Intermediate Algebra
MAT 099

Learning Objectives
This course teaches "Arithmetic operations review, basic operations on polynomials, solving linear equations, and graphing linear/ quadratic equations." Intermediate Algebra provides a review of mathematical concepts and operations, including the following:
- Solving and graphing linear equations,
- Rules for exponents and radicals,
- Factoring polynomials,
- Rational and radical expressions.

Teaching Style
Combining emporium style instruction with independent study, classes will meet for a traditional lecture or problem-solving session with the instructor once weekly and in the lab during other class periods.

During the lecture, the instructor will review concepts and work problems focusing on areas that students typically struggle with. During the time in the lab, the course management system MyLabsPlus will be used to complete video lectures, homework sets, quizzes, and tests while the instructor and lab assistants provide one-on-one assistance.

Important Dates
Last day to drop/add course.
Wednesday, August 31st, 2016

Last day to withdraw from course.
Friday, November 4th, 2016

Temporary access codes expire.
Wednesday, September 7th, 2016

Inside this Syllabus
- Information on Course Assessments .......... p 2
- Course Objectives .................................. p 3
- Testing Information ................................. p 4
- Course Policies .................................... p 5
- Tips for Success ................................. p 6
- Getting Started Guide ......................... p 7
Course Assessments

COMPONENTS
- Attendance
- Notebook Checks
- Pre-Homework
- Post-Homework
- Post-Quizzes
- Unit Tests
- Final Exam

Attendance & Participation. Attendance and participation will be based on class/lab attendance and weekly video notebook checks. See below for information regarding video notebooks.

Pre-Homework and Post-Homework. Before each lecture, a pre-homework is due. The Pre-Homework contains videos by the textbook author(s). You should fill out the Course Notebook while viewing the video lectures. The Post-Homework is a longer assignment following the lecture, often with different topics or a greater degree of complexity.

Post-Quizzes. Post-Quizzes are content quizzes to review the material. They are password-protected, and must be taken in the Math Zone.

Unit Tests and Final Exam. Unit Tests and Final Exams are also administered in MyLabsPlus. No assistance is provided in MyLabsPlus, and there is no use of outside materials (websites, notes, etc.) on the test. Specific instructions for testing will be provided in class prior to the first test (and are available at www.usm.edu/mathzone). The final exam is comprehensive.

General Class Format

Due Before Class:
Pre-Homework
- Unlimited attempts
- Can save your progress
- Useful Tools:
  - View an example
  - Help me solve this
- Can work past the due date for 50% credit (until test)

Due During Class:
Lecture/Review
- Video notebook checked
- Review and/or begin new material

Due After Class:
Post-Homework
- Unlimited attempts
- Can save your progress
- Useful Tools:
  - View an example
  - Help me solve this
- Can work past the due date for 50% credit (until test)

Due After Class:
Post-Quiz
- 3 Attempts
- Timed (30 minutes)
- May use notes or book
- No help from tutors or others

6 Unit Tests (50%)
(lowest unit test grade may be replaced by Final Exam)

Final Exam (20%)
Quizzes (5%)
Homework (10%)
Participation (15%)
(courses notebook and attendance)

A 90% - 100%
B 80% - 89%
C 70% - 79%
D 60% - 69%
F 0% - 59%
The goal of this course is to provide a solid foundation of fundamental mathematics skills and to prepare students for further study in mathematics. The emphasis of this class is on basic mathematical rules, operations, and methods. This particularly includes rules for simplifying and manipulating expressions including basic arithmetic, exponents, and radicals. Furthermore, methods for solving equations and inequalities for some functions are covered. Listed below is an overview of objectives covered in the course.

### Course Objective

<table>
<thead>
<tr>
<th>Arithmetic &amp; Linear Equations</th>
<th>Functions, Formulas, &amp; Inequalities</th>
<th>Linear Functions &amp; Exponent Rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluate arithmetic expressions</td>
<td>Identify functions</td>
<td>Find the slope of a line, write the equation of a line, and graph linear functions</td>
</tr>
<tr>
<td>Apply algebraic properties of real numbers</td>
<td>Solve linear inequalities and express their solutions</td>
<td>Apply exponent rules to simplify expressions</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Polynomials</th>
<th>More Polynomials &amp; Rational Functions</th>
<th>Rational Exponents &amp; Radicals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combine polynomials (by adding, subtracting, or multiplying)</td>
<td>Solve polynomial equations by factoring</td>
<td>Understand the meaning of radicals and rational exponents</td>
</tr>
<tr>
<td>Factor out the Greatest Common Factor (GCF) and factor by grouping</td>
<td>Combine rational expressions</td>
<td>Use rules for exponents/radicals to simplify expressions involving radicals or rational exponents</td>
</tr>
</tbody>
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### Course Outline

