

Lamar University  
Department of Mathematics

MATH 2311-01: Precalculus I (3 hour course)  
Fall 2017  
Syllabus  
MWF 10:20 am - 11:15 pm in Lucas 113

**Instructor:** Dr. Jacqueline Jensen-Vallin

**Office:** 200F Lucas Engineering

**Phone:** 409-880-7859

**E-mail:** jacqueline.jensen@lamar.edu

**Office Hours:** MWF 9 - 10 am. Other times are available by appointment.

**Problem Session:** Tuesday 11 am - noon.

**Electronic Communication Policy:** I will respond to all electronic communication, whether through email, Facebook or other social media, within two business days. In order for me to respond to any message, the message needs to include your name and which class you are in. Without that information, I cannot respond in an appropriate and timely way.

**Please do not send messages via Blackboard. I do not get alerts about these messages and usually do not see them for days or weeks.**

**Text:** *Precalculus - Custom Edition Package Lamar University, by Michael Sullivan*  
*Package ISBN: 1323034757*

**Facebook:** For the Fall 2017 semester, the Precalculus Facebook group will be used for students to ask questions about problems or anything else related to Precalculus with fellow classmates or instructors. Please use the following link:  
<https://www.facebook.com/groups/1587308807987810/> to join the group.

**Blackboard:** Blackboard will be used for course documents and for online quizzes (see below). Check this after each class period (or before each class period).

**Prerequisites:** 350 Math TSI, TSI Complete, or TSI Exempt

**Catalog Description:** In-depth study and applications of polynomial, rational, radical, exponential and logarithmic functions, and systems of equations.

**Prepares for:** MATH 1316, 1325, 1342, 1350, 2312, 2376, 3312, 3313

**Offered:** Fall, Spring, Summer

**Lectures/Discussions:** Class will be a mixture of discussion, group work on in-class assignments, presentations by students, and lecture by the faculty members. Because much of the course content will be presented by your classmates, it is exceptionally important that you attend every class and be on time.

### Success in Mathematics Courses

Mathematics is not a spectator sport. You must participate in the course and in the learning environment to get the most out of this course. Therefore, part of your grade will depend on you doing so - being active and involved. To demonstrate how important this is, that involvement will count towards your course grade. More about this below.

Also, you should note that the purpose of this course is to prepare you for calculus. Therefore, we will be working hard and focusing on algebra skills which are necessary for that future success. As the course progresses, we will try to be explicit about how you will need these tools in future math courses.

The material for this course builds on itself. If you find yourself behind, it will be very difficult to catch up. However, we are dedicated to your success in this course and will help you as much as we can. To that end, you should take advantage of the drop-in tutoring lab in 209 Lucas (M-F 8 am to 4 pm) and office hours. If you cannot make office hours, please let us know and we'll schedule an appointment. Remember, though, that you need to take charge of your learning. You will likely know if you are falling behind before we, as instructors, realize it.

Our goals for this course are the content goals listed below, but even more, we are interested in making you strong critical thinkers and problem solvers. You will learn algebra and mathematics needed for future courses, but you will also learn how to solve new problems and how to justify your work. You will also learn how to critically examine solutions posed by your classmates. These skills are as important as the mathematics, and are emphasized by the weighting of your course participation points (see below).

**A special note about calculators: No graphing calculators will be allowed in this course.** You may use a four-function calculator or a scientific calculator, but cell phones may not be used as calculators. If you have trouble obtaining such a calculator,

please let me know so that we can help.

**MATH 2311 Learning Outcomes:** Upon successful completion of the course, students will be able to:

1. Define and use properties of functions, which include domain and range, operations, compositions, and inverses;
2. Delineate and apply polynomial, rational, radical, exponential, and logarithmic functions and solve related equations and application problems;
3. Apply graphing techniques;
4. Evaluate all roots of higher degree polynomials and rational functions;
5. Describe and solve systems of equations and solve application problems;
6. Demonstrate facility with algebraic manipulations.

**MATH 2311 List of Topics:**

- Real Numbers
- Algebra Essentials
- Geometry Essentials
- Polynomials
- Factoring Polynomials
- Rational Expressions
- nth Roots, Rational Exponents
- Linear Equations
- Quadratic Equations
- Radical Equations, Equations Quadratic in Form, Factorable Equations
- Systems of Linear Equations: Substitution and Elimination
- Systems of Linear Equations: Matrices
- Systems of Nonlinear Equations
- Solving Inequalities
- Equations and Inequalities Involving Absolute Value
- Problem Solving: Interest, Mixture, Uniform Motion, and Constant Rate Job Applications
- The Distance and Midpoint Formulas
- Graphs of Equations in Two Variables, Intercepts, Symmetry

