

**Carthage Mathematics Department**  
**Course Summary for 1060: Finite Mathematics**

1. Credits: 4
2. Semesters Offered: Fall
3. Text(s): Finite Mathematics (13<sup>th</sup> ed.), Barnett, Ziegler and Byleen.
4. Topics Covered:
  - a. Logics and set,
  - b. Counting and probability,
  - c. Mathematics of finance,
  - d. Systems of linear equations (inc. matrices),
  - e. Linear programming (inc. simplex method).
5. Skills Enhanced:
  - a. Logical reasoning,
  - b. Problem solving,
  - c. Using technology (inc. spreadsheets and calculators),
  - d. Performing algorithmically defined processes.
6. Sample Syllabus:
  - a. Chapter 7-8 then 1-6.
7. Course Goals: By the end of the course, students should be able to do the following.
  - a. Create and analyze logical arguments
    - i. Assessment: Homework and exams include questions requiring this knowledge.
  - b. Define, manipulate and count sets.
    - i. Assessment: Homework and exams include questions requiring this knowledge.
  - c. Model financial investments and loans to determine costs and benefits.
    - i. Assessment: Homework and exams include questions requiring this knowledge.  
Furthermore the student will be required to make a financial plan for his/her life.
  - d. Use linear systems to model, solve and optimize given situations.
    - i. Assessment: Homework and exams include questions requiring this knowledge.