

**Math 112 Section 010**  
**College Algebra Concepts and Applications**  
**Course Policy – Spring 2018**

Instructor: Taryn Laird

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Office Hours: Tuesdays 10:00am – 11:30am Math 323  
Wednesdays 2:00pm – 3:00pm Think Tank  
Thursdays 1:00pm – 2:30pm Math 323

**Required Materials:**

ALEKS access code  
Graphing calculator (see below for specific details)

Main websites: <http://d2l.arizona.edu>  
<http://math.arizona.edu/~algebra/math112/>  
<http://www.aleks.com>

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**Catalog Course Description**

Topics include properties of functions and graphs, linear and quadratic equations, polynomial functions, exponential and logarithmic functions with applications. A graphing calculator is required for this course. We recommend the TI-83 or TI-84 models. Calculators that perform symbolic manipulations, such as the TI-89, NSpire CAS, or HP50g, cannot be used. Except as per University policy on repeating a course, credit will not be given for this course if the student has credit in a higher level math course. Such students may be dropped from the course. Examinations are proctored.

**Course Structure**

Math 112 is a 3 credit hour course. Students will meet in person three days per week except when there are no class meetings due to University holidays.

**Course Prerequisites**

Appropriate Math Placement Level or Proctored/Prep for Calculus 45+ or Proctored/Prep for College Algebra 55+ or Math 112.

**Course Goals and Objectives**

- To help students improve basic algebra skills by way of an integrated review of these skills as they are needed in the course.
- To promote problem-solving and critical thinking skills through the application of algebraic concepts to common situations.
- To enhance learning and understanding of algebraic concepts through the integrated use of graphing calculators.
- To provide a sufficient algebra background for Math 113, Math 116, and Math 163/263.

**Learning Outcomes**

Upon completion of this course, students should be able to:

1. Identify and use proper notation for functions, and describe key characteristics of functions and their graphs.
2. Recognize and analyze linear, piecewise linear, quadratic, polynomial, exponential, and logarithmic functions and their graphs.
3. Solve a variety of application problems involving these types of functions, using algebraic and graphical tools.

**Communication with Students**

Announcements and important course information may be sent out via official University email or through D2L. It is the student's responsibility to check for messages and announcements regularly.

**Accessibility and Accommodations**

It is the University's goal that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please meet with your instructor to discuss ways to ensure your full participation in the course. If you determine that formal, disability-related accommodations are necessary, it is very important that you register with Disability Resources (621-3268; [drc.arizona.edu](http://drc.arizona.edu)) and notify your instructor of your eligibility for reasonable accommodations by Tuesday, January 23, 2018. You will then be able to work with your instructor to plan how best to coordinate your accommodations. Please be aware that the accessible table and chairs in the classroom should remain available for students who find that standard classroom seating is not usable.

**Attendance/Administrative Drops**

Daily attendance is expected from every student. Students who miss the first class meeting will be administratively dropped unless they have made other arrangements. In addition, students with more than 3 unexcused absences may be administratively dropped from

the course. (See Administrative Drop Policy at <http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop>). Other actions that may result in an administrative drop from this course include failing to sign up for ALEKS by January 12, 2018, or missing more than 5 assignments. If you need to miss class for unavoidable circumstances, see your instructor as soon as possible.

- All holidays or special events observed by organized religions will be honored for those students who show affiliation with that particular religion.
- Absences pre-approved by the UA Dean of Students (or Dean's designee) will be honored.

It is the student's responsibility to notify the instructor in advance of an absence related to religious observation or an activity for which a Dean's excuse has been granted, and to arrange for how any missed work will be handled.

### **Academic Integrity**

Students are responsible to inform themselves of University policies regarding the Code of Academic Integrity. Students found to be in violation of the Code are subject to penalties ranging from a loss of credit for work involved to a grade of E in the course, and risk possible suspension or probation. The Code of Academic Integrity will be enforced in all areas of the course, including, but not limited to, homework, quizzes, and tests. For more information about the Code of Academic Integrity policies and procedures, including information about your rights and responsibilities as a student, see the following website:

<http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity>

### **Student Code of Conduct**

Students at The University of Arizona are expected to conform to the standards of conduct established in the Student Code of Conduct. Prohibited conduct includes:

1. All forms of student academic dishonesty, including cheating, fabrication, facilitating academic dishonesty, and plagiarism.
2. Interfering with University or University-sponsored activities, including but not limited to classroom related activities, studying, teaching, research, intellectual or creative endeavor, administration, service or the provision of communication, computing or emergency services.
3. Endangering, threatening, or causing physical harm to any member of the University community or to oneself or causing reasonable apprehension of such harm.
4. Engaging in harassment or unlawful discriminatory activities on the basis of age, ethnicity, gender, handicapping condition, national origin, race, religion, sexual orientation, or veteran status, or violating University rules governing harassment or discrimination.

