

MATH 122A – Sections 1 through 18
Functions for Calculus
Class Meetings: January 15 – February 10, 2020

- 🐾 Course description:** Elementary functions, their properties, and uses in modeling. 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.
- 🐾 Course Structure:** Math 122A is a one credit course which meets in person for either five days or four days per week depending on the start time of the class. These class meetings take place in the first three and a half weeks of the semester.
- 🐾 Course Prerequisites:** PPL 75+ or SAT I MSS 660+ or ACT MATH 28+ or a grade of C or higher in Math 120R (Precalculus). Test scores expire after 1 year.
- 🐾 Course Goals and Objectives:**
- To extend precalculus skills by way of a brief integrated review of these skills as needed in calculus.
 - To reinforce manipulative skills in the form of simplifying expressions and solving equations in the context of solving problems.
 - To promote a problem solving approach through applications.
 - To provide a sufficient background for Math 122B.
- 🐾 Learning Outcomes:** Upon successful completion of this course, students should be able to
- Analyze a function expressed in any form (graph, equation, table, or words).
 - Recognize and apply the properties of a family of functions to solve a problem. (exponential, logarithmic, polynomial, rational, trigonometric, inverse trigonometric).
 - Interpret the limiting behavior of a function given its graph and use properties of limits to evaluate algebraic expressions involving basic functions.
 - Set up an equation to model an application.
- 🐾 Course Webpages:** <https://d2l.arizona.edu> for access to course content information and materials, <https://calculus.math.arizona.edu> for general information and additional resources.
- 🐾 Text:** Chapter 1 of *Calculus Single Variable*, 6th ed. by Hughes-Hallett et al. Published by Wiley. This chapter is available free of charge for all students registered in Math 122A and is posted as a pdf in D2L (Getting Started module).
- 🐾 Calculators:** A graphing calculator is an important tool that will be used in this course. We recommend any model in the TI-83 or TI-84 series. Models that can perform symbolic calculations (also known as CAS) are NOT allowed on the final exam. CAS models include (but are not limited to) the TI-89, TI NSpire CAS, HP 50g, and Casio Classpad 330. Students are not allowed to share calculators during the final exam.
- 🐾 Communication:** Important information about the course will be sent periodically to your UA email address from the Math 122A Course Coordinator. It is essential that you check

your UA email in addition to visiting the Math 122A D2L site. Your instructor will provide information about his/her preferred mode of communication.

- 🐾 Absence and Class Participation:** Daily attendance is expected from every student. Students who miss the first class meeting may be administratively dropped unless they have made other arrangements.
- The UA's policy concerning Class Attendance, Participation, and Administrative Drops is available at: <http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop>.
 - The UA's policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable. See: <http://policy.arizona.edu/human-resources/religious-accommodation-policy>.
 - Absences for groups of more than three students that are pre-approved by the UA Dean of Students (or Dean Designee) will be honored. See: <http://policy.arizona.edu/employmenthuman-resources/attendance>.

- 🐾 Classroom Behavior:** To foster a positive learning environment, students and instructors have a shared responsibility. We want a safe, welcoming, and inclusive environment where all of us feel comfortable with each other and where we can challenge ourselves to succeed. To that end, our focus is on the tasks at hand and not on extraneous activities (e.g., texting, chatting, reading a newspaper, making phone calls, web surfing, etc.). Turn off all media / technology that might be distracting to you, the people around you, or the instructor. If you may be expecting an emergency phone call, be sure your phone is on vibrate, and take the call quickly outside.

- 🐾 Homework: (50 points)** A computer grading program called WebAssign will be used for common homework problems assigned from the text. WebAssign access to Math 122A assignments is free of charge for all students registered in Math 122A. To access your class WebAssign account, carefully follow the WebAssign Instructions outlined in the Getting Started module in D2L. Additional work such as written homework, worksheets, or quizzes will also be given. Your instructor will provide specific information for your section. Due dates for WebAssign assignments will be posted in WebAssign.

A final homework score based on 50 possible points will be assigned. Sixteen common assignments in WebAssign will contribute to 80% and section specific work assigned by your instructor will contribute to 20% of the final homework score.

