

Minnesota State University Moorhead

MATH 438: Short-Term Actuarial Mathematics

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 2

Lab Hours/Week: 0

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: None

The purpose of this course is to provide an introduction to a variety of models that are useful for short-term actuarial applications, the steps involved in the modeling process including determining a suitable model. Topics include commonly used severity models, hazard rate and mean excess functions, frequency models, zero-truncated and zero-modified versions, aggregate risk models, coverage modifications, deductibles, limits and coinsurance, common risk measures, VaR and TVaR, construction and selection of parametric models, Bayesian credibility, Bühlmann-Straub models, basic methods of pricing and reserving for short-term insurance coverages. This course covers topics for the Society of Actuaries Exam STAM and some topics of the Casualty Actuarial Society's MAS Exams.

B. COURSE EFFECTIVE DATES: 01/01/2022 - 01/01/2023

C. OUTLINE OF MAJOR CONTENT AREAS

None

D. LEARNING OUTCOMES (General)

None

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted