SOUTHEASTERN LOUISIANA UNIVERSITY
MATHEMATICS 1050 SYLLABUS
SPRING 2025

COURSE TITLE: FINITE MATHEMATICS **CREDIT:** 3 semester hours

ONLINE TEXT: *Math in Our World,* 5th Edition, by Sobecki and Mercer **PUBLISHER:** McGraw Hill

PREREQUISITE: A score of 19 or above on the Mathematics section of the ACT, or an appropriate score on the ALEKS exam.

COURSE DESCRIPTION: Finite Math is an introductory-level course covering mathematical ideas appropriate for students majoring in disciplines that do not require calculus or calculus-preparation courses, including algebra and trigonometry. Topics include linear equations and linear inequalities, linear programming, matrix theory, sets and counting techniques, permutations and combinations, financial math, and an introduction to probability and statistics.

Delivery of instruction will be via class lectures accompanied by coordinated online homework and quizzes on *Aleks* and assignments from the course workbook.

REQUIRED MATERIALS:

- Computer with strong, reliable Internet connectivity
- WebCam (needed if remote instruction becomes necessary)
- TI-83, 84, 83+, or 84+ (or a comparable calculator). No other physical or online calculators are allowed on tests or exams, and thus, these calculators are not recommended for use on homework or quizzes. (Note: The four-function calculator found within *Aleks will* be available.)
- Math 1050 Workbook – purchased from the Southeastern Retail Bookstore

EMAIL REQUIREMENT: All correspondence will be made through your Southeastern email account.
GOOGLE DRIVE may be required by your instructor for submission of Workbook pages in PDF format, thus **the ability to save completed work** from the Workbook **in PDF format is required. (Be able to scan, save as PDF, and upload.)**

COURSE GRADES: Percentages earned as follows determine the course grade.

Homework	= 8% of course grade
Quizzes	= 8% of course grade
Workbook	= 10% of course grade
Lab Participation	= 10% of course grade
Modules	= 4% of course grade
4 Unit Tests + Optional Final Exam*	= 60% of course grade

COURSE GRADING SCALE

89.50% - 100%	= A
79.50% - 89.49%	= B
69.50% - 79.49%	= C
59.50% - 69.49%	= D
below 59.50%	= F

*Final Exam is comprehensive, but weighted equally with unit tests.
*Lowest of 5 test scores will be dropped from overall grade calculation.
*All testing must occur in-person, with students on campus for test administration.

Partial credit will not be awarded on a Unit Test unless a student completes the associated Practice Problems for the unit (prior to taking the actual unit test) with at least 70% accuracy.
The last day to withdraw from this course is Friday, April 4th 2025, 12:30 p.m. No withdrawals can be made after this date.
The final exam must be taken during the week of May 12th – May 15th. No finals will be given in advance.

MAKE-UP POLICY:

HOMEWORK: Homework will be assigned for each section. Homework need not be completed in one sitting, but it must be completed before the expiration date and time. At the end of the semester, the two lowest homework scores will be dropped.
Homework may only be accessed after the due date *with instructor permission*. **No makeup work on homework will be allowed once Unit material has culminated in a Unit Test.**

QUIZZES: Quizzes are typically given on material covered in two class periods. You will be able to submit quizzes up to 10 times (with the best score counted). These must also be completed before the expiration date and time. At the end of the semester, the two lowest quiz scores will be dropped.
Quizzes may only be accessed after the due date *with instructor permission*. **No makeup work on quizzes will be allowed once Unit material has culminated in a Unit Test.**

TESTING:
All tests will be administered in the Math Lab located in Sims Library, Room 208. Consult your Daily Schedule for your test days.

Students are expected to maintain the highest standards of academic integrity. Behavior that violates these standards is not acceptable. Examples are the use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student and similar behavior that defeats the intent of an examination or other class work. Cheating on examinations and plagiarism are considered very serious offenses and shall be grounds for disciplinary action as outlined in the current General Catalogue.

In particular, the following are **NOT ALLOWED** during Unit Tests and the Final Exam:

- Procuring help from another person, through electronic devices or otherwise
- Procuring help from a non-sanctioned website
- Cell phone usage
- Accessing *Aleks* material in a second browser window when testing is taking place
- Having a second browser window open for any reason other than what is approved by the course instructor
- Use of a calculator other than one required by the course
- Use of notes, workbook pages, or other resources that give definitions, steps to solving problems, or solutions
- Submitting another person's work as your own

If you have any doubt whatsoever regarding what could constitute academic dishonesty, seek clarification from your instructor before use or access.

PARTICIPATION – in Class & in the Math Lab:
• Class Meetings: Every student is expected to attend and actively participate for in-class instruction as listed on your class schedule. The time for the class meeting is not counted toward your Math Lab work requirement.
• Math Lab Requirement: Every student is required to work on mathematics in the Math Lab for a minimum of 3 hours every week. (Variations due to holidays and testing will be made. Consult your schedule for specifics.) Lab attendance each week earns you one point per hour, rounded to the nearest tenth of an hour. Attendance is counted on a weekly schedule determined by section. Attendance will be monitored by your Southeastern ID card swipe, but it is also your responsibility to keep a record of your attendance. Your attendance score will be posted by your instructor who will receive weekly updates and can be checked on the gradebook application in Canvas. While in the lab, you will have access to faculty and peer tutoring, and you must be working on material related to your math class as your time there is counted in your course grade!

