9781337771863

Since some of the students enrolled in this class, may take other courses not only in Mathematics but also in Physics and Chemistry adopting Cengage books, some of you may choose to buy the Cengage Unlimited subscription which allows students to pay once and get access to ALL of Cengage Material material and therefore the materials for all of their courses covered by Cengage. Here are the options:

- Cengage Unlimited 1 semester subscription ISBN: 9780357700006
- Cengage Unlimited 1 year subscription ISBN: 9780357700013
- Cengage Unlimited 2 years subscription:ISBN: 9780357700020

Course Objectives

- Identify and define functions from tables, graphs, formulas, and verbal statements;
- Solve problems using the concepts of functions, such as domain, range, and vertical line test;
- Graph linear functions and write their equations, find and interpret the slope, intercept and, the average rate of change;
- Define and graph a quadratic function for applied problems by hand and regression analysis;
- Determine and explain the properties of a parabola, such as a vertex, heights, lows, and intercepts;
- Solve quadratic equations by factoring, quadratic formula, square root, and graphic methods;
- Develop and graph exponential and logarithmic models by hand or graphic calculator;
- Solve problems using exponential and logarithmic functions, and explain the conclusions;
- Compare and select the appropriate regression model for specific problems;
- Calculate compound interest, understand the continuous compounding formula;
- Reason and communicate using mathematical concepts both in written and oral format;
- Develop good analytical and problem-solving skills through class activities and team-wor

Communication Plan

Expectations for Electronic Communication
Please use email *ONLY* when the subject is of a personal and confidential matter. If the question you ask is of a nature that even one other person in the course could benefit from the answer, post the question in the appropriate discussion board forum.

I check my email daily Monday through Sunday during normal business hours only. You can expect a reply from me via email within 24 hours during the week.

I will also check the discussion forums daily during the week. I will post often during the first weeks of the course and then drop off in Activity while expecting participants to fill any void. Rest assured, however, I *will* be participating in what I hope will be lively discussions and will *always* reply to any discussion comment directed specifically at me.

Time Considerations
Students should be prepared to spend a minimum of 3 hours a week on reading and on course assignments. While you may feel that I'm displaying a lot of information to you on a weekly basis remember that in a traditional "live" course you would be coming to class for 3 hours and then spending an additional 3-6 hours (at least) outside of class on assignments and reading. In our online course environment, my expectation is that you will be spending those 3 "class hours" on your own, working on the concepts that you would usually get in a live lecture. Please be sure to budget your time accordingly!

Substantive participation in online discussions should:
- Ask insightful questions
- Answer other people's questions
- Make comments that are relevant to the course content and objectives

Methods of Instruction

Final Grade Breakdown:

Class Participation/Attendance	10%
Quizzes	30%
Exams	40%
Final Exam	20%

ALL the required quizzes and exams given online must be completed based on pre-requisites (mastery): that is in order to be able to take Quiz 1.2, students have to achieve at least a 65% or a higher score in Quiz 1.1, students have to take at least 65% or a higher score in Quiz 1.2 in order to take Quiz 1.3 and so on; similarly in order to take the Exam 1 at the end of Unit 1, students have to take at least 65% in Quiz 1.5, and in order to take Quiz 2.1, they have to take at least 65% in Exam 1.

Students will have practice homework for each subunit they will cover. **Practice homework will be ALWAYS open and available to students to practice not only for the subunit quiz and the unit exam but also for the cumulative final exam.**

Late assignments will be subjected to a 10% grade reduction if submitted within one week from the due date. If assignments are submitted AFTER one week from their due date, they will be subjected to a 50% grade reduction. All the reductions will be applied on myCourses so that students can keep working on WebAssign.

 At the of each unit, students will have a **discussion forum assignment** - In order to have full credits in the category "Class Participation/Attendance " students are expected to

- Participate in the discussion forum, by asking or solving the exercises proposed;
- Submit ALL their assignments ON TIME.

Incomplete Policy

According to the university catalog, an incomplete may be given only in exceptional circumstances at the instructor's discretion. The student must be passing at the time of the request or be sufficiently close to passing. If the work is not completed within one year of the recording of the incomplete grade, the grade will become an F(I). The incomplete policy for this course is that at least 70% of the course must be already completed and an exceptional circumstance (i.e. medical issue) must exist. If you feel you require an incomplete for an exceptional reason, you need to email me and state your reasons for the incomplete in writing. We will then decide on a course of action.