- Lines
- Circles
- Functions
- The Graph of a Function
- Properties of Functions
- Library of Functions, Piecewise-defined Functions
- Graphing Techniques: Transformations
- Mathematical Models: Building Functions
- Linear Functions and Their Properties
- Linear Models: Building Linear Functions from Data
- Quadratic Functions and Their Properties
- Inequalities Involving Quadratic Functions
- Polynomial Functions and Models
- Properties of Rational Functions
- The Graph of a Rational Function
- Polynomial and Rational Inequalities
- Exponential Functions
- Logarithmic Functions
- \*The Real Zeros of a Polynomial Function  
\* If time permits \*\* Brief summary

**Core Curriculum Outcomes:** Upon completion of this course, the student will demonstrate his or her abilities to think critically, communicate quantitative information, and apply mathematical concepts:

1. *Critical Thinking:* Develop a logical, consistent plan to solve a problem, recognize consequences of the solution, and articulate a reason for choosing solution method.
2. *Communication Skills:* Use and present quantitative information in connection with an argument or problem solution and explicate it in an effective format.
3. *Empirical and Quantitative:* Construct and present a detailed problem statement with evidence of relevant contextual factors and possible approaches for solving the problem, then implement a solution and review the results.

## Grading Policies

**Class Participation:** The class participation portion of your grade will be based on your attendance in class, your ability and willingness to share your work with your classmates, and your ability and willingness to ask helpful questions of other student presenters. You earn points in this category by being in class, presenting solutions to problems, asking a helpful question, offering a helpful comment, and/or by offering some mathematical insight to the problem being discussed.

*Attendance Policy:* Roll will be taken every class period - it is important for you to understand the value of class attendance and accept the personal responsibility involved. You are expected to be in class on time and stay for the entire period. As mentioned below, late work will not be accepted and there will be no make-up quizzes or exams. Tardiness will also not be tolerated and extra time will not be allowed for quizzes or exams if you are late. Students who are perpetually tardy will be asked not to attend class unless they can arrive on time.

Class participation and attendance count for 5% of your course grade.

**Reading quizzes** will be given at the beginning of each class day. Reading quizzes will usually be based on an assigned reading from the textbook. No make up quizzes will be given and no extra time will be given if you are late. To compensate for this, the two lowest reading quizzes for the semester will be dropped. These will count for 10% of your course grade.

**Quizzes:** A brief *in-class quiz* will be given every Friday in class. Other in-class quizzes may also occur, announced or unannounced. This is your opportunity to prove how much you understand the homework being assigned, and practice doing problems in a timed environment. There will be no make-up quizzes given for any absence, regardless of the reason. To compensate for this, the lowest two in-class quiz scores for the semester will be dropped. These allow us to give you feedback about the mathematics we are currently learning, and they also give you a chance to demonstrate your knowledge in a timed setting which will mimic exams coming later in the semester. Solutions to all in-class quizzes will be posted to Facebook. In-class quizzes will count for 10% of your course grade.

**Exams:** There will be two *exams* during the semester (one at the end of week 5 and another at the end of week 10) plus the final exam. The exams are scheduled for Friday, September 29th and Friday, November 3rd. Any changes to this schedule will be announced in class and posted to Facebook. No make-up exams will be given under any circumstances. To compensate for this, with instructor permission and an excused absence, the final exam may replace the missed exam **IF** the next exam is taken and passed at the

regularly scheduled time. Each exam is worth 20% of your final course grade.

**Final Exam:** The final exam will be given in two parts, on Friday, December 8th and Monday, December 11th during our normal classtime. No make-up exams will be given. The final exam is cumulative. The final exam is worth 30% of your final course grade. No student who fails the final will be assigned a grade higher than C in the course.

**Course grades will be calculated using the following weights:**

Participation & Attendance	Reading Quizzes	In-class Quizzes	Exam1	Exam2	Final Exam
5%	10%	10%	22%	23%	30%

**Course grades will be assigned according to the standard ten-point scale:**

A	B	C	D	F
90 - 100%	80 - 89%	70 - 79%	60 - 69%	0 - 59%

**No extra credit will be given as the semester progresses.**

**Class Behavior:** Students are expected to behave in a non-disruptive way in class. If a student is disrupting the learning environment, he or she will be asked to stop and/or to leave the class. Lamar University is a tobacco-free campus.

**Cell Phone Policy:** In order to limit classroom disruptions, as well as to protect against academic misconduct, the use of cell phones and other electronic communication devices is prohibited in the classroom. Students should be paying attention during class, and therefore all cell phones, pagers, and any other unnecessary technology, must be turned off or put in a silent (vibrate) mode and should not be taken out during class. Any student seen to be using technology inappropriately will be asked to stop, and the student's course grade will be reduced by  $2^{n-2}$  points, where  $n$  is the number of times any student in the class has inappropriately used technology.

**Inclusivity Statement:** I consider this classroom to be a place where you will be treated with respect, and I welcome individuals of all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, ability - and other visible and nonvisible differences. All members of this class are expected to contribute to a respectful, welcoming and inclusive environment for every other member of the class.

I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate

changes to my records.

**Additional Information:** While we have made a sincere effort to ensure that this syllabus is correct, changes may be required. We will announce any substantive changes during a regularly scheduled class, and those changes will be posted to Blackboard announcement, and on Facebook. If you find an error or omission, please advise us at once so that the other members of the class may be advised.

