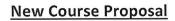
Curriculum Committee





| School or Division | School of Pure and Applied Sciences | |
|---|---|--|
| Program or Certificate | General Education | |
| Proposed by (faculty only) | Professor Don Ransford | |
| Presenter (faculty only) | Professor Don Ransford | |
| Note that the presenter (faculty) listed above must be present at the Curriculum Committee meeting or | | |
| the proposal will be returned to the School or Division and must be submitted for a later date. | | |
| Submission date | 10/13/2017 | |
| Course prefix, number, and title | MGF 1108 Honors Mathematical Ideas & Explorations | |

Section I, New Course Information (must complete all items)

| List course prerequisite(s) and minimum | MAT 1033 with a grade of "C" or higher or MAT 1100 | |
|--|---|--|
| grade(s) (must include minimum grade if higher | | |
| than a "D"). | with a grade of "C" or higher, and acceptance into | |
| than a b f. | the FSW Honors Scholar Program or by Dean | |
| | approval | |
| Provide justification for the proposed | Since this course may fulfill the General Education, | |
| prerequisite(s). | non-core mathematics requirement as College Level, | |
| | it should have the same prerequisite as other similar | |
| | mathematics courses. In addition, the course is to be | |
| | offered solely as an Honors course. | |
| Will students be taking any of the prerequisites | No | |
| listed for this course in different parts of the | | |
| same term (ex. Term A and Term B)? | | |
| List course co-requisites. | None | |
| Provide justification for the proposed co- | | |
| requisite(s). Is any co-requisite for this course listed as a co- | | |
| requisite on its paired course? | | |
| (Ex. CHM 2032 is a co-requisite for CHM 2032L, and | List the co-requisite | |
| CHM 2032L is a co-requisite for CHM 2032) | | |
| Course credits or clock hours | 3.0 | |
| Contact hours (faculty load) | 3.0 | |
| Select grade mode | Standard Grading (A, B, C, D, F) | |

Credit type

College Credit

Course description (provide below)

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.

General topic outline (type in outline below)

Elementary concepts of:

- The Rational Numbers
- Geometry
- Trigonometry
- Number Theory
- Sequence & Series
- Combinatorics
- Mathematical Modeling
- Connections with other Disciplines and/or Fields

Learning Outcomes: For information purposes only.

IV. Course Competencies, Learning Outcomes and Objectives

- A. General Education Competencies and Course Outcomes
- 1. Integral General Education Competency or competencies:

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

- 2. Supplemental General Education Competency or competencies:
- **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

Copy and Paste the SCNS Course Profile Description below (http://scns.fldoe.org/scns/public/pb_index.jsp).

THE CURRICULUM IS DESIGNED TO PROVIDE THE STUDENT WITH THE KNOWLEDGE AND SKILLS USEFUL FOR COLLEGE, LIFE AND CAREER. 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 THE BUSINESS WORLD. CRITICAL THINKING SKILLS, PROBLEM SOLVING STRATEGIES AND APPROPRIATE USE OF TECHNOLOGY WILL BE USED THROUGHOUT THE COURSE.

| ICS code for this course | ADVANCED AND PROFESSIONAL - 1.16.17 - | |
|--|---|--|
| | MATHEMATICS | |
| Should any major restriction(s) be listed on this | No | |
| course? If so, select "yes" and list the appropriate major restriction code(s) or select | List applicable major restriction codes | |
| "no". | | |

| Is the course an "International or Diversity | No, not International or Diversity Focus |
|--|---|
| Focus" course? | |
| Is the course a General Education course? | Yes |
| Is the course a Writing Intensive course? | No |
| Is the course repeatable*? | No |
| (A repeatable course may be taken more than one time for additional credits. For example, MUT 2641, a 3 credit hour course can be repeated 1 time and a student can earn a maximum of 6 credits). *Not the same as Multiple Attempts or Grade Forgiveness | If repeatable, list maximum number of credits |
| Do you expect to offer this course three times or | No |
| less (experimental)? | |

| Impact of Course Proposal | : |
|--|---|
| Will this new course proposal impact other | Yes |
| courses, programs, departments, or budgets? | |
| If the answer to the question above is "yes", list | It could potentially draw a small number of |
| the impact on other courses, programs, or | students from MGF 1106, MGF 1107 or STA 2023 |
| budgets? | since this will be an option for meeting the non- |
| | core mathematics requirement for the A.A. |
| | degree. |

Have you discussed this proposal with anyone (from other departments, programs, or institutions) regarding the impact? Were any agreements made? Provide detail information below.

The course was discussed at the monthly departmental meeting for mathematics with no dissension.

Section II, Justification for proposal

Provide justification (below) for this proposed curriculum action.

This course would provide an opportunity for students in the Honors Scholar Program to meet the general education, non-core mathematics requirement for the A.A. and to explore mathematics from a liberal arts perspective.

Section III, Important Dates and Endorsements Required

List all faculty endorsements below. (Note that proposals will be returned to the School or Division if faculty endorsements are not provided).

Wendy Chase, Rona Axelrod, Karen Buonocore, Sabine Eggleston, Laurice Garrett, Ivana Ilic, Kristi Moran, Joe Roles, Libby Schott, Terry Zamor, Tatiana Arzivian, Mike Chiacchiero, Joan VanGlabek, Jon Salem, Christy Smith, Sandra Seifert, Tina Churchill, Cindy Quehl, Cindy Baker, David Licht

NOTE: Course and Program changes must be submitted by the dates listed on the published Curriculum Committee Calendar. Exceptions to the published submission deadlines must receive prior approval from the Provost's Office.

| Term in which approved action will take place | Fall 2018 | |
|---|-----------------------------------|--|
| Provide an explanation below for the requested e | xception the submission deadline. | |
| Type in the explanation for exception to start date | here. | |

| Any exceptions to the term start date requires the signatures of the Academic Dean or Associate | | |
|---|-----------|------|
| Vice President and the Provost prior to submission. | | |
| Dean or Associate Vice President | Signature | Date |
| Type name here | | |
| Provost | Signature | Date |
| Dr. Jeff Stewart | | |

| Required Endorsements | Type in Name | Select Date |
|-----------------------------|----------------------|-------------|
| Department Chair or Program | Sabine Eggleston | 10/13/2017 |
| Coordinator/Director | | V |
| Academic Dean or Associate | Dr. Martin McClinton | 10/13/2017 |
| Vice President | | |

| Select Curriculum Committee Meeting Date | November 3, 2017 |
|--|------------------|

| Approve Do not appr | ove | |
|--|-----|-----------------|
| Mey (. Myss- Curriculum Committee Chair Signature | | 11/8/17 Date |
| | ove | |
| Cull 8Hwat Proves Singeture | | W 3 17 |

All Curriculum proposals require approval of the Curriculum Committee and the Provost. Final approval

or denial of a proposal is reflected on the completed and signed proposal.