# Intermediate Algebra (QS)

## MATH - 1010 004

## Course Prerequisites

ENGL 0990 w/C grade; AND within the last year MATH 0990 (or equivalent) w/C grade or better or appropriate placement score

## Course Description

This course provides a preparation for more advanced study in mathematics and related fields. Topics include solving systems of linear equations; simplifying polynomial, rational, and radical expressions; solving quadratic, rational, radical, exponential, and logarithmic equations; and graphing functions. Applications will be integrated throughout these topics.

Prerequisite(s): ENGL 0990 w/C grade; AND within the last year MATH 0990 (or equivalent) w/C grade or better or appropriate placement score
Semester(s): All

## Course Learning Outcomes

Upon completion of this course students should:

1. Have competent algebraic skills for: three by three linear systems with unique solutions; operations with polynomials, radicals, rational expressions, and absolute values; and have competent algebraic and graphic skills for: equations of lines, two by two systems, inequalities, and the quadratic equation.
2. Understand how linear equations, quadratics, systems, radicals, and graphs relate to realistic applications.
3. Advance readily to higher-level college mathematics courses, e.g., College Algebra.

# Course Student Learning Outcomes

- Discover mathematical knowledge via the self-exploration and integration of content topics, communicating and demonstrating findings as preparation for subsequent courses.

- Apply computational and analytical skills to resolve mathematical problems involving polynomial, rational, radical, exponential, and logarithmic functions.

- Interpret and evaluate relationships between two or more variable quantities, representing them verbally, algebraically, and/or geometrically (i.e., graphically), and translating between these variables.

- Persevere throughout the entire process of understanding, modeling, and solving real-world application problems.

- Think critically about problem-solving methods as well as the potential solutions that they generate, demonstrating both sound reasoning skills and a healthy sense of skepticism while enroute to a solution.

# College Wide Student Learning Outcomes

- 1. Acquire substantive knowledge 2. Communicate effectively 3. Develop quantitative literacies 4. Think critically 5. Express creatively 6. Knowledge and skills to be civically engaged 7. Work with others in a professional and constructive manner 8. Develop information literacy 9. Develop computer literacy

# Engagement Plan

**Instructor Responsibilities**

- I will respond to email within 24 hours. I will offer feedback on major assignments within 5-7 days. The best way to contact me is via the Canvas Inbox, as I will prioritize this email over other modes of communication.

- I will address questions from assignments and quizzes at the beginning of each class.
- Assist and instruct to the best of my ability the concepts of this course.

**Student Responsibilities**

- Understand and be proficient in Math 990 concepts.
- Get help sooner than later. There are many resources at SLCC.
- Ask Questions when you do not understand the concepts presented.
- Attend class.
- Stay current with assignments when covered in class.
- DO NOT PROCRASTINATE.

# Required Materials

All coursework will be available through Canvas. The textbook is available in your Canvas course. You can view it section by section in each module. Because of the interactive nature of the textbook, there is no hard copy of the textbook available.

You will complete your homework assignments online through Canvas. You will be using LumenLearning Online Homework Manager (OHM), which is integrated into Canvas, to complete your sectionhomework and quizzes. The fee for OHM is part of the course fee for this class.

# Calculators

A scientific calculator is required for the course. Students are allowed (as per instructor's restrictions) to use calculators provided they show clear/precise work on every problem on the exams in order to receive full credit for correct answers. No cell phones or devices with internet connectivity may be used on an exam. Graphing calculators may not be used on an exam. A current example of an acceptable scientific calculator is a TI30. It is the instructor's prerogative to give exams or portions of regular exams that do not allow a scientific calculator.

# Brief Description of Assignments/Exams

**Homework:** Homework should be completed for each section of learning material in the course. You will use the Lumen OHM (Online Homework Manager), which is integrated into your Canvas course. You should work your homework problems in a notebook, labeling each section and problem number. This will help you prepare for exams and organize your steps and thinking. After working out the problem on paper, enter your result online and check.

