Math 55 Intermediate Algebra
Course Information Sheet

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COURSE MATERIALS

  
  
  - The bookstore will be selling LPC custom textbooks; the only difference between this textbook and the national 3rd Edition Rockswold textbook is that following sections have been removed, as the material is not listed in the course outline of record: Ch 9.3, Ch 14. This allows students to purchase a textbook at a reduced price and skip next edition updates unless desired. Your students may use a national textbook or the LPC custom textbook.

- **Software (Optional)**: MyMathLab™
  
  - When purchased new, the textbook comes bundled with a MyMathLab™ access code.
  - Instructors adopting MyMathLab™ may make purchase of the textbook optional.
  - Students who wish to use MyMathLab™ to supplement learning in a course not requiring it can use our generic course. Please provide those interested students with the following Course ID: course16014

- **Calculator**: At the instructor’s option, students may be allowed use of graphing calculators, excluding TI-89s, in Math 55.
  
  - The Math Department has a **graphing** calculator rental program. Contact Bobby August for more information.

COURSE CONTENT

Cover all of Chapters 7 - 8, 10 – 13, and sections 1 - 2 of chapter 9.

- **Suggestions regarding content**:
  
  - Students in Math 65 will have covered an introduction to Rational Expressions, multiplying and dividing, and adding and subtracting with like denominators (7.1-7.3). Do not skip these sections, as students also place into 55 and will need the material.
  
  - **Review Factoring in Chapter 6**: Chapter 7: Rational Expressions and Chapter 11: Quadratic Functions and Equations require a review of factoring. It is recommended to review factoring techniques from section 6.5 prior to covering chapter 7.
  
  - **Chapter 9 and Chapter 13**: Consider covering Chapters 9 (omit 9.3) and 13 together after Chapter 11 or after Chapter 12.

- Materials related to this course can be found on the Mathematics Department Blackboard website. To gain access to this site, please contact Scott Vigallon (svigallon@laspositascollege.edu).
  
  These materials include:
  
  - Course Outline of Record
  - A table summarizing teacher resources for the course (e.g., labs, group activities)
  - Core lab assignments
  - Sample course calendar

COURSE OUTLINE OF RECORD
All course outlines can be found on the LPC Curricunet website: 
http://www.curricunet.com/laspositas then search course

Your teaching contract requires that you cover all of the material listed in the Course Outline of Record.

The course outline is our contract with our transfer institutions, with each other, and with our students about what the course will include.

Any instructor who does not carefully follow the course outline risks the possibility of not being allowed to teach that course again at LPC.

COURSE SYLLABUS

Your syllabus for this course should include the following information:

- Textbook and software requirements
- Measurable Objectives (see Course Outline of Record or below)
- LPC repeatability policy (see below)
- TBA Lab Hour Requirements/Policies (see below)
- OPTIONAL: Student Learning Outcomes (see below)

MEASURABLE OBJECTIVES (include in syllabus)

Upon completion of the course, the student should be able to:

A. determine whether or not an equation, table or graph represents a function;
B. use function notation;
C. given a function, determine the domain and range and express them in interval notation;
D. sketch the graphs of linear, absolute value, quadratic, rational, radical, exponential and logarithmic functions;
E. find the inverse of an invertible function, identify its domain and range, and sketch its graph;
F. solve compound inequalities, sketch the graph of the solution and use appropriate set and interval notation to express the solution;
G. solve absolute value equations and inequalities and, where appropriate, sketch the graph of the solution and use set or interval notation to express the solution;
H. simplify, add, subtract, multiply and divide rational expressions;
I. solve rational equations;
J. solve systems of linear equations in three variables;
K. use matrix methods to solve linear systems;
L. write radical expressions with rational exponents;
M. simplify, add, subtract, multiply and divide radical expressions;
N. simplify, add, subtract, multiply and divide expressions with rational exponents;
O. solve equations involving radicals;
P. add, subtract, multiply and divide complex numbers;
Q. solve quadratic equations using either factoring, the square root property, completing the square, or the quadratic formula;
R. discuss the possible solutions of a quadratic equation and find complex roots;
S. solve higher order polynomial equations in quadratic form;
T. find the composition of two functions;
U. solve exponential equations;
V. use properties of logarithms to simplify logarithmic expressions and solve logarithmic equations;
W. use the relationships between exponential and logarithmic functions to solve equations;
X. sketch the graphs of conic sections and identify key components of the graphs;
Y. solve non-linear systems of equations and inequalities;
Z. develop and use equations or function models to analyze and solve applied problems involving linear, quadratic, rational, radical, exponential or logarithmic expressions.
TBA LAB HOUR

- There is a required TBA (to be arranged) lab hour attached to this course.
- Compliance with all TBA lab hour requirements and policies is essential, as audits by the State Chancellor’s office are conducted on a regular basis and schools found not to be in compliance face stiff monetary penalties.

