COURSE SYLLABUS

MA 110, Finite Mathematics

*This information is to be completed by the instructor for the course.

I. ***INSTRUCTOR INFORMATION**

   A.   Name:

   B.   Office:

   C.   Office Phone Number:

   D.   E-mail Address:

   E.   Office Hours:

II. **COURSE INFORMATION**

   A.   Course name, Number and Credit hours:
      Finite Mathematics, MA110, 3 Semester Hours

   B.   *Semester, Section number

   C.   *Class meeting time (days, time location):

   D.   Prerequisites : A minimum mathematics ACT score of 22 and credit in high school Algebra I, Algebra II, and Geometry; or grade of C or better in Intermediate Algebra (MA 100) or Introduction to Finite Mathematics (MA105 preferred).

   E. Course Description: This course is intended to give an overview of topics in finite mathematics together with their applications and is taken primarily by students who are not majoring in science, engineering, commerce, or mathematics (i.e., students who are not required to take calculus). The course includes sets, counting, permutations, combinations, basic probability (including Bayes' Theorem), an introduction to statistics including work with normal distribution, matrices and their applications to Markov chains and decision theory. Additional topics may include binomial distribution, symbolic logic, linear models, linear programming, the simplex method and applications

   F. Course Objectives: The student shall demonstrate knowledge of counting techniques (including permutations and combinations), basic probability, (including Bayes' Theorem), basic statistics, matrices and their applications to Markov chains and decision theory.

Revised August 2017

G. Course Content

  A. Set Theory

   1. Introduction to sets
   2. Subsets
   3. Complement, union and intersection of sets
   4. Venn Diagrams
   5. Applications

  B. Probability

   1. Basic Concepts
   2. Conditional probability
   3. Bayes Theorem

  C. Counting Principles

   1. Permutation and combinations
   2. Applications of Counting
   3. Binomial Probability
   4. Probability distribution and expected value

  D. Statistics

   1. Measures of central tendency
   2. Measures of variation
   3. Normal distribution
   4. Binomial distribution (optional)

  E. Matrices

   1. Addition and scalar multiplication
   2. Matrix multiplication

  F. Application

   1. Markov chains and applications
   2. Decision making (game theory)

III. TEXTBOOK AND SOFTWARE

  A. Textbook: *Finite Mathematics* by Lial, Greenwell and Ritchey (10th edition).
    ISBN 0-321-748999

  Note: The homework will be done on the computer, using the MyMathLab (MML) soft- ware. The MML software is REQUIRED for this class. The text is included as an e-textbook version in the MyMathLab subscription. YOU DO

NOT NEED TO PURCHASE A BOOK SEPARATELY unless you would like a copy of the print version.

You will need the code ****teacher12345**** to register on MML for this course.

B. Software: MyMathLab Student Access Kit

C. Calculator Policy: Each student is required to have a non-graphing calculator. You are not allowed to use your cell phone for a calculator.

IV. *ATTENDANCE POLICY

Regular and punctual attendance in expected of all students. Whenever a student's cumulative absences for any reason – excused or unexcused – exceed the equivalent of three weeks of scheduled classes, no credit may be earned for the course. The student will either withdraw from the course or receive an F for the course grade. Any exceptions to this policy will be in accordance with the university policy.

V. *FINAL EXAM

A. This course has a block final examination.

B. The final examination is comprehensive and multiple choice.

C. The final examination is worth 25% of the total.

VI. GRADING SCALE

Grades will be assigned according to the following scale:

A   90% – 100%
B   80% – 89%
C   70% – 79%
D   60% – 69%
F   Below 60%

VII. *GRADING PLAN

A. There will be a minimum of 3 hourly examinations at 100 points each.

B. Include information on the number and type of other evaluation methods (exams, quizzes, labs, homework, papers, etc.) with point or percentage values for each.