Regular practice is essential in learning mathematics. Most students find that the more homework they practice, the better they do on the exams. If you don't understand a question or how to input the answer, you should stop and get help on that question instead of continuing to get it wrong. Many homework questions are accompanied with a video for reference. Please watch the video (if available), refer to your textbook, get help from a tutor, or contact your instructor for help with the problem and concepts.

**Projects = GE Signature Assignment:** You will complete 2 projects this semester applying techniques you've been learning to bigger problems. These will be labeled as GE Signature Assignment 1, GE Reflection 1, and GE Signature Assignment 2, GE Reflection 2.

General Education classes at SLCC require students to have a Signature assignment.

**Quizzes:** Short quizzes to help assess your progress at mastering the course content and give you feedback on your work will be given throughout the semester. See the course schedule for dates and topics.

**Exams:** There will be three paper exams this semester. The dates for these exams can be found on the class schedule. There is NOT a retake option for the exams. **Exams will be taken in our classroom during a regularly scheduled class period.**

Exams will be on paper and will require you to show work. All exams will be "closed book" and no written notes of any kind are allowed. A standard scientific calculator may be used on exams as per your instructor's prerogative. A graphing/programmable calculator/cell phone/PDA or any device capable of connecting to the internet is NOT allowed. Full credit will only be awarded on exam questions when answers are justified by a legible and logically valid argument.

**Final Exam:** The final exam for Math 1010 will be a paper/pencil comprehensive departmental examination emphasizing topics listed under the course objectives. You will have 120 minutes to complete the exam. More information is available in your CANVAS course. The is no retake option for the final exam, nor can the final exam score be dropped.

- 60% Final Exam Rule: The Math Department's 60% Final Exam Rule is that if a student scores less than 60% on their final exam then their total course grade will be the lower of a D or their grade as calculated according to the weights of the grading categories on their syllabus. In other words, if a student fails their final exam (scores less than 60%), then the highest total course grade that they can earn for the course is a D.

**Attendance and Participation:** Class attendance and participation is expected and essential to success in this course. Participation will be defined by your instructor and may include activities such as quizzes or completing various assignments during the scheduled class time. There is a very high correlation between attendance and success in any mathematics class. If a student does not attend one of the first two class meetings, the instructor may drop the student from the class.

## Additional Materials

There are a few websites that are listed below that are beneficial in this course.

www.mathisfun.com

www.desmos.com

www.khanacademy.org

There are many more online resources and tutoring at the STEM center in the SI building at the Redwood Campus.

## Due Dates and Late Work

It is important in this math class to stay up to date on all assignments. All assignments are expected to be completed by the due date. Completing any assignment after the due

date will result in a 2% daily deduction in points, calculated automatically by Canvas.

## General Education Information

QL; QS

This course fulfills the above requirement for the General Education Program at Salt Lake Community College. It is designed not only to teach the information and skills required by the discipline, but also to develop vital workplace skills and to teach strategies and skills that can be used for life-long learning.

General Education courses teach basic skills as well as broaden a student's knowledge of a wide range of subjects. Education is much more than the acquisition of facts; it is being able to use information in meaningful ways in order to enrich one's life.

While the subject of each course is important and useful, we become truly educated through making connections of such varied information with the different methods of organizing human experience that are practiced by different disciplines. Therefore, this course, when combined with other General Education courses, will enable you to develop broader perspectives and deeper understandings of your community and the world, as well as challenge previously held assumptions about the world and its inhabitants.

## Grade Weights

Your grade will be based on a weighted average as follows.

- Attendance + Participation (2%)
- Homework (18%)
- Quizzes (8%)
- Project(s) (12%)
- Exams  (30%)
- Final Exam (30%)

# Grading Scale

The grade you earn will be recorded on your SLCC transcript. Grades are not negotiable. No work will be accepted after the last day of class. Limited, if any, extra credit opportunities may be available. If you need to achieve a certain grade in this course be careful to complete all assignments, plan appropriate time for studying, and get help as needed so that you achieve your goal.

