

INSTRUCTOR: Ron McKay

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CONSULTATION: Monday, Wednesday 1-2 pm; Friday 12-1pm; or by appointment.

WEB PAGE: www.ronaldmckay.weebly.com

Course Description: This is a course in modern mathematics. We will be exploring a number of topics that have been developed fairly recently in the mathematical world, along with some more traditional ones. Topics will include trigonometry, voting theory, graph theory, growth models, finance, probability and statistics. This class will be nothing like your intermediate algebra course. If you prefer equations and expressions, this is not the class for you. This course looks at topics that might not seem like math to you, and many of these topics will be explored in the context of their applications.

The purpose of this course is to expose you to the wider world of mathematical thinking. There are two reasons for this: 1) for you to understand the power of quantitative thinking and the power of numbers in solving and dealing with real world scenarios. 2) for you to understand that there is more to mathematics than expressions and equations.

Prerequisites: The pre-requisite for this course is Math 0980 Fundamentals of Algebra or a suitable placement test score.

Is this course right for you? Math 1030 is a terminal math course, meaning it does not prepare you for any other math class. Hopefully you went to an advisor who knows your educational goals when deciding which class to take. If you're not sure if this class is right for you, please feel free to contact the instructor or the Math Department for assistance.

Technical Expectations: To be successful in this course, you will need some technical skills. Most important is access to a computer with a reliable internet connection, and the ability to operate that computer and a web browser. There will be online homework's and couple assignments that ask you to upload files, cut-and-paste internet addresses (URLs), etc. In most cases, a non-technical alternative is available if needed.

For your information, the following privacy policies are provided for the technology used in to build the course:

- [Canvas](#)
- [MyOpenMath](#)
- [Kaltura](#)
- [Quizlet](#)

For your information, the following accessibility policies are provided for the technology used in to build the course:

- [Canvas](#)
- MyOpenMath - This application is used to complete and submit online exercises. It does not have a policy but has been tested by the DRC and is compatible with a screen reader.
- [Kaltura](#)
- Quizlet - This application is used to create online flashcards. It does not have a policy. An alternate version of the terms and definitions on the flash cards has been provided on each vocabulary page.

Textbook: Instead of using a traditional textbook, this course will use a book written by David Lippman, the founder of My Open Math. The book will be available free online in PDF format. If you prefer reading from print, you are welcome to print out the PDFs.

Format of the Course

The book and videos will provide the theory and skills needed to approach the exercises, quizzes, and writing assignments. The videos should be used to supplement the reading, not replace it, as there is a lot of content in the book that is not included in the videos. The videos are usually 3-5 minutes long and will be helpful in developing your understanding of the material.

Unlike algebra classes, this class is about solving problems, not just replicating skills, so some questions may not be exactly like problems in the book. For those, you will need to figure out how to adapt what you've learned to solve the new and different problem.

A discussion help forum will be provided where you can ask questions about the reading, and discuss the material with the instructor and your classmates. This is a great resource for help when you don't understand the book or need clarification.

There will be a set of online exercises assigned in each section. These are required, and graded. However, if you miss a question, it will show the answer, allowing you to self-diagnose your mistake, and then you can try similar problems until you get the questions correct. You can ask questions in the discussion forum about any homework questions you have difficulty with. These exercises will allow you to explore and practice the material from the chapter.

In each section, there will be a "Skills Quiz". This will be a quiz consisting of problems similar, but not necessarily identical, to the homework problems, that test your understanding of the material and your ability to perform any procedures or techniques presented in that chapter. These questions will be numerical, multiple-choice, matching, or fill-in-the-blank. Quiz due dates will be indicated in Canvas. These quizzes are not timed. You are also allowed unlimited quiz attempts. Each question on the quiz allows you to try three times. Your highest score will be kept. The quizzes are open book.

Additionally, each section will include a written assignment or project. These assignments will be a more open-ended question that usually requires a bit more work, conceptual understanding, possibly some outside research, and may require a written solution or explanation. These

questions provide a less procedural exploration of the topic being covered, focusing on critical thinking and quantitative reasoning.

Although there is no email, or log-in frequency requirement, it is strongly recommended that you do **not** wait until the last day of the week to begin your assignments, as it does not allow time to seek out assistance if needed.

There will be three proctored exams and a proctored comprehensive final exam.