Students found to be in violation of the Student Code of Conduct are subject to disciplinary action. For more information about the Student Code of Conduct, including a complete list of prohibited conduct, see the following website:

<http://deanofstudents.arizona.edu/accountability/students/student-accountability>

### **Other Relevant University Policies Relating to Conduct**

Please take note of the following University policies:

- Policy on Threatening Behavior by Students: <http://policy.web.arizona.edu/education-and-student-affairs/threatening-behavior-students>
- Nondiscrimination and Anti-Harassment Policy: <http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy>

### **Expected Classroom Behavior**

Students should turn off all electronic devices during class unless the device is deemed necessary for the class by the instructor. This includes, but is not limited to cell phones, tablets, mp3 players, and laptops. Class time is an important and wonderful sanctuary from our super-connected lives. Smart phones are a serious distraction from the learning environment of class and I will not allow their use during class at any time. Before class, turn off your phone and put it out of sight in your bag. If you have a truly essential emergency, please step outside of the classroom so as not to disturb your classmates. If you have a disability-related accommodation that involves the use of a computer during class, please discuss this with your instructor in advance.

### **Calculators**

A graphing calculator (TI-83, 84, or 86) is required for this course. Calculators that perform symbolic manipulations (such as the TI-89 or TI-92 or certain TI-Nspire CAS) cannot be used. For in-class exams, quizzes, and the final exam, the only program allowed in your calculator is the QUADRATIC FORMULA program.

### **ALEKS**

The course textbook and several graded components for Math 112 are found in ALEKS. ALEKS can be accessed through the University of Arizona's D2L website (<http://d2l.arizona.edu>). Students will be billed for ALEKS through their Bursar account.

Students may only **register for ALEKS** by enrolling through <http://d2l.arizona.edu>. When registering for ALEKS, students will need to enter a valid email address and password. If you have previously used an ALEKS product, you should use your previous login

credentials. If you have not used an ALEKS product before, you are **STRONGLY** encouraged to use your University of Arizona email address.

### Homework

There are 3 components to homework: ALEKS Assignments, Written Homework, and Quizzes. Late homework is generally not accepted. Students who register for the class after the first class meeting may not be able to make up missed assignments, exceptions may be considered by the student's instructor. Grading disputes regarding homework must be addressed within one week after the homework has been returned.

#### ALEKS Assignments (75 course points)

There will be several online homework assignments this semester, posted in ALEKS. These assignments are due by 11:59 PM on the due dates. Three of the lowest ALEKS assignments will be dropped, and the remaining assignments will be averaged and scaled to 75 points in the course.

#### Written Homework Assignments, Quizzes, and Concept Checks (75 course points)

There will be 14 written work assignments, posted by your instructor in D2L. Written work assignments generally consist of a few questions from each section and will relate to the material covered in class and/or the Guided Workbook. Each question will be provided on a pre-formatted sheet that will have space for the student to show their detailed solutions. Students must print the assignment and handwrite all work on the printed assignment. Once your homework is completed, you will need to submit the assignment by the start of class on the due date (typically on Wednesday). The work that is submitted should be the **FINAL** draft, created after the first drafts of the solutions were attempted. Since there are only a few questions assigned per section, each student should submit work that is of high quality. Each written work assignment will be scaled to 100 points. While students are permitted to work together on their written work, the work submitted must be one's own. Copying work from another student will not be tolerated. Students who copy another person's work are violating the university's Code of Academic Integrity and may be subject to penalties described in the Code.

Students are expected to complete the following procedures to receive full points on their written work assignments:

- Show and clearly explain an algebraic method used to solve the problem. Proper mathematical notation should be used and the student's work should be neat and well organized in the final draft that is submitted. Points will be awarded for correctness and completeness. Simply giving an answer is not acceptable and will receive little or no credit.
- Clearly indicate the final answer.
- No late homework is accepted.

