| **PROFESSOR:** |   |
| --- | --- |
| **OFFICE LOCATION:** |   |
| **OFFICE HOURS:** |   |
| **PHONE NUMBER:** |   |
| **E-MAIL:** |   |
| **SEMESTER:** |   |
| **DELIVERY METHOD:** |   |

# COURSE NUMBER AND TITLE, CATALOG DESCRIPTION, CREDITS:

## MGF 1106 Mathematics for Liberal Arts I (3 Credits)

This course is intended to introduce the beauty and utility of mathematics to the general student population. Topics include systematic counting, probability, statistics, geometry, sets, and logic. This course is designed for those students whose majors do not require the technical mathematics sequence. If completed with a grade of “C” or better, this course serves to demonstrate competence for the general education mathematics requirement. The geometry component of this course should meet the requirements of 6a-5.066(3)1, Florida Administrative Rules, for education majors. It will enable the teacher to support the instruction of geometry and measurement as listed by the Sunshine State Standards. Credit is not given for both MGF 1106 and MGF 1113.

## PREREQUISITES FOR THIS COURSE:

SB 1720 exemption, or testing, or (MAT 0057 with a "C" or better), or (MAT 1100 with a "C" or better), or [MAT 1033 (or higher) with a "C" or better].

### CO-REQUISITES FOR THIS COURSE:

None

## GENERAL COURSE INFORMATION:

Topic Outline

Counting principles

Probability

Statistics

Geometry

Sets

Logic

## ALL COURSES AT FLORIDA SOUTHWESTERN STATE COLLEGE CONTRIBUTE TO THE GENERAL EDUCATION PROGRAM BY MEETING ONE OR MORE OF THE FOLLOWING GENERAL EDUCATION COMPETENCIES:

**C**ommunicate clearly in a variety of modes and media.

**R**esearch and examine academic and non-academic information, resources, and evidence.

**E**valuate and utilize mathematical principles, technology, scientific, and quantitative data.

**A**nalyze and create individual and collaborative works of art, literature, and performance.

**T**hink critically about questions to yield meaning and value.

**I**nvestigate and engage in the transdisciplinary applications of research, learning, and knowledge.

**V**isualize and engage the world from different historical, social, religious, and cultural approaches.

**E**ngage meanings of active citizenship in one’s community, nation, and the world.

A. General Education Competencies and Course Outcomes

1. Listed here are the course outcomes/objectives assessed in this course which play an integral part in contributing to the student’s general education along with the general education competency it supports.

 General Education Competency: Analyze

 Course Outcomes or Objectives Supporting the General Education Competency Selected:

Analyze, interpret, organize, and present statistical data. Use dimension analysis to change to and from the metric system.

B. In accordance with Florida Statute 1007.25 concerning the state’s general education core course requirements, this course meets the general education competencies for mathematics.

Student will determine appropriate mathematical and computational models and methods in problem solving, and demonstrate, and an understanding of mathematical concepts.

Students will apply appropriate mathematical and computational models and methods in problem solving.

C. Other Course Objectives/Standards

Create and interpret a Venn diagram.

Represent sets using description, set-builder notation, and roster notation.

Perform operations with sets.

Apply the formula for the cardinality of the union of two sets.

Determine the truth value of a conditional statement.

Proof that statements are equivalent or not equivalent by using the truth table.

Examine the validity of an argument by using a truth table or an Euler diagram.

Solve problems involving similar figures, the Pythagorean Theorem, and angles formed by parallel lines and transversals.

Convert units of measurement by using dimensional analysis.

Distinguish among quadrilaterals and other polygons by their unique characteristics.

Solve application problems involving areas of plane regions and volumes of three-dimensional figures.

Identify missing parts of right triangles and solve application problems through the use of trigonometric ratios.

Solve problems involving the fundamental counting principle, permutations, and combinations.

Compute theoretical and empirical probabilities including the probability of an event not occurring on conditional probabilities.

Express and interpret the odds in favor and against an event occurring.

Calculate and interpret the expected value.

Organize and present statistical data.

Identify or calculate the mean, median, mode, midrange, range, and standard deviation for a dataset.

Sketch and analyze a normal distribution for a given mean and standard deviation.

Calculate and interpret percentiles and Z-scores

## DISTRICT-WIDE POLICIES:

### PROGRAMS FOR STUDENTS WITH DISABILITIES

Florida SouthWestern State College, in accordance with the Americans with Disabilities Act and the College’s guiding principles, offers students with documented disabilities programs to equalize access to the educational process. Students needing to request an accommodation in this class due to a disability, or who suspect that their academic performance is affected by a disability should contact the Office of Adaptive Services at the nearest campus. The office locations and telephone numbers for the Office of Adaptive Services at each campus can be found at <https://www.fsw.edu/adaptiveservices>.

### REPORTING TITLE IX VIOLATIONS

Florida SouthWestern State College, in accordance with Title IX and the Violence Against Women Act, has established a set of procedures for reporting and investigating Title IX violations including sexual misconduct. Students who need to report an incident or need to receive support regarding an incident should contact the Equity Officer at equity@fsw.edu. Incoming students are encouraged to participate in the Sexual Violence Prevention training offered online. Additional information and resources can be found on the College’s website at <https://www.fsw.edu/sexualassault>.

## REQUIREMENTS FOR THE STUDENTS:

List specific course assessments such as class participation, tests, homework assignments, make-up procedures, etc.

## ATTENDANCE POLICY:

The professor’s specific policy concerning absence. (The College policy on attendance is in the Catalog and defers to the professor.)

## GRADING POLICY:

Include numerical ranges for letter grades; the following is a range commonly used by many faculty:

| **Grade Percent** | **Letter Grade** |
| --- | --- |
| 90 - 100 | A |
| 80 - 89 | B |
| 70 - 79 | C |
| 60 - 69 | D |
| Below 60 | F |

(Note: The “incomplete” grade [“I”] should be given only when unusual circumstances warrant. An “incomplete” is not a substitute for a “D,” “F,” or “W.” Refer to the policy on “incomplete grades.)

## REQUIRED COURSE MATERIALS:

(In correct bibliographic format.)

## RESERVED MATERIALS FOR THE COURSE:

Other special learning resources.

## CLASS SCHEDULE:

This section includes assignments for each class meeting or unit, along with scheduled Library activities and other scheduled support, including scheduled tests.

## ANY OTHER INFORMATION OR CLASS PROCEDURES OR POLICIES:

(Which would be useful to the students in the class.)