If you want to withdraw from this course, it is your responsibility to complete all procedures for dropping a course on your own.

SPECIFIC COURSE OBJECTIVES – Refer to these when preparing for exams. Students should be able to –

UNIT 1 Objectives

- Use appropriate set language and set notation.
- Define a set using listing, description, or set-builder notation and know what makes a set ``well-defined."
- Perform the set operations of union, intersection, and complement given definitions of sets.
- Find unions, intersections, and complements of sets via Venn Diagrams.
- Calculate the number of combinations and permutations of a set of objects.
- Use counting techniques to solve application problems.
- Describe a graph using terms related to connectivity, degree, and bridges.
- Find the chromatic number of a graph.
- Identify the minimum spanning tree of a weighted graph and calculate the minimum weight.

UNIT 2 Objectives:

- Find intercepts for linear equations in two variables.
- Graph linear equations in two variables.
- Solve systems of linear equations in two variables by hand using substitution and elimination methods.
- Create the augmented matrix corresponding to a given linear system, and vice-versa.
- Solve augmented matrices using the reduced-row echelon form function on a calculator.
- Solve applications of linear systems.

- Graph linear inequalities in two variables.
- Graph systems of linear inequalities in two variables.
- Solve linear programming problems using the graphical approach.
- Solve applied optimization problems using linear programming.

UNIT 3 Objectives:

- Calculate monthly take-home pay.
- Calculate the amount spent on regular expenditures.
- Prepare a budget.
- Prorate long-term expenses to save in advance for them.
- Compute simple interest and future value.
- Compute principal, rate, or time for simple interest.
- Compute interest using the Banker's rule.
- Use compound interest formulas to compute principal and future values.
- Compare the future values of two investment options.
- Find the future value of an annuity.
- Compute the periodic payment needed to meet an investment goal.
- Find amount financed, total installment price, and finance charge for a fixed installment loan.
- Compute credit card finance charges using the unpaid balance method.
- Compute the interest on a loan.
- Compute payments on a student loan.
- Find a monthly mortgage payment.
- Compare two mortgages with different lengths.
- Make an amortization schedule for a home loan.

Unit 4 Objectives

- Compute theoretical and empirical probabilities.
- Develop and use the addition rule for two events.
- Find the probability of two or more events all occurring.
- Find conditional probabilities.
- Determine measures of central tendency (mean, median, mode) and measures of variation (range, standard deviation) in applied problems.
- Compute the mean for grouped data.
- Use percentile rank to compare values from different data sets.
- Find the five-number summaries (minimum, Q_1 median, Q_3 and maximum) and create boxplots for applied problems.
- Be able to interpret measures of central tendency, variation, and position in applied problems.
- Find outliers in a data set.

WORKING FROM HOME: The Math 1050 online material can be accessed from a student's personal computer. Internet access and the appropriate plug-ins are required in order to use the website where the notes, homework, and exercises are found. The website for this course material is aleks.com. Once you have registered for your class site in *Aleks*, you will be able to login to the site from home with your login and password. Click into your course and run the **Browser Check** found on the main page of your course to ensure the correct setup on your own computer.

NOTE: Students must ensure that all homework and quizzes submitted from home are properly saved on the site. You should check your scores online to ensure that credit has been assigned. If homework and quiz grades are not successfully sent from home and the deadline passes, the student may not be able to make up the work.

Expectations regarding student behavior/classroom decorum: Free discussion, inquiry, and expression is encouraged in this class. Classroom behavior that interferes with either (a) the instructor's ability to conduct the class or (b) the ability of students to benefit from the instruction is not acceptable. Examples may include routinely entering class late or departing early; use of communication devices, or other electronic devices; repeatedly talking in class without being recognized; talking while others are speaking; or arguing in a way that is perceived as "crossing the civility line. Classroom behavior which is deemed inappropriate and cannot be resolved by the student and the faculty member may be referred to the Office of Judicial Affairs for administrative or disciplinary review as per the Code of Student Conduct which may be found at http://www.selu.edu/admin/stu_affairs/handbook/. According to Southeastern Louisiana University policy, students cannot bring children to any classroom for daycare or babysitting.

If you are a qualified student with a disability seeking accommodations under the Americans with Disabilities Act, you are required to self-identify with the Office of Student Accessibility Services, Tinsley Hall, Room 102. No accommodations will be granted without documentation from the Office of Student Accessibility Services. The deadline for registering or making accommodation changes is two weeks prior to the start of the Final Exam period. Any requests received after the deadline will generally be considered for the following semester.

If you are the victim of a sexually oriented crime, please be aware that the University Policy regarding Victims of Sexual Misconduct is located online at www.southeastern.edu/resources/policies/assets/sexual_misconduct.pdf as well as at page 68 in the University Student Handbook at http://www.southeastern.edu/admin/stu_affairs/handbook/index.html. The policy includes definitions of the various sexually oriented offenses prohibited by Southeastern as well as the reporting options for victims and the process of investigation and disciplinary proceedings of the university. For more information, log onto http://www.southeastern.edu/admin/police/victims_soc/index.html.