There will be 14 quizzes, posted by your instructor in D2L. Each quiz will contain 5 multiple-choice questions. Students will have one attempt for each quiz and no late quizzes will be accepted.

In addition to the 14 handwritten homework assignments and 14 D2L quizzes, the instructor will supplement assignments with additional written work in class. Most Monday and Friday class periods, students will complete a short concept check. The combined score from these concept checks will be scaled to a percentage out of 100 points each week.

To account for issues that may arise during the semester, the 3 lowest percentages of written homework/D2L Quiz/Concept Check scores will be dropped and the remaining points will be scaled to 75 points in the course.

### Midterm Exams

There are three midterm exams. The dates, times, and content for the midterms are given below.

- Midterm 1:
  - **Monday, February 12, 2018, from 7:00 PM – 8:00 PM**, taken outside of class at a location to be announced
  - Topics: Functions, Graphs of Functions, Linear Functions, Piecewise Linear Functions, Transformations of Functions
  - 100 points
- Midterm 2:
  - **Thursday, March 22, 2018, from 7:00 PM – 8:00 PM**, taken outside of class at a location to be announced
  - Topics: Combining Functions, Inverse Functions, Quadratic Functions, Polynomial Functions
  - 100 points
- Midterm 3:
  - **Thursday, April 26, 2018, from 7:00 PM – 8:00 PM**, taken outside of class at a location to be announced
  - Topics: Rational Functions, Exponential Functions, Logarithmic Functions, Properties of Logarithms, Exponential and Logarithmic Equations and Applications
  - 100 points

Please put all of these dates in your calendar immediately. The location of Midterm Exams 1, 2 and 3 will be posted on the College Algebra website.

Issues related to the grade received on the exam need to be discussed within 1 week of the exam being graded. Study guides for the midterms will be posted as PDF documents on the College Algebra website.

### Final Exam

The comprehensive Final Exam will be given on **Monday, May 7, 2018**, from **8:00 AM – 10:00 AM**. Please put this date in your calendar immediately. The location of the final exam will be posted on the College Algebra website.

A study guide for the final exam will be posted as a PDF document on the College Algebra website.

Please note the following:

- University rules relating to final examinations may be found at:  
<http://www.registrar.arizona.edu/schedule101/exams/examrules.htm>
- The University final exam schedule may be found at:  
<http://www.registrar.arizona.edu/schedules/finals.htm>

### Missed Exams

Students who are unable to attend Midterm 1, 2, or 3 for a **LEGITIMATE** reason will be asked to complete an online request form by a specific date. Information about this form will be sent to every student's UA email address approximately 2 weeks before each exam. In addition to completing the online form, students should also notify their instructor. Failure to submit the request for a make-up midterm may result in the request being denied or the student receiving a penalty on the exam.

Only legitimate reasons will be considered for make-up exams. Legitimate reasons include UA class conflicts, Dean's excuses, religious holiday's recognized by the University, and verifiable emergencies. University related events without a Dean's excuse will generally not be considered as an exam conflict (e.g., club meeting or club dinner).

If a verifiable emergency arises which prevents you from taking an exam at the regularly scheduled time, you must notify your instructor or the Mathematics Department as soon as possible. Students who fail to notify their instructor or Mathematics Department within 24 hours after the test has been given may receive a grade of zero on the exam. Make-up exams will be administered only at the discretion of the Mathematics Department and/or the instructor. If a student is allowed to make up a missed exam, (s)he must take it at a mutually arranged time. No further opportunities will be extended. Failure to contact the Mathematics Department and/or instructor as stated above or inability to produce sufficient evidence of a real emergency will result in a grade of zero on the exam.

### Early Progress Grades

This course is reporting Early Progress Grades in UAccess shortly after Midterm 1 is graded. The Early Progress Grade will include the percentage received on Midterm 1 (approximately 16.67% of the final course grade). This is an opportunity to assess your current performance and make adjustments as need to earn the grade that you want this semester. Make a plan to finish strong!