<table>
<thead>
<tr>
<th>Section</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2</td>
<td>Algebraic expression, absolute value, &amp; order of operations</td>
</tr>
<tr>
<td>1.3-1.4</td>
<td>Properties of real numbers (e.g. Associative) &amp; linear equations</td>
</tr>
<tr>
<td>2.1-2.2</td>
<td>Introduction to problem solving</td>
</tr>
<tr>
<td>2.3-2.4</td>
<td>Problem solving with formulas and with linear inequalities</td>
</tr>
<tr>
<td>3.1-3.2</td>
<td>Introduction to functions &amp; graphing equations</td>
</tr>
<tr>
<td>3.3-3.5</td>
<td>Equations of lines</td>
</tr>
<tr>
<td>5.1-5.2</td>
<td>Exponents and exponent rules</td>
</tr>
<tr>
<td>5.3-5.4</td>
<td>Introduction to polynomials and greatest common factors</td>
</tr>
<tr>
<td>5.5-5.6</td>
<td>Factoring trinomials and factoring by special products</td>
</tr>
<tr>
<td>5.7-5.8</td>
<td>Problem solving with quadratics and factoring</td>
</tr>
<tr>
<td>6.1-6.2</td>
<td>Introduction to rational functions &amp; combining rational expressions</td>
</tr>
<tr>
<td>7.1-7.2</td>
<td>Introduction to radical expressions and rational exponents</td>
</tr>
<tr>
<td>7.3-7.4</td>
<td>Product &amp; quotient rule for radicals, combining radical expressions</td>
</tr>
<tr>
<td>7.5</td>
<td>Rationalizing denominators with one or two terms</td>
</tr>
</tbody>
</table>
Testing Information

General Information

All tests are password-protected and must be taken in the Math Zone. Tests must be taken during registered test times unless other arrangements are necessary.

Each test has an accompanying practice test which can be taken as many times as desired. To best prepare for your test, complete any late assignments for the unit and work the practice test until you obtain your desired score.

Once your test is submitted, you should review it. After you leave the test, it will not be available for review in your MyLabsPlus account. If you have any problems or concerns while reviewing, please inform the test proctor and they will assist you.

A score of zero is given when a testing policy has been violated.

What to Bring:
- Student ID
- Scientific Calculator
- Any non-graphing calculator
- Pen or Pencil

Leave Behind:
- Graphing Calculators & Calculator Lids
- Electronic Devices
- Notes or Other Papers
- Bags or Personal Items
- Hats
- Headphones

Testing Policies

- You may not visit any website other than MyLabsPlus.
- You must remain in the testing area for the entire duration of your test.
- Once you begin your test, you may not leave the testing area.
- No prohibited items may be brought into the testing area.

Remember...

Take a test for a scheduled absence before the due date.

For an documented absence...
- Fill out a petition from the Math Zone desk.
- Submit documentation to Student Ombudsman Services.

Rescheduling a Test

In the event of documentable absences, a Petition for Alternative Test Date must completed (available at the Math Zone desk) and submitted to the Math Zone Director. In addition, documentation must be provided to the Office of Student Ombudsman Services (R.C. Cook University Union - Room 221), indicating that the absence is documented and excused. These steps should be completed within two school days of the absence. Incomplete, late, or failure to complete petitions will not be accepted. Test retakes may not be rescheduled.

Retaking a Test

One unit test retake is allowed over the course of the semester. Students wishing to use their test retake must complete the corresponding practice test with a score of 70% or greater before the retake is allowed. Look in the "Test Retake" tab in your MyLabsPlus course for more specific instructions.

In addition, all students have the opportunity to retake the final exam at the conclusion of the semester, regardless whether the unit test retake has been used or not.
Course Policies

ODA Policy

If a student has a disability that qualifies under the American with Disabilities Act (ADA) and requires accommodations, he/she should contact the Office for Disability Accommodations (ODA) for information on appropriate policies and procedures. Disabilities covered by ADA may include learning, psychiatric, physical disabilities, or chronic health disorders. Students can contact ODA if they are not certain whether a medical condition/disability qualifies.

Address:
The University of Southern Mississippi
Office for Disability Accommodations
118 College Drive # 8586
Hattiesburg, MS 39406-0001
Voice Telephone:
(601) 266-5024
(228) 214-3232
Fax:
(601) 266-6035

Individuals with hearing impairments can contact ODA using the Mississippi Relay Service at 1-800-582-2233 (TTY) or email Suzy Hebert at Suzanne.Hebert@usm.edu.

Make-up Policy

The make-up policy for tests is covered in the ‘Testing’ section of the syllabus.

Homework assignments, quizzes, video notebook checks, and classes that are missed due to verifiable circumstances can be made-up (or waived in the case of attendance) provided you can submit valid documentation.