An average percent will be computed, and the final grade will be determined using the following scale:

93–100% = A

90– 92% = A-

87- 89% = B+

83–86% = B

80–82% = B-

77–79% = C+

73– 76% = C

70– 72% = C-

67– 69% = D+

63–66% = D

60–62% = D-

Below 60% = E

Incomplete Grade: Per college policy, incompletes can only be considered when a student has completed at least 70% of total course work and is passing the class at the time the incomplete is requested. In Math 1010, this amounts to all course work being completed, except the final exam. So, if a Math 1010 student has completed all work minus the final

and is passing, then their instructor may consider, but does not have to grant, an incomplete grade to that requesting student with a college-excused reason.

## Keys for Success (how to succeed in the course)

**Make a Time Commitment**

This is a 4-credit-hour course and you should expect to spend, on average, 8-12 hours per week outside of class studying or at least 16 hours if taken as an Online class. Do not assume an online class will require less engagement than an in-person class. If anything, taking this class online will require even more dedication and engagement from the very start.

## Additional Policies

**Classroom Deportment:** Each student is responsible for their own behavior. Any student who shows a pattern of disrespect for others, or who at any time displays egregious disrespect for others, will be subject to penalties as per the student code of conduct.

**Cheating:** Typically, cheating on any assignment minimally results in a failing grade for that assignment, but possibly a failing grade for the entire class. Cheating is not tolerated; so, take heed and do honest work to learn and develop intellectually. For more details about academic dishonesty, consult the Code of Student Rights and Responsibilities link above, where this topic is addressed.

**Electronic Devices in the Classroom:** Absolutely no video or audio recording in the classroom is allowed without prior written authorization from the instructor. Cell phones and other electronic devices should be in silent mode and put away during quizzes, tests, and final exams.

In case of an emergency where you need to answer a call or respond to a text, please exit the classroom before responding. You may use a computer or tablet for notes in class, but do be sure you are not distracting classmates and that you are only doing class tasks. We will use technology for some class activities. Students who text, scroll on their phones, talk on their cell phone, or use their technology to do activities not directly related to the class will be asked to leave the classroom.

## Math Tutoring and Academic Success Resources

Free tutoring and academic success resources offered through our **STEM Resource Center.**

## Accesibility and Disability Services

SLCC values inclusive learning environments and strives to make all aspects of the College accessible to our students. If you have a disability and believe you need accommodations to improve access to learning materials or the learning environment, please contact Accessibility and Disability Services: Phone: 801-957-4659; Email: ADS@slcc.edu; ADS Website: https://www.slcc.edu/drc/Home/index.aspx

## Institutional Policies

As members of our academic community, we would like to invite you to review the Institutional Syllabus which covers important policies and procedures. This document contains important links for students on the code of student rights and responsibilities, academic integrity, and grading policies, Title IX and other important acknowledgements. By familiarizing yourself with this information, you can help us create a safe and respectful environment for everyone.

For more information, navigate to the Institutional Policies tab on the Institutional Syllabus page.

## Learning Support and Tutoring Services

We are pleased to offer a range of tutoring and learning support services to help you achieve your academic goals. Whether you need assistance with a specific subject or want to improve your study skills, you have many options for tutoring or other support.

To learn more about the services we offer and how to access them, visit the Institutional Syllabus page under the Tutoring and Learning Support tab. We encourage you to take advantage of these resources to help you succeed in your studies. If you have any

questions or would like to schedule a tutoring session, please don't hesitate to reach out to us. We are here to support you in any way we can.

## Contingency Plan for Remote Workday

Under Utah legislation, the governor can now call a "Remote Workday" given certain circumstances. These remote workdays can be due to inclement weather, pollution, or natural disasters. If this happens, I will post an announcement in Canvas with instructions for any adjustments we may need to make. If we have a test scheduled on a remote learning day, the test will be postponed and I'll post instructions and information in a Canvas announcement.

## Advising and Counseling Support Services

At our institution, we are committed to supporting your academic and personal growth. That's why we offer a range of advising and counseling services to help you navigate the challenges of college life. To learn more about the resources available to you and how to access them, visit the Institutional Syllabus page under the Advising and Counseling Support Services tab. Our advising team and the support centers across campus are here to support you in achieving your goals and overcoming any obstacles you may face.