The course content is divided into 10 modules:

- Module 1: Trigonometry
- Module 2: Problem Solving
- Module 3: Voting Theory
- Module 4: Graph Theory
- Module 5: Growth Models
- Module 6: Finance
- Module 7: Intro to Statistics
- Module 8: Describing data
- Module 9: Probability
- Module 10: Normal Distribution

Learning Outcomes

The course learning outcomes describe what abilities and skills a successful student is expected to develop and demonstrate in this course. While often related, these are separate from the course content (the specific topics covered). They are as follows:

1. Apply mathematics-based skills used in college and career, including reasoning, planning, and communication, to make decisions and solve problems in applied situations.
2. Analyze right triangle trigonometry.
3. Apply a variety of voting methods to determine a winner of various elections.
4. Use graphical algorithms to solve problems related to graph theory.
5. Use and interpret linear, exponential, and logistic growth models.
6. Perform calculations relating to annuities and amortized loans. Use amortization schedules. Explain the impact of various investment options.
7. Find descriptive statistics from raw data. Create frequency distributions and histograms from raw data. Interpret and make appropriate claims from data.
8. Create and interpret statistical charts and tables. Determine what claims can be made from charts and tables.
9. Calculate probability, odds, and expected value. Interpret the law of averages.
10. Calculate probabilities, percentages, and percentiles using the Normal Distribution

You will be able to meet the learning outcomes by reading the book, making sure you understand the examples in the book, watching recourse videos, working through the online exercises, and seeking out assistance if you have difficulties. You will, of course, also need to apply your critical thinking skills, since part of the purpose of this course is to expand your ability apply the skills you've learned to new and different scenarios. In real life, problems rarely tell you how to solve them.

Graded Items

Each module includes:

- Online exercises
- Skills Quiz
- Discussions
- A written assignment or project

Additional graded items are:

Three (3) projects

Three (3) proctored exams

A proctored comprehensive final exam

Grade Weights: Your grade is weighted with the following distribution:

- Exercises - 10%
- Skills Quizzes - 10%
- Written Assignments/Participation/Projects/ePortfolio - 10%
- Exam 1 – 15%
- Exam 2 – 15%
- Exam 3 – 15%
- Final 25%

Your weighted percent in the class will be converted to a letter grade via this scale:

A	100 - 93%	C	76 - 73%
A-	92 - 90%	C-	72 - 70%
B+	89 - 87%	D+	69 - 67%
B	86 - 83%	D	66 - 63%
B-	82 - 80%	D-	62 - 60%
C+	79 - 77%	E	below 60%

Due Dates

The assignments must be completed before midnight on the due date specified on the calendar in Canvas. Because of this, it is strongly recommended that students not wait until 11:50pm to start the test, in case if they have problems logging in or something.

Working Ahead

This course allows the flexibility to work ahead within each module. You must reply to fellow students in the discussions before they are due, so if you do work ahead - go back and add your replies the discussions as the course progresses.

Feedback

The online exercises and skills quizzes are automatically graded, and you will receive instant feedback on those assignments.

Most written assignments are manually graded. Your score, with feedback, will show in the Canvas grade book after they're scored.

Late Work

If something major comes up (a death in the family, hospitalization, etc.) please be in communication with your instructor.

Comprehensive Final: The final exam will be cover all the objectives for the course. It must be taken on the date and time specified in the Class Schedule for the current semester. The final exam is a standardized departmental comprehensive examination. **All students must take the final exam.** It is an SLCC Math Departmental policy that students attaining a score of less than 60% on the final shall receive a grade no higher than "D" for the course.

Discussions

The purpose of online discussion boards is to facilitate class discussion. To create meaningful discussions, you will often be put into small groups of 6 - 10 students. These groups will change throughout the semester. In order for discussion to happen, the group needs to get started on the discussion early in the week rather than waiting to the last day to post. To encourage participation in the discussion throughout the week, you can only earn 11/12 points if you make your post on the last day of the discussion.

This rubric describes how you will be graded on most discussions:

Criteria	Excellent - 2	Satisfactory - 1	Needs Work - 0
Content/Subject Knowledge 2 points	Addresses all elements of the prompt. Demonstrates strong knowledge of the topic.	Addresses most of the elements of the discussion prompt. Demonstrates basic knowledge of the topic.	Does not address the discussion prompt. Demonstrates incorrect or no knowledge of the topic.
Engagement 2 points	Post initial comment by Thursday night.	Posts initial comment later than Thursday night, by Sunday night.	No initial post submitted by Sunday night.
Interaction 2 points	Responds to at least two peers' posts by Sunday night.	Responds to one peer's post by Sunday night.	Does not respond to peers' posts by Sunday night.
Insight 2 points	Responses add new insight and give examples, rather than saying brief phrases like "good job", "I agree", or "I like what you said."	Responses add a new insight or give examples, rather than saying brief phrases like "good job", "I agree", or "I like what you said."	Responses do not add new insight nor give examples. Reply is brief such as, "good job", "I agree", or "I like what you said."
Writing and Mechanics 2 points	Contains no more than 2 errors related to grammar, spelling, and sentence structure.	Contains between 2 and 5 errors related to grammar, spelling, and sentence structure.	Contains more than 5 errors related to grammar, spelling, and sentence structure.

