



Math 55B

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 55B is the second half of our split version of Math 55. Every section of M55B 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 55B 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: M55B content includes all sections of Chapters 11, 12, 9 Sections 1 and 2, and 13 Sections 1 - 3

- Consider covering Chapter 9: Systems of Linear Equations and Chapter 13: Conic Sections together after Chapter 11. Note that we are including "Matrix solutions of Linear Systems" (chapter 9.2) in our new course content – this is a change from our previous course content with the Tussy Gustafson text. However we are still not including determinants – so omit chapter 9.3.
- Chapter 14: Sequences and Series should be omitted.

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 SLO for Math 55B connects with our program level SLO of: **Modeling**. This course-level SLO 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 55B, a student should be able to demonstrate:

- the ability to solve an applied problem involving a quadratic function (Modeling).

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 55B 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 55B

1. **Quadratic Functions: Max or Min?** This lab focuses on multiple representations for quadratic functions and using the vertex to find max or min value of a quadratic function. [Based on section 11.1]
2. **Exploring families of functions.** This lab extends the textbooks discussion about horizontal and vertical translation to other types of functions that the students have studied. [Based on section 11.2]
3. **Linear vs. Exponential Change.** This lab explores the distinction between linear and exponential change using models, tables and graphs. Recommendation: Start in class. [Based on section 12.2]
4. **Graphs of logarithms.** Students explore the relationship between logarithmic and exponential graphs. [Based on section 12.3]