Course Description

Presents substantive skills in quantitative and abstract reasoning in the use of mathematics as a computational and analytical tool in a continuation of Algebra I.

Course Textbook


Course Learning Outcomes

Upon completion of this course, students should be able to:

1. Solve formulas for a specific variable and linear, quadratic, exponential, and logarithmic equations, including equations with radical expressions and complex numbers.
2. Interpret graphs of functions.
3. Graph linear, quadratic, exponential, and logarithmic equations.
4. Perform mathematical operations on quadratic equations, exponential equations, logarithmic equations, polynomials, and functions.
5. Solve problems using the distance and midpoint formulas as well as the Pythagorean theorem.
6. Simplify algebraic, radical, and rational expressions.
7. Solve a system of equations or inequalities by the four methods of graphing, substitution, elimination, and addition.
8. Solve application problems involving linear, quadratic, exponential, logarithmic, radical, and rational expressions and equations.

Credits

Upon completion of this course, the students will earn three (3) hours of college credit.

Course Structure

1. **Study Guide**: Each unit contains a Study Guide that provides students with the learning outcomes, unit lesson, required reading assignments, and supplemental resources.
2. **Learning Outcomes**: Each unit contains Learning Outcomes that specify the measurable skills and knowledge students should gain upon completion of the unit.
3. **Unit Lesson**: Each unit contains a Unit Lesson, which discusses lesson material.
4. **Reading Assignments**: Units I-VII contain Reading Assignments from one or more chapters from the textbook.
5. **Suggested Reading**: Suggested Readings are listed in Unit VIII.
6. **Learning Activities (Non-Graded)**: These non-graded Learning Activities are provided to aid students in their course of study.
7. **Discussion Boards**: Discussion Boards are part of all CSU term courses. More information and specifications can be found in the Student Resources link listed in the Course Menu bar.
8. **Homework**: Each unit contains a homework assignment to be completed in MyMathLab (links are provided in each unit). You have unlimited attempts to make a grade of at least 70% before you will be allowed to take your unit assessment.
9. **Unit Assessments**: Units I-VII contain unit assessments to be completed in MyMathLab (links are provided in each unit). Be sure to show your work step-by-step on assessment questions so that your professor can follow your work and grade it accordingly.
10. **Final Exam:** Unit VIII contains a final exam to be completed in MyMathLab (a link is provided within the unit). All Final Exams are proctored—see below for additional information. You are permitted four (4) hours to complete this exam in the presence of your approved proctor. This is an open-book exam. Only course textbooks and a calculator, if necessary, are allowed when taking proctored exams. The Final Exam is composed of multiple choice questions.

11. **Ask the Professor:** This communication forum provides you with an opportunity to ask your professor general or course content related questions.

12. **Student Break Room:** This communication forum allows for casual conversation with your classmates.

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**CSU Online Library**

The CSU Online Library is available to support your courses and programs. The online library includes databases, journals, e-books, and research guides. These resources are always accessible and can be reached through the library webpage. To access the library, log into the myCSU Student Portal, and click on “CSU Online Library.” You can also access the CSU Online Library from the “My Library” button on the course menu for each course in Blackboard.

The CSU Online Library offers several reference services. E-mail (library@columbiasouthern.edu) and telephone (1.877.268.8046) assistance is available Monday – Thursday from 8 am to 5 pm and Friday from 8 am to 3 pm. The library’s chat reference service, *Ask a Librarian*, is available 24/7; look for the chat box on the online library page.

Librarians can help you develop your research plan or assist you in finding relevant, appropriate, and timely information. Reference requests can include customized keyword search strategies, links to articles, database help, and other services.

**APA Guidelines**

The application of the APA writing style shall be practical, functional, and appropriate to each academic level, with the primary purpose being the documentation (citation) of sources. CSU requires that students use APA style for certain papers and projects. Students should always carefully read and follow assignment directions and review the associated grading rubric when available. Students can find CSU’s Citation Guide by clicking [here](#). This document includes examples and sample papers and provides information on how to contact the CSU Success Center.

**Grading Rubrics**

This course utilizes analytic grading rubrics as tools for your professor in assigning grades for all learning activities. Each rubric serves as a guide that communicates the expectations of the learning activity and describes the criteria for each level of achievement. In addition, a rubric is a reference tool that lists evaluation criteria and can help you organize your efforts to meet the requirements of that learning activity. It is imperative for you to familiarize yourself with these rubrics because these are the primary tools your professor uses for assessing learning activities.