Policies and Requirements:

- Students complete their lab hour requirement by logging one hour in the Open Math Lab (Integrated Learning Center) each week and working on TBA lab hour assignments.
- Students must log seventeen (60 minute) lab hours (one per week for the 17-1/2 week semester).
- Students must log at least one lab hour prior to the census date (check the academic calendar for the census date).
  - **IMPORTANT:** students who do not log at least one hour prior to the census date cannot be claimed for apportionment by the college. For this reason, **any student who does not meet this requirement must be dropped NGR.**
- Each student must complete a TBA Lab Hour contract. The contract will be available for download from the Mathematics Department Blackboard website.
  - Contracts should be completed by the end of the first week of instruction.
  - Instructors keep the contracts until the end of the semester, at which time they should be given to the Division office for archiving.
- Lab assignments cannot be homework.
- Lab assignments must constitute a portion of the students’ grade for the course.
- More about lab assignments:
  - We recommend a minimum of eight lab assignments over the semester.
  - Students may be given more than one week to complete an assignment.
  - Core lab assignments for Math 55 are available on the Mathematics Department Blackboard website.
  - We encourage sharing of lab assignments and collaboration with other instructors in the creation of lab assignments.

Encourage your students to use the Open Math Lab as a resource for studying and getting help.

REPEATABILITY

There is a new state-mandated Repetition Policy for the Chabot-Las Positas District that is retroactive to the date a student first started taking courses within the district (at either Chabot or Las Positas).

What does this mean for students?

- Within the district, a student is allowed to attempt a course (or courses equivalent to it) at total of THREE TIMES. If the first attempt is unsuccessful (W, D, F, or NC (No Credit)), a student has two additional attempts to complete the course with a passing grade (C, B, A or Cr (Credit)).
- After three attempts to pass a course (or equivalent course), students will be blocked from registering for that course (or its equivalents) again at either Las Positas or Chabot College unless a special circumstance petition is approved, as described in the Administrative Rules and Procedures.
- More information can be found at the following link: [http://www.laspositascollege.edu/math/documents/repeatingpolicy_spr2013.pdf](http://www.laspositascollege.edu/math/documents/repeatingpolicy_spr2013.pdf)
OPTIONAL Inclusion into Syllabus:

STUDENT LEARNING OUTCOMES

- Student Learning Outcomes, SLOs, are learning proficiencies the Mathematics Department has determined students should be able to demonstrate at the end of the course. Course-level SLOs for Math 55 connect with our program-level SLOs of communication, multiple representations, problem-solving, and modeling.
- Although assessment of SLOs is voluntary for adjunct faculty, we encourage all instructors to participate in the SLO assessment process as collection of SLO data is essential for program review and compliance with accreditation standards.
- SLO assessment process:
  - All SLO’s should be assessed on the final exam, one question per SLO (each instructor writes their own assessment). Sample questions are found on the Math Dept Blackboard Site.
  - Assessments should reflect the appropriate level of rigor for the course and must specifically address the SLO being assessed.
  - Results should be entered into eLumen, the SLO data base, either aggregated for the class, or by individual student. For help with eLumen, contact the coordinator for this course.
- The following course-level SLOs may be listed in your course syllabus.

<table>
<thead>
<tr>
<th>Program-Level SLO</th>
<th>Course-Level SLO</th>
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</thead>
<tbody>
<tr>
<td>Multiple Representations</td>
<td>Construct multiple representations of a function (numerical, graphical, or symbolic).</td>
</tr>
<tr>
<td>Communication</td>
<td>Solve and interpret an applied problem using a function.</td>
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<tr>
<td>Problem Solving</td>
<td>Determine the domain of a function.</td>
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