MATH 115 020

MATH 115 - COLLEGE ALGEBRA

Fall 2020 Syllabus, Section 020, CRN 4903

Times and Location

MW 2pm-4:15pm (8/24 to 12/14)

Join via "Nilsen Virtual Classroom - Zoom Link" on Blackboard

Instructor Information

Bailey Nilsen
Email: bnilsen@towson.edu
Office: "Nilsen Virtual Classroom - Zoom Link" on Blackboard
Office Hours: Tuesday 9:30 - 11a & Thursday 1:30 - 3p
Cell Phone: 405-205-5424

Course Description

Equations and the concept of function; linear, quadratic, higher-degree polynomial, exponential, logarithmic, and rational functions; complex numbers. Not open to those who have successfully completed MATH 119. Prerequisite: qualifying score on Math Placement exam or MATH 102. Core: Mathematics.

Course Learning Outcomes

This University core course is designed to meet these four learning goals:

- Construct and evaluate logical arguments
- Apply and adapt a variety of appropriate strategies to solve mathematical problems
- Recognize and apply mathematics in contexts outside of mathematics
- Organize and consolidate mathematical thinking through written and oral communication

Course Objectives

As a result of taking this course, students should learn about various types of mathematical functions. Students should also learn how to apply such functions to solving real-world problems in the life and physical sciences as well as in personal finance.

Textbooks

The textbook that this course uses is the following:

Lial, Hornsby, Schneider, Daniels, Essentials of College Algebra 12th edition (Pearson, 2019)

This semester we will be using a first-day tool called Direct Access, which the University Store offers through Blackboard. Direct Access includes both the textbook and MyMathLab, which is a required and important feature of the course. Unless you opt out of Direct Access, you will be direct billed direct billed on your student account after the first two weeks of class. To access and review your materials for the class, log into your Blackboard account.

You can opt out of Direct Access, but you need to do so by 11:59 p.m. on Sunday (August 30). If you do opt out, you still need to acquire MyMathLab by some other method. Using Direct Access will be less expensive for you.

The due dates for the online assignments are indicated in the schedule of topics further on in this syllabus, and they are also listed in your MyMathLab account when you log onto it. All the online homework assignments averaged together will count towards 15% of your final grade.

Blackboard

Outside of class, I will keep in contact with students via Blackboard (BB). On BB, you will find announcements, instructional materials (such as supplementary video lectures, powerpoints, etc.) and you will also find important information regarding the course. Therefore, you should check your Blackboard account for this course regularly throughout the semester.

To get into your Blackboard account, use the following URL and then click the title of this course: bbweb.towson.edu (http://catalog.towson.edu/syllabi/2020-fall/math-115-001/bbweb.towson.edu)

Calculator

A graphing calculator is required for this course, and I recommend that students use Desmos (free online graphing calculator) or some model of TI-83 or TI-84. You may use another make or model of graphing calculator (with some limitations), but I will teach using primarily Desmos. On BB you will find the link to the free online calculator, Desmos. If you are using a TI-83 or TI-84, I will be able to assist you. If you choose a different model, you will need to know how to operate it yourself.

Attendance/Absence Policy

Students are expected to attend all classes. Consistent attendance offers the most effective opportunity for students to understand concepts, materials and expectations of those courses in which they are enrolled. Although some courses do not use attendance as a criterion for grading, there are others where in-class participation is an integral part of the course. Examples include, but are not limited to, seminars and courses that require public speaking, laboratories, language learning, group discussions or internships. Frequent absences from these types of courses, whether excused or unexcused, may affect the final grade. Faculty who use absences as a factor in grading must explain in the course syllabus what effect even an excused absence might have on the evaluation of a student's work.

1. It is the policy of the university to excuse the absences of students for the following reasons:
2. illness or injury when the student is unable to attend class
3. death of a family member (see the Student Bereavement Procedure (https://www.towson.edu/studentaffairs/policies/documents/bereavement.pdf) on the website)
4. religious observance where the nature of the observance prevents the student from attending class
5. participation in university activities at the request of university authorities (e.g., Intercollegiate Athletics, Forensics Team, Dance Company, etc.)
6. compelling verifiable circumstances beyond the control of the student

Students requesting an excused absence must provide documentation to the instructor two weeks prior to the scheduled absence when known in advance or as soon as possible when not known in advance. Absences that do not fall into any of the above categories are unexcused. Faculty may set a limit on the number of unexcused absences.

