

Term Information

Effective Term Spring 2022

General Information

Course Bulletin Listing/Subject Area Mathematics
Fiscal Unit/Academic Org Mathematics - D0671
College/Academic Group Arts and Sciences
Level/Career Graduate, Undergraduate
Course Number/Catalog 5588
Course Title Advanced Practicum for Actuarial Science
Transcript Abbreviation Adv Pract Act Sci
Course Description This course introduces students to the real world practice relative to advanced Actuarial Science topics and more specifically to the MAQRM program.
Semester Credit Hours/Units Fixed: 3

Offering Information

Length Of Course 14 Week, 7 Week, 6 Week
Flexibly Scheduled Course Never
Does any section of this course have a distance education component? No
Grading Basis Letter Grade
Repeatable No
Course Components Lecture
Grade Roster Component Lecture
Credit Available by Exam No
Admission Condition Course No
Off Campus Never
Campus of Offering Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites Open only to students in the MAQRM program or by permission of department.
Exclusions
Electronically Enforced Yes

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code 27.0101
Subsidy Level Doctoral Course
Intended Rank Junior, Senior, Masters

Requirement/Elective Designation

The course is an elective (for this or other units) or is a service course for other units

Course Details

Course goals or learning objectives/outcomes

- To introduce students to the real world practice and to improve their communication skills.

Content Topic List

- Option Pricing and Simulation
- Market Optimization and Elasticity Modeling
- Brownian Motion and Its Application in Quantitative Finance
- Pension and Retirement
- Data Analysis and Modeling

Sought Concurrence

No

Attachments

- Math_5588_syllabus_update.pdf: Syllabus

(Syllabus. Owner: Husen, William J)

Comments

- Changed title, course syllabus/description and intended rank to reflect a course that advanced undergraduate actuarial science majors could take in addition to MAQRM students. With this, we would like to keep it as a 5000-level course. *(by Husen, William J on 09/21/2021 08:56 AM)*
- Hi Bill, A 5000-level course is intended for both undergraduate and graduate students. If this course is only for the MAQRM program, then it should be pitched at the 6000 level, right? *(by Vankeerbergen, Bernadette Chantal on 09/20/2021 12:09 PM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Husen, William J	09/17/2021 11:24 AM	Submitted for Approval
Approved	Husen, William J	09/17/2021 11:29 AM	Unit Approval
Revision Requested	Vankeerbergen, Bernadette Chantal	09/20/2021 12:09 PM	College Approval
Submitted	Husen, William J	09/21/2021 08:56 AM	Submitted for Approval
Approved	Husen, William J	09/21/2021 08:57 AM	Unit Approval
Pending Approval	Vankeerbergen, Bernadette Chantal	09/21/2021 08:57 AM	College Approval

Math 5588 - Advanced Practicum for Actuarial Science

- **COURSE FORMAT** Math 5588 is taught in a lecture format and consists of 3 contact hours per week.

- **COURSE DESCRIPTION**

This course introduces students to the real world practice relative to advanced Actuarial Science topics and more specifically to the MAQRM program.

- **COURSE OBJECTIVES**

To introduce students to the real world practice and to improve their communication skills. Most classes will be presentations by visiting professionals on topics drawn from their fields of expertise. Students will work as groups on many projects and give presentations.

- **PREREQUISITE**

Open only to students in the MAQRM program or by departmental permission

- **GRADE**

The course grade is based on student's participation, performance, and the class presentation. The distribution is attendance 20%, group projects 50%, and individual presentation 30%.

- **GROUP PROJECTS**

There are several group projects designed and assigned by visiting professionals. In each project, a group should discuss and study the case, create a model for the problem, decide on an analytical tool, gather and process data and information, analyze results, and prepare a presentation. After completing the project, each group presents its result to the whole class, and the work will be evaluated by the visiting professionals. Each student will be evaluated by the evaluation of the project result that the group receives from the visiting professional (60%) and the student's contribution to the project by peer evaluation (40%).

- **INDIVIDUAL PRESENTATION**

Each student will give a presentation on a topic of his/her choice. The topic can be from actuarial science, financial math, data science, business finance, economics, or any related field. Each student should discuss his/her choice of topic with the instructor before starting working on the presentation. Individual presentations will be arranged in the later part of the semester.

- **PEER EVALUATION**

For each group work, individual student contribution is evaluated by peer evaluation. After a group project, each student gives him/herself a score on his/her contribution to the project, and assigns a score to each of his/her team member. A peer evaluation form is attached below.

- **SCHEDULE**

- Week 1 Introduction
- Week 2 & 3 **Nationwide Project**
Option Pricing and Simulation
- Week 4 & 5 **Cincinnati Financial Project**
Market Optimization and Elasticity Modeling
- Week 6 Brownian Motion and Its Application in Quantitative Finance
- Week 7 & 8 **Aon Project**
Pension and Retirement
- Week 9 Making Technical Presentations, Individual Presentations
- Week 10 & 12 Individual Presentations
- Week 13 & 14 *Data Analysis and Modeling Project*

- **ACADEMIC MISCONDUCT**

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>.

- **Disability Services Statement**

The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Team Work Evaluation

Self Evaluation

Your Name _____	Grade: _____
Comments	

Peer Evaluation

Team Member Name _____	Grade: _____
Comments	

Team Member Name _____	Grade: _____
Comments	