Rubric categories include: (1) Discussion Board, (2) Assessment (Written Response), and (3) Assignment. However, it is possible that not all of the listed rubric types will be used in a single course (e.g., some courses may not have Assessments).

The Discussion Board rubric can be found within Unit I’s Discussion Board submission instructions.

The Assessment (Written Response) rubric can be found embedded in a link within the directions for each Unit Assessment. However, these rubrics will only be used when written-response questions appear within the Assessment.

Each Assignment type (e.g., article critique, case study, research paper) will have its own rubric. The Assignment rubrics are built into Blackboard, allowing students to review them prior to beginning the Assignment and again once the Assignment has been scored. This rubric can be accessed via the Assignment link located within the unit where it is to be submitted. Students may also access the rubric through the course menu by selecting “Tools” and then “My Grades.”

Again, it is vitally important for you to become familiar with these rubrics because their application to your Discussion Boards, Assessments, and Assignments is the method by which your instructor assigns all grades.
Final Examination Guidelines

Final Exams are to be administered to students by an approved Proctor. CSU approves two flexible proctoring options: a standard Proctor, who is chosen by the student and approved by the university, or Remote Proctor Now (RP Now), an on-demand, third-party testing service that proctors examinations for a small fee.

Students choosing RP Now must have an operational webcam/video with audio, a high-speed Internet connection, and the appropriate system rights required to download and install software.

To review the complete Examination Proctor Policy, including a list of acceptable Proctors, Proctor responsibilities, Proctor approval procedures, and the Proctor Agreement Form, go to the myCSU Student Portal from the link below.
http://mycsu.columbiasouthern.edu

You are permitted four (4) hours to complete this exam in the presence of your approved Proctor. This is an open book exam. Only course textbooks, writing utensils, and a calculator, if necessary, are allowed when taking proctored exams. Other materials are not permitted unless specified in the examination instructions and only the sources identified in the instructions may be used as source material.

Communication Forums

These are non-graded discussion forums that allow you to communicate with your professor and other students. Participation in these discussion forums is encouraged, but not required. You can access these forums with the buttons in the Course Menu. Instructions for subscribing/unsubscribing to these forums are provided below.

Click here for instructions on how to subscribe/unsubscribe and post to the Communication Forums.

Ask the Professor

This communication forum provides you with an opportunity to ask your professor general or course content questions. Questions may focus on Blackboard locations of online course components, textbook or course content elaboration, additional guidance on assessment requirements, or general advice from other students.

Questions that are specific in nature, such as inquiries regarding assessment/assignment grades or personal accommodation requests, are NOT to be posted on this forum. If you have questions, comments, or concerns of a non-public nature, please feel free to email your professor. Responses to your post will be addressed or emailed by the professor within 48 hours.

Before posting, please ensure that you have read all relevant course documentation, including the syllabus, assessment/assignment instructions, faculty feedback, and other important information.

Student Break Room

This communication forum allows for casual conversation with your classmates. Communication on this forum should always maintain a standard of appropriateness and respect for your fellow classmates. This forum should NOT be used to share assessment answers.
## Grading

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<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Discussion Boards Units I &amp; VIII (2 @ 1%)</td>
<td>2%</td>
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<td>Discussion Boards Units II-VII (6 @ 2%)</td>
<td>12%</td>
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<td>Homework (8 @ 4%)</td>
<td>32%</td>
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<td>Assessments (7 @ 5%)</td>
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<td>Final Exam</td>
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<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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## Course Schedule/Checklist (PLEASE PRINT)

The following pages contain a printable Course Schedule to assist you through this course. By following this schedule, you will be assured that you will complete the course within the time allotted.
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## Unit I  Graphs, Functions, and Linear Equations

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<tr>
<th>Review:</th>
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<tbody>
<tr>
<td>□ Unit Study Guide</td>
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<td>□ Learning Activities (Non Graded): See Study Guide</td>
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<tr>
<th>Read:</th>
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<tr>
<td>□ Chapter 1: Algebra and Problem Solving, Sections 1.3 (pp. 21-28), 1.4 (pp. 29-35), and 1.6 (pp. 45-54)</td>
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<td>□ Chapter 2: Graphs, Functions, and Linear Equations</td>
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<td>□ MyMathLab Assessment by Tuesday, 11:59 p.m. (Central Time)</td>
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Notes/Goals:

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## Unit II  Systems of Equations, Inequalities, and Problem Solving

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<th>Read:</th>
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<tbody>
<tr>
<td>□ Chapter 3: Systems of Linear Equations and Problem Solving</td>
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<td>□ Chapter 4: Inequalities and Problem Solving</td>
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<td>□ Proctor Approval Form</td>
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Notes/Goals:
## MAT 1303, Algebra II

### Unit III  
**Polynomials and Polynomial Functions**

- **Review:**
  - Unit Study Guide
  - **Learning Activities (Non Graded):** See Study Guide

- **Read:**
  - Chapter 5: Polynomials and Polynomial Functions

- **Discuss:**
  - **Discussion Board Response:** Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time)
  - **Discussion Board Comment:** Comment on another student’s Discussion Board response by Tuesday, 11:59 p.m. (Central Time)

- **Submit:**
  - MyMathLab Homework by Tuesday, 11:59 p.m. (Central Time)
  - MyMathLab Assessment by Tuesday, 11:59 p.m. (Central Time)

### Unit IV  
**Rational Expressions, Equations, and Functions**

- **Review:**
  - Unit Study Guide
  - **Learning Activities (Non Graded):** See Study Guide

- **Read:**
  - Chapter 6: Rational Expressions, Equations, and Functions

- **Discuss:**
  - **Discussion Board Response:** Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time)
  - **Discussion Board Comment:** Comment on another student’s Discussion Board response by Tuesday, 11:59 p.m. (Central Time)

- **Submit:**
  - MyMathLab Homework by Tuesday, 11:59 p.m. (Central Time)
  - MyMathLab Assessment by Tuesday, 11:59 p.m. (Central Time)

### Unit V  
**Exponents and Radicals**

- **Review:**
  - Unit Study Guide
  - **Learning Activities (Non Graded):** See Study Guide

- **Read:**
  - Chapter 7: Exponents and Radicals

- **Discuss:**
  - **Discussion Board Response:** Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time)
  - **Discussion Board Comment:** Comment on another student’s Discussion Board response by Tuesday, 11:59 p.m. (Central Time)

- **Submit:**
  - MyMathLab Homework by Tuesday, 11:59 p.m. (Central Time)
  - MyMathLab Assessment by Tuesday, 11:59 p.m. (Central Time)

Notes/Goals:
# MAT 1303, Algebra II

## Course Schedule

### Unit VI: Quadratic Functions and Equations

**Review:**
- Unit Study Guide
- **Learning Activities (Non Graded):** See Study Guide

**Read:**
- Chapter 8: Quadratic Functions and Equations

**Discuss:**
- **Discussion Board Response:** Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time)
- **Discussion Board Comment:** Comment on another student’s Discussion Board response by Tuesday, 11:59 p.m. (Central Time)

**Submit:**
- **MyMathLab Homework** by Tuesday, 11:59 p.m. (Central Time)
- **MyMathLab Assessment** by Tuesday, 11:59 p.m. (Central Time)

**Notes/Goals:**

### Unit VII: Exponential Functions and Logarithmic Functions

**Review:**
- Unit Study Guide
- **Learning Activities (Non Graded):** See Study Guide

**Read:**
- Chapter 9: Exponential Functions and Logarithmic Functions

**Discuss:**
- **Discussion Board Response:** Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time)
- **Discussion Board Comment:** Comment on another student’s Discussion Board response by Tuesday, 11:59 p.m. (Central Time)

**Submit:**
- **MyMathLab Homework** by Tuesday, 11:59 p.m. (Central Time)
- **MyMathLab Assessment** by Tuesday, 11:59 p.m. (Central Time)
- **Request to take Final Exam**

**Notes/Goals:**

### Unit VIII: Review for the Final Exam

**Review:**
- Unit Study Guide
- **Learning Activities (Non Graded):** See Study Guide

**Read:**
- **Suggested Reading:** Review Chapters 1 – 9 for the comprehensive Final Exam

**Discuss:**
- **Discussion Board Response:** Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time)
- **Discussion Board Comment:** Comment on another student’s Discussion Board response by Tuesday, 11:59 p.m. (Central Time)

**Submit:**
- **MyMathLab Homework** by Tuesday, 11:59 p.m. (Central Time)
- **MyMathLab Final Exam** by Tuesday, 11:59 p.m. (Central Time)

**Notes/Goals:**