1. Students who will be representing TU at events, conferences, or other official activities should obtain a Notification of Absence from Class Form from the Office of Campus Life, University Union 232, to be given to their instructors to verify the excused absence. Students are encouraged to notify faculty of anticipated class absences as soon as they learn they will be missing class.
2. Students who are absent from class are responsible for any missed work, assignments or assessments (e.g., quizzes, tests, papers, etc.). Faculty members are required to allow students with documented excused absences to make up missed work or assignments when this is feasible. When the nature of the assignment makes this impossible, faculty members should attempt to make a reasonable adjustment of the assignment.
3. Students who fail to appear for the first two class sessions, or the first session of evening classes, may forfeit their space in class. Instructors have the right to release these spaces to other students wishing to add the class to their schedules. Students who lose their spaces must officially withdraw from the course through the Registrar's Office to avoid earning an FX grade for non-attendance. See the sections on Changing a Schedule (https://catalog.towson.edu/undergraduate/academic-policies/changing-schedule/) and Grades/Grading (https://catalog.towson.edu/undergraduate/academic-policies/grades-grading/) for further information.

Students may not attend a class until they are registered for the class, and they must satisfy all financial obligations to the institution before they register. Family members, including children, of students are not permitted to attend classes. On rare occasions, this might be permitted if related to a course activity such as a presentation.

Preparing for Exams and Learning the Material

To learn the material and prepare for the exams in this course, above all you should attend class regularly. Furthermore, the online homework assignments provide an excellent learning source, besides being an important component of the course grade. There are additional resource available through MML.

Math Tutoring

The Tutoring and Learning Center (TLC) makes tutoring services for this course available on a drop-in basis and by appointment. You can receive tutoring at the Mathematics Lab at 7800 York Road, Room 109. For detailed information, look at the ACC's website,located at this URL: https://www.towson.edu/tutoring-learning/

Academic Integrity Policy

The academic integrity policy for this course is consistent with the TU Academic Integrity Policy. The policy can be reviewed here: https://www.towson.edu/about/administration/policies/documents/polices/03-01-00-student-academic-integrity-policy.pdf. (https://www.towson.edu/about/administration/policies/documents/polices/03-01-00-student-academic-integrity-policy.pdf)

Mathematics Department Diversity Statement

Department of Mathematics Commitment to Diversity: Towson University values diversity and fosters a climate that is grounded in respect and inclusion. Everyone participating in this course is expected to treat all others in accordance with this vision and policy. TU's diversity tenets include sex, sexual orientation, race and ethnicity, color, nationality, gender identity or expression, mental/physical ability, religious affiliation, age, and veteran status. If you feel these expectations have not been met, please contact the Math Department's Diversity representative, Dr. Goode at egoode@towson.edu.

Students with Disabilities Policy

This course is in compliance with Towson University policies for students with disabilities. Students with disabilities are encouraged to register with Accessibility & Disability Services (ADS), 7720 York Road, Suite 232, 410-704-2638 (Voice) or 410-704- 4423 (TDD). Students who suspect that they have a disability but do not have documentation are encouraged to contact ADS for advice on how to obtain appropriate evaluation. A memo from ADS authorizing your accommodation is needed before any accommodation can be made.

https://www.towson.edu/accessibility-disability-services/

Student Workload Expectations

Federal and State regulations require that students should expect to spend at least two hours per week per credit hour for working on course-related activity outside of the classroom. Thus, students are expected to spend at least six hours per week outside of the three hours of classroom lecture to succeed in MATH 115.

Here are examples of outside-classroom activities: reading the textbook before lecture, rewriting lecture notes, redoing problems presented in class, watching/rewatching videos provided to you by the instructor or via MML, completing assigned homework, completing additional problems to ensure mastery of concepts, and preparing for tests.