### **Important Information for Students**

Lamar University expressly prohibits intimidation and harassment of students, faculty, staff, or applicants. <http://dept.lamar.edu/studentaffairs/handbook.htm>

**Drop Policy:** Please make note of the three dates indicated in this drop policy. Any drop will be your responsibility; I will not drop a student from the course.

**September 20, 2017:** (Census Date-Six Drop Rule does not apply) A student may drop or withdraw without consulting with the instructor. The Six Drop Rule does not apply to a drop before 5:00 PM. **October 6, 2017:** (Six Drop Rule applies) A student may drop or withdraw from the course without academic penalty and receive a Q, however, the Six Drop Rule applies. The student will consult with the instructor and the Records Office to initiate a drop. **November 10, 2017:** (Six Drop Rule applies) Last day to drop or withdraw with academic penalty; the student must be passing the course at the time of the requested drop in order to receive a Q. The drop form, including all required signatures, must arrive in the Records Office by no later than 4:00 PM. No drop is allowed after this date except in extreme extenuating circumstances. Any “late drop” must be approved by the instructor, department chair, college dean, and provost.

**Academic Integrity:** Students are expected to maintain complete honesty and integrity in their academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. Students are specifically warned against all forms of cheating and plagiarism. The *Lamar University Student Handbook* clearly reads: “Any student found guilty of academic dishonesty in any phase of academic work will be subjected to disciplinary action. Punishable offenses include, but are not limited to, cheating on an examination or academic work which is to be submitted, plagiarism, collusion, and the abuse of source materials.” One aspect of the Handbooks definition of cheating includes “purchasing or otherwise acquiring and submitting as ones own work any research paper or other writing assignment prepared by an individual or firm.” Plagiarism is defined as “the appropriation and the unacknowledged incorporation of anothers work or ideas into ones own and submitted for credit.”

Faculty members in the College of arts and Sciences investigate all cases of suspected plagiarism. Any student who is found cheating in this course will receive a course grade of F. <http://students.lamar.edu/student-handbook.html>

**Accommodations:** Lamar University is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center (DRC) is located in the Communications building room 105. Office staff collaborate with students who have disabilities to provide and/or arrange reasonable accommodations. If you have, or think you may have, a disability (e.g., mental health, attentional, learning, chronic health, sensory, or physical), please contact the DRC at 409-880-8347 or [drc@lamar.edu](mailto:drc@lamar.edu) to arrange a confidential appointment with the Director of the DRC to explore possible options regarding equitable access and reasonable accommodations. If you are registered with DRC and have a current letter requesting reasonable accommodations, we encourage you to contact your instructor early in the semester to review how the accommodations will be applied in the course. <http://www.lamar.edu/disability-resource-center/>

**Incomplete Grades:** The grade of “I” may be given when any requirement of the course, including the final examination, is not completed. Arrangements to complete deficiencies in a course should be made with the instructor prior to the end of the semester or term. Incomplete work must be finished during the next long semester or the Records Office will change the “I” to the grade of “F.” While the extension may be granted by the instructor with the approval of his/her Department Chair and Academic Dean, once the “I” is changed to an “F” it cannot be changed back to an “I.” In this case, either a “change of grade” procedure must be initiated or the course must then be repeated if credit is desired. The instructor may record the grade of “F” for a student who is absent from the final examinations and is not passing the course.

**Campus Closure:** In the event of an announced campus closure in excess of four days due to a hurricane or other disaster, students are expected to login to Lamar University’s website’s homepage for instructions about continuing courses remotely. <http://lamar.edu>

**Emergency Procedures:** Many types of emergencies can occur on campus; instructions for severe weather or violence/active shooter, fire, or chemical release can be found at: <http://www.lamar.edu/about-lu/administration/risk-management/index.html>

Following are procedures for the first two:

- Severe Weather:
  - Follow the directions of the instructor or emergency personnel.
  - Seek shelter in an interior room or hallway on the lowest floor, putting as many walls as possible between you and the outside.

- If you are in a multi-story building, and you cannot get to the lowest floor, pick a hallway in the center of the building.
- Stay in the center of the room, away from exterior walls, windows, and doors.
- Violence/Active Shooter:
  - CALL - 8-3-1-1 from a campus phone (880-8311 from a cell phone). Note: Calling 9-1-1 from either a campus phone or cell phone will contact Beaumont City Police Dispatch rather than University Police.
  - AVOID- If possible, self-evacuate to a safe area outside the building. Follow directions of police officers.
  - DENY- Barricade the door with desks, chairs, bookcases or any other items. Move to a place inside the room where you are not visible. Turn off the lights and remain quiet. Remain there until told by police it is safe.
  - DEFEND- Use chairs, desks, cell phones or whatever is immediately available to distract and/or defend yourself and others from attack.

**Course Evaluations:** You will have an opportunity to evaluate all aspects of this course in a formal process to be completed online near the end of the term. You will receive an email reminder through your LU account.