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

# COURSE NUMBER AND TITLE, CATALOG DESCRIPTION, CREDITS:

## MGF 1108 Honors Mathematical Ideas & Explorations (3 Credits)

This course is intended to introduce the beauty and utility of mathematics to students in the FSW Honors Scholars program. The course will involve problem-based learning about topics that cross disciplines. These topics include probability, statistics, modeling, and mathematical connections with music, art, architecture, nature and/or the business world. Critical thinking skills, problem solving strategies and appropriate use of technology will be used throughout the course.

## 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] AND (acceptance into the FSW Honors Scholar Program or Dean approval).

### CO-REQUISITES FOR THIS COURSE:

None

## GENERAL COURSE INFORMATION:

Topic Outline

Elementary concepts of:

The rational numbers

Geometry

Trigonometry

Number theory

Sequence & series

Combinatorics

Mathematical modeling

Connections with other disciplines and/or fields

## 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 outcomes/objectives assessed in this course which play an integral part in the student’s general education along with the general education competency they support.

General Education Competency: Evaluate

Course Outcomes or Objectives Supporting the General Education Competency:

Evaluate and utilize mathematical principles, technology, scientific and quantitative data.

Analyze and create individual and collaborative works of art, literature, and performance.

Analyze and/or create a composition, design, structure and/or model from a non-mathematics field and discuss how it relates to mathematics.B. Other Course Objectives/Standards

Explain and/or demonstrate various uses of the rational numbers in a non-mathematics field.

Explore and evaluate basic elements of geometry as they relate to a non-mathematics field.

Describe and/or apply a basic element of trigonometry within a non-mathematics field.

Provide an example and discuss the use of an elementary principle of number theory (i.e., prime factorization, common multiples, or modular arithmetic) within a non-mathematics field.

Determine and describe how the use of sequences and/or series have been or could be utilized in a non-mathematics field.

Using the fundamental counting principle and/or another counting technique such as permutations and/or combinations, calculate the number of ways an event can occur in a non-mathematics field.

Analyze a method and/or technique utilized in a non-mathematics field and develop a mathematical model to effectively represent the method and/or technique by modifying an already existing or constructing an original mathematical model.

## 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](mailto: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.)