Assessments

Test 1 20%
Test 2 20%
Test 3 20%
Final Exam 20%
Online Homework 20%

Grading Scheme/Policy

Grade	Grade Points Per Unit
A	93% ≤ x ≤ 100%
A-	90% ≤ x < 93%
B+	87% ≤ x < 90%
B	83% ≤ x < 87%
B-	80% ≤ x < 83%
C+	76% ≤ x < 80%
C	70% ≤ x < 76%
D+	66% ≤ x < 70%
D	60% ≤ x < 66%
F	0% ≤ x < 60%

MATH Department Guidelines for Remote Learning

Equipment for remote learning:

A laptop or desktop with reliable internet and a webcam. Even though the Coronavirus pandemic means we can't have normal face-to-face class, we would like to build community within our class as much as possible. I want you to see my face and each other's. It's helpful when I'm attempting to hold a discussion if I can "read" your faces: confused? nodding in understanding? Etc. For these reasons, the expectation is that during our live online class meetings you have **your webcam turned on**. You are welcome to use a virtual background, as long as it's not distracting. If for any reason, you believe you should be exempt from this expectation, please reach out to me ASAP. I'm happy to discuss the issue, and our meeting will be confidential.

Mode of Course Delivery

This class will employ a "flipped" instructional approach. As such, you will be assigned work to do BEFORE coming to class – typically watching videos. Class time will be spent working on problems and activities either in a group or individually. We hope this course organization will help you "learn by doing" and develop a strong understanding of MATH

Video Conference Platform for live, remote classes:

We will meet on Zoom, and the link for that meeting is found in our Blackboard Course. See "Zoom" folder on left side.
Please *sign up for a Zoom account through Towson* by following the steps here (https://www.towson.edu/technology/training/resources/webconferencing/zoom.html) (depending on whether you already have an account or not).

Administration of Exams and Quizzes:

For these assessments done synchronously, you will sign into Zoom **from your phone**, remain muted (mic off), keep speaker on and keep webcam on, and set your phone up to show your workspace (your paper, your hands, your laptop, at least some of your face.) Acceptable views are shown in the Tech Skills Assignment. During the assessment, you will address all questions to me via chat box or email.

Just as in face-to face classes, the teacher can monitor their students, and students can see others working around them during testing. Monitoring you as described is intended to let everyone know, especially those of you who ***do*** act with integrity and honesty, that I take Academic Integrity seriously, and seek to diminish others' temptations to behave dishonestly, so that everyone is on a level playing field.

Students who complete an assessment without adhering to the process will receive a zero on the assessment. If for any reason, this requirement is a problem for you, you need to tell me about it ***now*** (within first 2 weeks of semester), so that we can discuss the situation and if necessary, come up with an alternate plan. If you are more comfortable, feel free to reach out to Assistant Chair of the Math Department, fshore@towson.edu about this course requirement.

Schedule of Topics and Assignments

Week of	Reading(s):	Agenda/Topic:	Due:
8/24	8/30: Change-of-schedule period ends - Last day to drop a course with no grade posted to academic record - Last day to add a course	Syllabus & course outline. Section R.3: "Polynomials" Section R.4: "Factoring Polynomials" Section R.5: "Rational Expressions"	
8/31		Section R.6: "Rational Exponents" Section R.7: "Radical Expressions" Section 1.1: "Linear Equations"	Due : Tech Skills Assignment -- due on August 31 at 08:00. Homework #1, which covers R.3 — due on August 31 at 08:00. Homework #2, which covers R.4 — due on August 31 at 08:00. Homework #3, which covers R.5 — due on August 31 at 08:00.
9/7	9/7 Labor Day Holliday: No Class	Section 1.2: "Applications & Modeling with Linear Equations" Section 1.3: "Complex Numbers" Section 1.4: "Quadratic Equations" Labor Day (No class)	Homework #4, which covers R.6 — due on September 07 at 08:00. Homework #5, which covers R.7 — due on September 07 at 08:00. Homework #6, which covers Section 1.1 — due on September 07 at 08:00.
9/14		Section 1.5: "Applications & Modeling with Quadratic Equations" Section 1.6: "Other Types of Equations & Applications"	Homework #7, which covers Section 1.2 — due on September 14 at 08:00. Homework #8, which covers Section 1.3 — due on September 14 at 08:00. Homework #9, which covers Section 1.4 — due on September 14 at 08:00.
9/21		Review for Test 1 Section 1.7: "Inequalities"	Homework #10, which covers Section 1.5 — due on September 21 at 08:00. Homework #11, which covers Section 1.6 — due on September 21 at 08:00. Test 1 (covers Sections 1.1, 1.2, 1.3, 1.4, 1.5, 1.6)

9/28		Section 1.8: “Absolute Value Functions & Inequalities” Section 2.1: “Rectangular Coordinates & Graphs” Section 2.3: “Functions”	Homework #12, which covers Section 1.7 — due on September 28 at 08:00.
10/5		Section 2.4: “Linear Functions” Section 2.5: “Equations of Lines & Linear Models” Section 2.6: “Graphs of Basic Functions”	Homework #13, which covers Section 1.8 — due on October 05 at 08:00. Homework #14, which covers Section 2.1 — due on October 05 at 08:00. Homework #15, which covers Section 2.3 — due on October 05 at 08:00.
10/12		Section 2.7: “Graphing Techniques” Section 2.8: “Function Operations & Composition” Review for Test 2	Homework #16, which covers Section 2.4 — due on October 12 at 08:00. Homework #17, which covers Section 2.5 — due on October 12 at 08:00. Homework #18, which covers Section 2.6 — due on October 12 at 08:00.
10/19		Section 3.1: “Quadratic Functions & Models” Section 3.2: “Synthetic Division”	Homework #19, which covers Section 2.7 — due on October 19 at 08:00. Homework #20, which covers Section 2.8 — due on October 19 at 08:00. Test 2 (covers Sections 1.7, 1.8, 2.1, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8)
10/26		Section 3.3: “Zeros of Polynomial Functions” Section 3.4: “Polynomial Functions: Graphs, Applications, & Models”	Homework #21, which covers Section 3.1 — due on October 26 at 08:00. Homework #22, which covers Section 3.2 — due on October 26 at 08:00.
11/2	11/2 - Last day to withdraw with a grade of ‘W’ Last day to change to pass/fail option or audit options	Section 3.5: “Rational Functions: Graphs, Applications, & Models” Section 3.6: “Variation”	Homework #23, which covers Section 3.3 — due on November 02 at 08:00. Homework #24, which covers Section 3.4 — due on November 02 at 08:00.
11/9		Section 4.1: “Inverse Functions” Section 4.2: “Exponential Functions”	Homework #25 which covers Section 3.5 — due on November 09 at 08:00. Homework #26, which covers Section 3.6 — due on November 09 at 08:00.
11/16		Section 4.3: “Logarithmic Functions” Section 4.4: “Evaluating Logarithms & the Change-of-Base Theorem” Review for Test 3	NeHomework #27, which covers Section 4.1 — due on November 16 at 08:00. Homework #28, which covers Section 4.2 — due on November 16 at 08:00. Test 3 (covers Sections 3.1, 3.2, 3.3, 3.4, 3.5, 3.6

11/23	11/25 - 11/29 Thanksgiving Holiday: No Classes	Section 4.5: “Exponential & Logarithmic Equations” & Section 4.6: “Applications & Models of Exponential Growth & Decay” [begin these sections]	Homework #29, which covers Section 4.3 — due on November 23 at 08:00. Homework #30, which covers Section 4.4 — due on November 23 at 08:00.
11/25		Thanksgiving Holiday (No class)	
11/30		Section 4.5: “Exponential & Logarithmic Equations” & Section 4.6: “Applications & Models of Exponential Growth & Decay” [finish these sections]	Homework #31, which covers Section 4.5 — due on November 30 at 08:00. Homework #32, which covers Section 4.6 — due on November 30 at 08:00.
12/7	Final Exam period (December 08 – 14)		