VIII. *GENERAL COMMENTS BY INSTRUCTOR

IX. ACADEMIC HONESTY

Students of the university academic community are expected to adhere to commonly accepted standards of academic honesty. Allegations of academic dishonesty can reflect poorly on the scholarly reputation of the University including students, faculty and graduates. Individuals who elect to commit acts of academic dishonesty such as cheating, plagiarism, or misrepresentation will be subject to appropriate disciplinary action in accordance with university policy.

Incidents of possible student academic dishonesty will be addressed in accordance with the following guidelines:

1. The instructor is responsible for investigating and documenting any incident of alleged academic dishonesty that occurs under the instructor's purview.
2. If the instructor finds the allegation of academic dishonesty to have merit, then the instructor, after a documented conference with the student, will develop a plan for disciplinary action. If the student agrees to this plan, then both instructor and student will sign the agreement. The faculty member will forward a copy of the signed agreement to the Office of Student Conduct for record-keeping purposes.
3. If the student disagrees with the instructor's proposed plan for disciplinary action and wishes to take further action, he/she is responsible for scheduling a meeting with the chair of the department where the course is housed to appeal the proposed disciplinary plan. The department chair shall mediate the matter and seek a satisfactory judgment acceptable to the faculty member based on meetings with all parties. If a resolution is reached, the disposition of the case will be forwarded to the Office of Student Conduct. If a resolution at the departmental level is not reached and the student wishes to take further action, he/she is responsible for scheduling a meeting with the dean of the college where the course is housed to appeal the proposed disciplinary plan. The college dean shall mediate the matter and seek a satisfactory judgment acceptable to the faculty member based on meetings with all parties. If a resolution is reached, the disposition of the case will be forwarded to the Office of Student Conduct. If a resolution at the college level is not reached and the student wishes to take further action, he/she is responsible for scheduling a meeting with the Vice President for Academic Affairs and Provost (VPAA/P) to appeal the proposed disciplinary plan. The VPAA/P shall mediate the matter and seek a satisfactory judgment acceptable to the faculty member based on meetings with all parties. After reviewing all documentation, the VPAA/P may, at his/her discretion, choose either to affirm the proposed action, to

refer the case to the Office of Student Conduct for further review, or to dismiss the matter depending on the merits of the case. The final disposition of the case will be disseminated to appropriate parties, including the Office of Student Conduct.

4. If a student is allowed academic progression but demonstrates a repeated pattern of academic dishonesty, the VPAA/P may, after consultation with the Office of Student Conduct, assign additional penalties to the student, including removal from the University.

X. COMMUNICATIONS

The official method of communication at UNA is UNA portal, with emphasis placed on University email.

XI. DISABILITY ACCOMODATIONS

In accordance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973, the University offers reasonable accommodations to students with eligible documented learning, physical and/or psychological disabilities. Under Title II of the Americans with Disabilities Act (ADA) of 1990, Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Amendment Act of 2008, a disability is defined as a physical or mental impairment that substantially limits one or more major life activities as compared to an average person in the population. It is the responsibility of the student to contact Disability Support Services to initiate the process to develop an accommodation plan. This accommodation plan will not be applied retroactively. Appropriate, reasonable accommodations will be made to allow each student to meet course requirements, but no fundamental or substantial alteration of academic standards will be made. Students needing assistance should contact Disability Support Services (256-765-4214).

XII. TITLE IX

The University of North Alabama has an expectation of mutual respect. Students, staff, administrators, and faculty are entitled to a working environment and educational environment free of discriminatory harassment. This includes sexual violence, sexual harassment, domestic and intimate partner violence, stalking, gender-based discrimination, discrimination against pregnant and parenting students, and gender-based bullying and hazing.

Faculty and staff are required by federal law to report any observations of harassment (including online harassment) as well as any notice given by

students or colleagues of any of the behaviors noted above. Retaliation against any person who reports discrimination or harassment is also prohibited. UNA's policies and regulations covering discrimination and harassment may be accessed at www.una.edu/titleix. If you have experienced or observed discrimination or harassment, confidential reporting resources can be found on the website or you may make a formal complaint by contacting the Title IX Coordinator at 256-765-4223.