## Student Academic Calendar

As students you should be aware of all important dates in the semester, such as the day that courses begin and end, as well as the drop date and the last day to withdraw. To learn more about those dates, navigate to the Student Academic Calendar below:

SLCC Student Academic Calendar

## How to Navigate to Canvas

## Assignment Schedule

| Due Date | Assignment Name | Assignment Type | Points |
| --- | --- | --- | --- |
| | GE Signature Assignment Reflection | Assignment | 100 |
| | GE Signature Assignment Zero Gravity (OHM) | Assignment | 40 |
| | Roll Call Attendance | Assignment | 100 |
| 8/28/25 | Pre-Test | Assignment | 20 |
| 9/11/25 | Module 1 Written Quiz | Assignment | 100 |
| 9/16/25 | Module 2 Written Quiz | Assignment | 100 |
| 9/17/25 | Exam 1 | Assignment | 100 |
| 9/17/25 | Homework 1.1: Graphs | Assignment | 12 |
| 9/17/25 | Homework 1.2: Functions | Assignment | 18 |
| 9/17/25 | Homework 1.3: Linear Functions | Assignment | 21 |
| 9/17/25 | Homework 1.4:  Linear Equations and Modeling | Assignment | 8 |
| 9/17/25 | Homework 2.1: Systems of Two Linear Equations | Assignment | 16 |
| 9/17/25 | Homework 2.2: Systems of Three Linear Equations | Assignment | 12 |
| 9/17/25 | Homework 2.3: Solutions to Systems of Linear Inequalities | Assignment | 12 |

| Due Date | Assignment Name | Assignment Type | Points |
|----------|-----------------|-----------------|--------|
| 9/17/25 | Module 2 Online Quiz | Assignment | 35 |
| 9/17/25 | Module Online 1 Quiz | Assignment | 75 |
| 9/26/25 | GE Signature Assignment Optimization Parts 1-5 Check-In | Assignment | 10 |
| 10/2/25 | Module 3 Written Quiz | Assignment | 100 |
| 10/15/25 | Module 4 Written Quiz | Assignment | 100 |
| 10/20/25 | Exam 2 | Assignment | 100 |
| 10/20/25 | Homework 3.1: Properties of Exponents and Polynomials | Assignment | 18 |
| 10/20/25 | Homework 3.2: The Algebra of Functions | Assignment | 14 |
| 10/20/25 | Homework 3.3: Graphing Quadratic Functions in Vertex Form | Assignment | 9 |
| 10/20/25 | Homework 3.4: Graphing Quadratic Functions in Intercept Form and the Zero-Product Property | Assignment | 9 |
| 10/20/25 | Homework 3.5: Review of Factoring | Assignment | 21 |

| Due Date | Assignment Name | Assignment Type | Points |
| --- | --- | --- | --- |
| 10/20/25 | [Homework 3.6: Graphing Quadratic Functions in General Form](#) | Assignment | 19 |
| 10/20/25 | [Homework 3.7: Factoring the Sum and Difference of Cubes and a General Approach to Factoring](#) | Assignment | 21 |
| 10/20/25 | [Homework 4.1: Introduction to Rational Expressions and Functions](#) | Assignment | 11 |
| 10/20/25 | [Homework 4.2: Multiplying and Dividing Rational Expressions](#) | Assignment | 6 |
| 10/20/25 | [Homework 4.3: Adding and Subtracting Rational Expressions](#) | Assignment | 13 |
| 10/20/25 | [Homework 4.4: Simplifying Complex Rational Expressions](#) | Assignment | 12 |
| 10/20/25 | [Homework 4.5: Solving Rational Equations](#) | Assignment | 13 |
| 10/20/25 | [Homework 4.6: Formulas](#) | Assignment | 10 |