### Grades

Homework (ALEKS)	75 points	(12.5%)
Homework (Written Homework and Quizzes)	75 points	(12.5%)
Midterm 1	100 points	(16.7%)
Midterm 2	100 points	(16.7%)
Midterm 3	100 points	(16.7%)
Final Exam	150 points	(25.0%)
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Total possible points	600 points	(100 %)

### You are Guaranteed a Grade of:

A	if you earn at least 540 points (90%)
B	if you earn at least 480 points (80%)
C	if you earn at least 420 points (70%)
D	if you earn at least 360 points (60%)

**Please note that neither exam scores nor final grades will be curved. No extra credit or bonus points are offered in this course.**

A grade of Incomplete will be given only at the instructor's discretion, according to University Policy as described at <http://www.registrar.arizona.edu/gradepolicy/incomplete.htm>

### Withdrawal

A student may withdraw from the course with a deletion from record through January 24, 2018, using UAccess. A student may withdraw with a grade of "W" through March 27, 2018, using UAccess. It is suggested that students consult his/her academic advisor before withdrawal from any course.

### Using Math 112 as a Prerequisite for Other Courses

The Undergraduate Committee of the Department of Mathematics has adopted a policy that a grade of C or better in Math 112 is a necessary prerequisite for Math 113 or 116. Students who receive a D in Math 112 will receive credit for the course towards graduation requirements, and will be able to use the course for their general education math requirement or as a prerequisite for Math 163, 263, or 302A, but will not be automatically qualified to register for Math 113 or 116. Students may always exercise the option of taking the math placement tests to achieve placement into Math 113 or 116.

### Tentative Weekly Schedule

Week	Start Date	Topics Covered	Assignments Due*
1	Jan 8	Introduction, Functions	ALEKS: Topic 1 Goal
2	Jan 15	MLK Jr. Holiday, Functions, Graphs of Functions	ALEKS: Refresh, Functions & Graphs D2L Quiz: Functions
3	Jan 22	Graphs of Functions, Linear Functions	ALEKS: Topic 2 Goal, Topic 3 Goal Written HW: Functions, Graphs D2L Quiz: Graphs
4	Jan 29	Piecewise Functions, Transformations	ALEKS: Linear, Piecewise Written HW: Linear D2L Quiz: Linear, Piecewise
5	Feb 5	Transformations, Review	ALEKS: Topic 4 Goal, Transformations Written HW: Piecewise D2L Quiz: Transformations
6	Feb 12	Midterm 1, Combining Functions	ALEKS: Mechanics Review 1, Topic 5 Goal Written HW: Transformations
7	Feb 19	Inverse Functions	ALEKS: Combining, Inverses Written HW: Combining D2L Quiz: Combining
8	Feb 26	Quadratic Functions	ALEKS: Factoring Quadratics Written HW: Inverse D2L Quiz: Inverse
9	Mar 12	Quadratic Functions, Polynomial Functions	ALEKS: Topic 6 Goal, Evaluate & Solve Quadratics, Quadratic Applications Written HW: Quadratic D2L Quiz: Quadratic
10	Mar 19	Polynomial Functions, Review, Midterm 2, Rational Functions	ALEKS: Polynomial, Mechanics Review 2 Written HW: Polynomial D2L Quiz: Polynomial
11	Mar 26	Rational Functions, Exponential Functions	ALEKS: Review Quiz Piecewise, Rational
12	Apr 2	Exponential Functions, Logarithmic Functions	ALEKS: Review Quiz Composition & Inverse, Exponential Written HW: Rational D2L Quiz: Rational
13	Apr 9	Logarithmic Functions, Properties of Logarithms	ALEKS: Exponential Applications, Logarithmic Written HW: Exponential, Logarithmic D2L Quiz: Exponential, Logarithmic
14	Apr 16	Properties of Logarithms, Exponential and Logarithmic Equations/Applications	ALEKS: Logarithmic Applications, Mechanics Review 3 Written HW: Properties of Logs D2L Quiz: Properties of Logs
15	Apr 23	Exponential and Logarithmic Equations/Applications, Review, Midterm 3, Final Exam Review	ALEKS: Final Mechanics Review Written HW: Exp/Log Equations & Applications D2L Quiz: Exp/Log Equations & Applications
16	Apr 30	Final Exam Review	
17	May 7	Final Exam	

\*Note: Due dates for assignments will be posted in class or at an online location by the instructor.

### Changes to the Course Policies

The information contained in the course policies, other than the grade and absence policies, may be subject to change with reasonable advance notice, as deemed appropriate by the instructor.