If homework assignments are not completed on time for any other reason, those problems can still be completed for 50% credit until the date of the test, however, quizzes will remain unavailable.

Fast Track Policy

The Fast Track Policy is for students earning an A on the first two tests of the semester. Students in the Fast Track program are allowed to take tests early and finish the course as soon as all assignments and tests are completed. More information about the Fast Track Policy is located at www.usm.edu/mathzone.

Academic Honesty

Statement on academic integrity:
All students at the University of Southern Mississippi are expected to demonstrate the highest levels of academic integrity in all that they do. Forms of academic dishonesty include (but are not limited to):
* Cheating (to include copying from others’ work)
* Plagiarism – representing another person’s words or ideas as your own; failure to properly cite the source of your information, argument, or concepts
* Fabrication of documents
*Disclosure of test or other assignment content to another student
* Submission of the same paper or other assignment to more than one class without the explicit approval of all faculty members involved
* Unauthorized collaboration with others on work for online courses

Engaging in any of these behaviors or supporting others who do so will result in academic penalties and/or other sanctions. If a faculty member determines that a student has violated our academic Integrity Policy, sanctions ranging from resubmission of work to course failure may occur, including the possibility of receiving a grade of “XF” for the course, which will be on the student’s transcript with the notation “Failure due to academic misconduct.” For more details, please see the University’s Academic Integrity Policy: https://www.usm.edu/institutional-policies/policy-acaf-pro-012 Note that repeated acts of academic misconduct will lead to expulsion from the University.

In particular, any instance of cheating on a unit test will result in a zero and cannot be replaced by a second attempt.

Lab Policy

The following policies concern use of the Math Zone. Violating the rules listed below may result in one or more of the following: loss of lab attendance credit, being asked to leave the Zone, and/or a zero on an assignment(s).

1. Only students in eligible MAT courses may enter the Zone. Friends, private tutors, etc., must find other premises.

2. When in the Math Zone, you are expected to be respectful of others.

3. Food and tobacco products are not allowed in the lab. Drinks should be in sealed containers.

4. Talking on cell phones is not permitted while working in the lab.

5. You are expected to be actively working on mathematics while in the Zone. You may not visit other websites or work on assignments for other classes.
Tips for Success

Use your time in class effectively.
- Sit near the front, avoid distractions, and participate.
- Ask questions if you are confused and don't be afraid to respond to questions that are asked.
- Learn the exact definitions of all new terms the first time they appear so that misunderstandings do not prevent you from answering questions.

Adequately prepare for class and tests.
- Prepare yourself physically as well as mentally; eat well and get sufficient rest.
- Take your practice test(s) under conditions similar to those of the real test.
- Plan study sessions with your classmates.
- When taking your test, relax and read the problems carefully.

Dedicate the necessary time.
- Use your time in the lab effectively; get help right away from the Math Zone staff with any problems you may have.
- Get to know your classmates so you can plan study sessions together.
- Organize your work: keep video notes, class handouts, and scratch paper from homework and quizzes together.
- Establish a consistent schedule for completing homework and studying the material.
- When working problems, model the same step-by-step processes used by your instructor.

Use resources wisely to help you.
- If you don't understand problems or concepts, ask the tutors or your instructor.
- Utilize the Media Library in MyLabsPlus.
- Find ways to learn concepts rather than memorizing every problem.

Embrace the struggle.
- Don't overuse the "Help Me Solve This" or "View and Example" tools. Attempt problems on your own if possible.
- Focus on the most challenging problems and realize that you may not understand every single problem instantly.

Additional Tips.
- If you are a pen and paper person, print out your homework assignments and bring them to the Math Zone with you.
- Make good use of the video lectures. Pause, rewind, and rewatch them as often as necessary.

Other Resources

Student Success Center
- Offers tutoring through the First Year Initiative (FYI)
- Located in McLemore Hall, Second Floor
- Phone: 601.266.5003
- Website: http://www.usm.edu/success

Learning Enhancement Center
- Helps students devise learning strategies, study skills, and time management skills
- Located in the International Center, Third Floor
- Phone: 601.266.5518
- Website: www.lec.usm.edu
UNLOCK A COMPUTER
Login: student
Password: student

OPEN A BROWSER
Website: usm.mylabsplus.com

HAVE YOU TAKEN A COURSE IN THE MATH ZONE BEFORE?

DO YOU HAVE AN ACCESS CODE?

Yes

Login: w*****
Password: usmmlppw
(unless you changed it)
If you do not remember your password, click "Forgot Password" and a link will be sent to your Eagles email for you to reset it.

Yes

ENTER ACCESS CODE

TEMPORARY ACCESS
When prompted to enter an access code, click "Pay Later". You will be granted temporary access for 14 days.

BEGIN WORKING
You are now free to begin exploring your course and working assignments.

No

No