Course Conduct

UMass Dartmouth policies regarding equal opportunity, discrimination, harassment, and sexual violence apply to all learning environments wherever they are located and from wherever they are taught. This applies to all UE face-to-face, off-campus, blended, and online courses. Please see the Office of Diversity, Equity & Inclusion policies page for more information.

Student Academic Integrity Policy

All UMass Dartmouth students are expected to maintain high standards of academic integrity and scholarly practice. The University does not tolerate academic dishonesty of any variety, whether as a result of a failure to understand required an academic and scholarly procedure or as an act of intentional dishonesty.

A student found responsible for academic dishonesty is subject to severe disciplinary action which may include dismissal from the University. The procedure for responding to incidents of academic dishonesty may be found in Section III of this document. You may also refer to the Student Handbook for information about the judicial process.

A high standard of academic integrity promotes the pursuit of truth and learning and respect for the intellectual accomplishments of others. These are values that are fundamental to the mission of this University. Such values are undermined by academic dishonesty.

Academic freedom is a fundamental right in any institution of higher learning. Honesty and integrity are necessary preconditions of this freedom. Academic integrity requires that all academic work be wholly the product of an identified individual or individuals. Joint efforts are legitimate only when the assistance of others is explicitly acknowledged and deemed appropriate by the instructor of the course. Ethical conduct is the obligation of every member of the University community, and breaches of academic integrity constitute serious offenses.

Maintenance of the standards of academic integrity and the successful administration of this policy depend on the mutual cooperation of faculty and students.

Faculty cooperation is essential for the successful application of the procedures defined by this Academic Integrity Policy. Faculty members promote academic integrity by making clear on their syllabi their expectations concerning homework assignments, collaborative student efforts, research papers, examinations, computer-based infractions, and the like. Efforts should be made to detect and to prevent cheating and plagiarism in all academic assignments. If faculty members have evidence of academic dishonesty, they are expected to report such evidence promptly.

Students must assume responsibility for maintaining honesty in all work submitted for credit and in any other work designated by the instructor of the course. Students are also expected to report incidents of academic dishonesty to the instructor or dean of the instructional unit.

The intent of this policy is to make clear the standards of academic integrity at UMass Dartmouth.

*For additional information on violations, infractions, and consequences visit the UMass Dartmouth Student Academic Integrity Policy.

Center for Access and Success
In accordance with University policy, if you have a documented disability and require accommodations to obtain equal access in this course, please meet with the instructor at the beginning of the semester and provide the appropriate paperwork from the Center for Access and Success. The necessary paperwork is obtained when you bring proper documentation to the Center.

Credit Hour Definition
One credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates not less than:
1. One hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks (includes exam week) for one semester or the equivalent amount of work over a different amount of time.
2. At least an equivalent amount of work as required in paragraph (1) of this definition for other academic activities as established by the institution, including laboratory work,

internships, practica, studio work, and other academic work leading to the award of credit hours.

Because this is a 3-credit class, 3 hours per week of in-class work and 6 hours per week of out-of-class work are required.

Other Resources for UMass Dartmouth Students

Tutoring
If you have difficulty with the coursework, please:
- Contact me directly using the contact information listed at the top of this document.
- Contact the Academic Resource Center (ARC) for support:
  - Location: Liberal Arts Room 007
  - Phone: 508.999.8708
  -

Technical Help
- 24/7 email, live chat, and phone support for myCourses are available at the myCourses support portal.
- Support information for all other UMass Dartmouth technologies can be found on the Technical Resources page.