Instructor Response Time

You can expect a 24 - 48 hour response time for emails and phone calls during the workweek. You can also expect assignments to be graded within one - two weeks from the due date. Late work will not be subject to this policy.

Title IX

20 U.S.C.A. Section 1681 (a): TITLE IX

“No person in the United States shall, on the basis of sex, be excluded from participation in, be denied benefit of, or be subjected to discrimination under any education program or activity receiving federal funds.”

Examples of violations (but not limited to):

- Sexual advances, requests for sexual favors and sexually motivated physical conduct
- Overt or subtle pressure for sexual activity
- Sexually offensive verbalization including remarks, “teasing”, slurs, and innuendo
- Repeated inappropriate jokes or comments about sex or gender-specific traits
- Conduct that is demeaning or derisive and occurs substantially because of one’s gender
- Sexual assault
- Sexual Violence
- Gender-based disparate treatment

Violations can occur in any college environment, such as (but not limited to):

- } Field Trips } Classrooms
- } Student Clubs } Athletics
- } Transportation } On Campus Events

If you have questions or concerns regarding your rights or responsibilities, or if you would like to file a Title IX complaint please contact:

Students: Dr. Marlin Clark, Dean of Students, 801-957-4776, STC 276 A (Redwood)

Employees or Community members: Ken Stonebrook, Title IX & Discrimination Manager, 801-957-5027, AAB 211G (Redwood)

Online Reporting Form: <http://www.slcc.edu/eo/title-ix/complaint.aspx>

Salt Lake Community College has a strong prohibition against RETALIATION! The college does not tolerate acts of retaliation against anyone for engaging in filing a complaint or participating in an investigation.

Student Code of Conduct

Students are expected to follow all provisions of the Student Code of Conduct available here: [http://www.slcc.edu/policies/docs/Student Code of Conduct.pdf](http://www.slcc.edu/policies/docs/Student_Code_of_Conduct.pdf)

Academic Honesty

In this course, you will have the opportunity to work in collaboration with other students. However, whether working in a group or individually, the work must be your own or that of the group's. Presenting others' work as one's own, or assisting another student in doing so is considered cheating. Students found cheating will receive an E for the course.

ADA

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 the Disability Resource Center: (phone) 801-957-4659; (email) drc@slcc.edu; (website) www.slcc.edu/drc.

General Education Statement

This course fulfills the Quantitative Literacy (QL) 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.

General Education ePortfolio—Each student in General Education courses at SLCC maintains a General Education ePortfolio. Instructors in every Gen Ed course will ask you to put at least one assignment from the course into your ePortfolio, and accompany it with reflective writing. **It is a requirement in this class for you to add to your ePortfolio**, and this syllabus details the assignments and reflections you are to include. Your ePortfolio will allow you to include your educational goals, describe your extracurricular activities, and post your resume. When you finish your time at SLCC, your ePortfolio will then be a multi-media showcase of your educational experience.

New ePortfolio Introduction Video. This great three-minute video for you to watch. <https://www.youtube.com/watch?v=-Pn3AAts1-4>

Salt Lake Community College and Utah Valley University have jointly adopted Digication as the default ePortfolio tool for all students. New students will use Digication for ePortfolio creation, but most students have a Web 2.0 portfolio they already created. This is very important: If you already have an established portfolio with Weebly, Wordpress, Wix, etc., we will not be asking you to change to Digication. “If you have an existing portfolio with rich content in it, keep it and keep working to improve it as a showcase of your learning. If you haven’t yet started an ePortfolio, start one with Digication when it becomes available in a few weeks. If you have an existing portfolio with very little in it, consider moving that content to a Digication portfolio because setting up all the new blank pages is literally a matter of one click.”

Finally, questions regarding the ePortfolio can be directed to Emily.Dibble@slcc.edu.

Withdrawal Policy

The last day to drop the course with 100% refund and the last day to withdraw from the course with no refund are indicated in the schedule. These dates are also available online at <http://www.slcc.edu/academiccalendar> , students enrolled in the course after the last day to withdraw will receive letter grades.