- 🐾 Final Exam: (200 points)** The final exam is a common department exam. It is scheduled for Friday, February 7 from 7:15PM – 9:15PM. Note – this does NOT conflict with the Chemistry exam being held on that day. A study guide is posted in D2L and at <https://calculus.math.arizona.edu>. More information about the exam, including exam rooms will be announced later in D2L. An on-line form to request an alternate time due to an acceptable time conflict (such as a University excused event) will be available in D2L during the second week of class. An email from the course coordinator will be sent to notify you when the form becomes available.

Your continued registration into Math 122B or administrative switch into Math 120R is determined by the course grade you have earned as of February 10 (homework plus final

exam). However, your final course grade for Math 122A will not be posted in your record in UAccess until the end of the semester. Students who do not withdraw from Math 122A will have the option of retaking another final exam on Friday, April 17 (7:15PM-9:00PM) in order to improve their Math 122A grade. This retake is optional. Note: Your homework score cannot be improved, but the higher of the two final exam attempts will be used in computing your final course grade.

🐾 Grades: Course grades are determined by a percentage of the total possible points in the course (250 points). A: 100-90% B: 89-80% C: 79-70% D: 69-60% E: 59-0%.

A grade of C or higher is needed to continue registration in Math 122B, First Semester Calculus. If you do not receive a grade of C or better, you will be administratively switched out of Math 122B and into a Math 120R class. Grades and course assignments for Math 122B/120R will be posted in D2L. An email from the course coordinator will be sent to notify you when the grades are posted. It is your responsibility to check your grades and your class schedule. The first day of Math 122B and 120R is Tuesday, February 11.

In order for the Mathematics Department to accommodate all students moving into Math 122B and Math 120R, the time or section of your originally scheduled Math 122B class may change. If you are administratively switched to Math 120R, there is no guarantee that the time your section meets will be the same as your originally scheduled Math 122A or Math 122B. There is also no guarantee that the instructor will be the same.

🐾 Withdrawing from the course: Must be made in accordance with University policy <http://catalog.arizona.edu/policy/grades-and-grading-system#Withdrawal>. You may drop the class without a W through January 28, 2020 using UAccess. The class will appear on your UAccess record, but will not appear on your transcript. You may withdraw with a W through March 31, 2020 using UAccess. The University allows withdrawals through April 14, but only with the Dean's approval. Late withdrawals are dealt with on a case by case basis, and requests for late withdraw without a valid reason may or may not be honored. If you withdraw from Math 122A, you will be administratively removed from Math 122B.

🐾 Academic Integrity: Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See: <http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity>. The University Libraries have some excellent tips for avoiding plagiarism, available at <http://new.library.arizona.edu/research/citing/plagiarism>.

🐾 Incompletes: Must be made in accordance with University policies, which are available at <http://catalog.arizona.edu/policy/grades-and-grading-system#incomplete>. Students receiving an incomplete will be dropped from Math 122B.

🐾 Accessibility and Accommodations: At the University of Arizona we strive to make learning experiences as accessible as possible. If you anticipate or experience barriers based on disability or pregnancy, please contact the Disability Resource Center (520-621-3268, <https://drc.arizona.edu/>) to establish reasonable accommodations.

- 🐾 UA Code of Academic Integrity Policy:** Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See: <http://deanofstudents.arizona.edu/codeofacademicintegrity> and <http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity>.
- 🐾 UA Threatening Behavior Policy:** The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself. See <http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students>.
- 🐾 UA Nondiscrimination and Anti-Harassment Policy:** The University is committed to creating and maintaining an environment free of discrimination; see <http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy>.
- 🐾 Crisis resources:** Campus Health offers counseling services and resources for students covering a wide range of issues regarding mental health; see <https://health.arizona.edu/crisis-resources-and-hotlines>
- 🐾 Tentative weekly schedule:** Actual due dates for homework are posted in WebAssign. Additional assignments will be posted by your instructor for your section.

Week beginning	Topics to be covered	WebAssign assignments due
Jan 13	Functions & change, Exponential functions	Homework 0 Preparations 1.1, 1.2 Sections 1.1
Jan 20	New functions from old, Logarithmic functions	Preparations 1.3, 1.4 Sections 1.2, 1.3
Jan 27	Trigonometric functions, Polynomial and Rational functions	Preparations 1.5, 1.6 Sections 1.4, 1.5
Feb 3	Continuity, Limits	Models Sections 1.6, 1.7, 1.8

- 🐾 Subject to change policy:** Information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor; see <http://policy.arizona.edu/faculty-affairs-and-academics/course-syllabus-policy-undergraduate-template>.