Course Schedule

Unit Start/End Dates	Unit Topics	Students' Responsibilities
Unit 1 – Functions 06/11 – 06/17 **NOTE**: All the Unit 1 assignments are due by Monday, June 17 at 11:59 pm	• 1.1 – Functions (Tuesday) • 1.2 – Graphs of Functions (Wednesday) • 1.3 – Getting Info From Graphs (Thursday) • 1.4 – Transformations of Functions (Friday) • 1.5 – Combining Functions (Saturday)	**Reading**: 1.1 – Pages 70-77; 1.2 – Pages 81-88; 1.3 – Pages 92-100; 1.4 – Pages 152-159; 1.5 – Pages 164-171; **Activities:** Practice Homework and Discussion Board Assignment Unit 1 **Assessment:** Quiz 1.1 (Tuesday) Quiz 1.2 (Wednesday) Quiz 1.3 (Thursday) Quiz 1.4 (Friday) Quiz 1.5 (Saturday) Exam 1 (Sunday)

Unit Start/End Dates	Unit Topics	Students' Responsibilities
Units 2 – Advanced Topics with Functions 06/18 – 06/22 **NOTE**: All the Units 2 assignments are due by Saturday, June 22 at 11:59 pm	• 2.1 – Lines (Tuesday) • 2.2 – Linear Functions (Wednesday) • 2.3 – One to One Functions (Thursday)	**Reading:** 2.1 – Pages 106-119; 2.2 – Pages 126-131; 2.3 – Pages 173-179; **Activities:** Practice Homework and Discussion Board Assignment Unit 2 **Assessment**: Quiz 2.1 (Tuesday) Quiz 2.2 (Wednesday) Quiz 2.3 (Thursday) Exam 2 (Friday)

Unit Start/End Dates	Unit Topics	Students' Responsibilities
Units 3 – Equations and Inequalities 06/23 – 06/27 **NOTE**: All the Units 3 assignments are due by Thursday, June 27 at 11:59 pm	• 3.1 – Linear Equations (Sunday) • 3.2 – Linear Inequalities – Absolute Value Equations and Inequalities (Monday) • 3.3 – Systems of Linear Equations (Tuesday)	**Reading:** 3.1 – Pages 192-193; 3.2 – Pages 201-202; 3.3 – Pages 216-223; **Activities**: Practice Homework and Discussion Board Assignment Unit 3 **Assessment:** Quiz 3.1 (Sunday) Quiz 3.2 (Monday) Quiz 3.3 (Tuesday) Exam 3 (Wednesday)

Unit Start/End Dates	Unit Topics	Students' Responsibilities
Units 4 – Polynomial and Rational Functions 06/28 – 07/03	• 4.1 – Quadratic Equations (Friday) • 4.2 – Quadratic Functions (Saturday)	**Reading:** 4.1 – Pages 319-326; 4.2 – Pages 336-341; 4.3 – Pages 344-355;

	• 4.3 – Polynomial Functions (Sunday) • 4.4 – Polynomial and Synthetic Division (Monday) • 4.5 – Zeros of Polynomial Functions (Tuesday) • 4.6 – Rational Functions (Wednesday)	4.4 – Pages 360-365; 4.5 – Pages 369- 373; 4.6 – Pages 399-409; **Activities:** Practice Homework and Discussion Board Assignment Unit 4 **Assessment:** Quiz 4.1 (Friday) Quiz 4.2 (Saturday) Quiz 4.3 (Sunday) Quiz 4.4 (Monday) Quiz 4.5 (Tuesday) Quiz 4.6 (Wednesday) Exam 4 (Wednesday)

Unit Start/End Dates	Unit Topics	Students' Responsibilities
Units 5 – Exponential and Logarithmic Functions 07/5– 07/10 **NOTE**: All the Units 5 assignments are due by Wednesday, July 10 at 11:59 pm	• 5.1 – Exponential Functions (Friday) • 5.2 – Logarithmic Functions (Saturday) • 5.3 – Laws of Exponents (Sunday) • 5.4 – Exponential and Logarithmic Equations (Monday) • 5.5 – Exponential and Logarithmic Models (Tuesday)	**Reading:** 5.1 – Pages 424-431; 5.2 – Pages 436-443; 5.3 – Pages 446-450; 5.4 – Pages 452-459; 5.5 – Pages 462- 470; **Activities:** Practice Homework and Discussion Board Assignment Unit 4 **Assessment:** Quiz 5.1 (Friday) Quiz 5.2 (Saturday) Quiz 5.3 (Sunday) Quiz 5.4 (Monday) Quiz 5.5 (Tuesday) Exam 5 (Wednesday)

Final Exam 07/11	Cumulative	