| Due Date | Assignment Name | Assignment Type | Points |
|---|---|---|---|
| 10/20/25 | [Homework 4.7: Solving Applications Involving Rational Equations](#) | Assignment | 11 |
| 10/20/25 | [Homework 4.8: Polynomial Division](#) | Assignment | 9 |
| 10/20/25 | [Homework 4.9: Synthetic Division and the Remainder Theorem](#) | Assignment | 9 |
| 10/20/25 | [Module 3 Online Quiz](#) | Assignment | 70 |
| 10/20/25 | [Module 4 Online Quiz](#) | Assignment | 75 |
| 10/24/25 | [GE Signature Assignment Optimization Full Project Parts 1-9](#) | Assignment | 30 |
| 11/11/25 | [Module 5 Written Quiz](#) | Assignment | 100 |
| 11/18/25 | [Module 6 Written Quiz](#) | Assignment | 100 |
| 11/19/25 | [Exam 3](#) | Assignment | 100 |
| 11/19/25 | [Homework 5.1: Radical Functions and Radical Expressions](#) | Assignment | 14 |
| 11/19/25 | [Homework 5.2: Rational Exponents](#) | Assignment | 16 |
| 11/19/25 | [Homework 5.3: Multiplying Radical Expressions](#) | Assignment | 16 |

| Due Date | Assignment Name | Assignment Type | Points |
|----------|-----------------|-----------------|--------|
| 11/19/25 | [Homework 5.4: Dividing Radical Expressions](#) | Assignment | 10 |
| 11/19/25 | [Homework 5.5: Radical Expressions with Multiple Terms](#) | Assignment | 19 |
| 11/19/25 | [Homework 5.6: Rationalizing Denominators](#) | Assignment | 12 |
| 11/19/25 | [Homework 5.7: Solving Radical Equations](#) | Assignment | 17 |
| 11/19/25 | [Homework 5.8: Distance and Midpoint Formulas, Pythagorean Theorem](#) | Assignment | 10 |
| 11/19/25 | [Homework 5.9: Imaginary and Complex Numbers](#) | Assignment | 21 |
| 11/19/25 | [Homework 6.1: Solving Quadratic Equations](#) | Assignment | 18 |
| 11/19/25 | [Homework 6.2: The Quadratic Formula](#) | Assignment | 9 |
| 11/19/25 | [Homework 6.3: Solutions of Quadratic Equations](#) | Assignment | 10 |
| 11/19/25 | [Homework 6.4: Equations Quadratic in Form](#) | Assignment | 9 |

| Due Date | Assignment Name | Assignment Type | Points |
|----------|-----------------|-----------------|--------|
| 11/19/25 | Homework 6.5: Solving Quadratic Inequalities | Assignment | 9 |
| 11/19/25 | Homework 6.6: Circles | Assignment | 8 |
| 11/19/25 | Module 5 Online Quiz | Assignment | 85 |
| 11/19/25 | Module 6 Online Quiz | Assignment | 70 |
| 12/10/25 | Module 7 Written Quiz | Assignment | 100 |
| 12/12/25 | Module 7 Online Quiz | Assignment | 75 |
| 12/15/25 | Final Exam | Assignment | 200 |
| 12/15/25 | Homework 7.1: Composing Functions | Assignment | 8 |
| 12/15/25 | Homework 7.2: Inverse Functions | Assignment | 13 |
| 12/15/25 | Homework 7.3: Exponential Functions | Assignment | 15 |
| 12/15/25 | Homework 7.4: Logarithmic Functions | Assignment | 12 |
| 12/15/25 | Homework 7.5: Common and Natural Logarithms | Assignment | 14 |
| 12/15/25 | Homework 7.6: Solving Exponential Equations | Assignment | 7 |
| 12/15/25 | Homework 7.7: Solving Logarithmic Equations | Assignment | 9 |

| Due Date | Assignment Name | Assignment Type | Points |
|---|---|---|---|
| 12/15/25 | Homework 7.8: Applications of Exponential Functions | Assignment | 6 |
| 12/15/25 | Homework 7.9: Applications of Logarithmic Functions | Assignment | 4 |