MATH 2906

Division: Natural Science and Mathematics
Department: Mathematics
Course: MATH 2906
Title: In-depth Investigations in Mathematics
Catalog Description:

This course is designed to give students an in-depth learning experience in a mathematics related topic. It may include reading assignments, computation (by hand and/or with a calculator/computer), meetings, group discussions, group work, and excursions to pertinent sites.

General Education Requirements: N/A
Semesters Offered: TBA
Credit/Time Requirement: Credit: 1-3; Lecture: 1-3; Lab: 0
Clock/Hour Requirements: 0
Offered for Non-Credit: No
Prerequisites: May vary with topic. Instructor

Justification:

This course will allow the mathematics faculty to offer dynamic courses in their areas of expertise and/or areas of student interest. Math 2906 is designed for a classroom of learners in a specialized course, often offered during a non-regular semester like Maymester or week-long GBEEC classes.

Student Learning Outcomes:

Students will be able to understand and apply the content of the course. They will demonstrate the ability to determine which algorithm(s) to apply and use it(them) correctly in the mathematical context.

Content:

Content will be determined by the instructor. However, the topic should be related to mathematics and its applications, including, but not limited to, cryptography, fractals, game theory, and other similar fields. Each t ime the course is offered, the instructor will design outcomes and assessments that will match the topic. One purpose of this course is to enhance current educational practices by including an in-depth component to the breadth component of an associate degree.

General Education Outcomes:

6) Apply computational skills to a variety of contexts.

Based on the topic, the instructor will ensure that students understand and can perform the basic mathematical computations required for the subject.

Key Performance Indicators:

Each instructor will determine how to assess student learning, but generally these assessments will include individual and group work, class and group discussion, homework, quizzes, exams and special projects.

Representative Text and/or Supplies:

Texts will be chosen by the instructor to match the topic of study. For example, a course on c ryptology/cryptography could use the following book:

Singh, *The Code Book: The Science of Secrecy from Ancient Egypt to Quantum Cryptography*, current edition, Anchor Books

Optimum Class Size: 12
Maximum Class Size: 24

Signatures:

I hereby submit this course syllabus:

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Jonathan Bodrero, M.S., Assistant Professor

I hereby find this course consistent with the goals and resources of the Mathematics Department:

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Kari Arnoldsen, PhD, Professor, Chair

I hereby find this course consistent with the goals and resources of the Natural Science and Mathematics Division:

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Dan Black, EdD, Associate Professor, Dean

I have discussed the need for library resources related to this class with the person submitting the syllabus:

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Lynn Anderson, MLIS, Technical Services Librarian (Main Campus)

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Michelle Olsen, MLS, Campus Librarian (Richfield Campus)