



Math 55A

Course Information Sheet

Textbook: Rockswold, G., Krieger, T., Beginning & Intermediate Algebra, 2nd Ed., Pearson/Addison Wesley, 2009. ISBN-13: 978-0-321-50005-2.

Course Outline of Record: Math 55A is the first half of our split version of Math 55. Every section of M55A is required to cover all of the material as listed on the Course Outline of Record. It is our contract with our transfer institutions, with each other and our students about what the course will detail. Failure to do so puts your students at a disadvantage, leads to discrepancies across the sections, and problems for the students in their next course. Any instructor who does not attempt to follow the course outline carefully risks the possibility of not being able to teach that course again at LPC. All course outlines of record can be found on the Las Positas College Website under Programs/Courses.

http://www.laspositascollege.edu/programs/course_outlines/math_index.php

Math 55A Course Materials are available on the math department's blackboard site. These materials include: the course outline of record; a table summarizing teacher resources for this course (e.g., labs, group activities); core lab assignments; and, sample homework lists. To gain access to this site, please contact the course coordinators Kristine Woods and Randy Taylor.

Suggestions regarding content: M55A content includes all sections of Chapters 8, 7 and 10

- Students in M65 will have covered an Introduction to Rational Expressions, multiplying and dividing, and adding and subtracting with like denominators (sections 7.1 – 7.3).
- Consider starting with Chapter 8: Introduction to Functions FIRST. There are several reasons for this: Chapter 8's content does not require a review from the previous course and therefore is a nice way to get all students engaged in the mathematics on a more equitable plane. Also, covering the Chapter 8 content first will lend to richer discussions of behaviors of rational functions (domain, range, asymptotes, etc.) in Chapter 7.
- Chapter 7: Rational Expressions does require a review of factoring. In Math 65 students may not have seen the factoring techniques for sum and difference of two cubes: $a^3 + b^3$ and $a^3 - b^3$. Our suggestion is to allow some time to go over this technique from chapter 6.4 and also do a review of factoring techniques from Chapter 6.5 prior to covering Chapter 7.

Student Learning Outcomes: Student Learning Outcomes, SLOs, are learning proficiencies the Department feels every student enrolled in our math classes should be encouraged master.

The course-level SLOs for Math 55A connect with our program level SLOs of: **Communication** and **Problem-Solving**. These course-level SLOs should be listed in your syllabus for the course. Please refer to the Mathematics Department website for more SLO information.

Upon successful completion of Math 55A, a student should be able to demonstrate:

- the ability to distinguish between a relation and a function (Communication).
- the ability to identify the domain and range of a given function (Problem Solving).

Math Lab Requirements: There is a required TBA lab hour attached to this course, part of the course outline of record. To allow for maximum flexibility, the hour is TBA (to be arranged), rather than scheduled. To satisfy their lab requirement, students must go to the **Open Math Lab** in the **Integrated Learning Center, ILC**, to work on lab assignments. The Open Math Lab provides a place for students to get the help they need to succeed in math. Your syllabus must state that students are required to attend the lab for one hour per week for a minimum of 17 lab hours over the semester. We recommend a minimum of eight lab assignments be given (students may be given more than one week to complete an assignment). Lab assignments must be something more than doing homework. **CORE LAB** assignments for Math 55 have been created and are available on the Mathematics Department Blackboard website for all LPC Math 65 instructors. Contact the Math 55 course coordinators Kristine Woods and Randy Taylor for more information. In addition, there are many examples of good math labs that other instructors have created; we encourage you to talk with other instructors and share labs.

Recommended CORE LAB assignments for Math 55A

1. **Introduction to Functions** explores multiple representations, functions vs. relations, domain and range. [Based on section 8.1]
2. **Introduction to Rational Functions** supplements the text book's discussion of graphs of rational equations and asymptotes and ties the discussion of rational functions to function concepts learned in chapter 8. [Based on section 7.1]
3. **Rational Expressions and Equations.** This lab, originally written for Math 65, focuses on differentiating between the processes used to simplify rational expressions and perform operations with them, and the processes used to solve rational equations. [Based on section 7.6]