Minnesota State University Moorhead

MATH 515: Programming & Technology Tools for Mathematics

A. COURSE DESCRIPTION

Credits: 2

Lecture Hours/Week: 2

Lab Hours/Week: 0

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: None

Programming in R, technical writing using LaTeX, simulations of experiments using a variety of instructional technology, examination of formative assessment tools, and research instructional principles related to the use of computers and technology resources.

B. COURSE EFFECTIVE DATES: 02/02/2020 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

D. LEARNING OUTCOMES (General)

1. Formative assessment tools will be critically examined and tried with students to determine which tools are best suited for particular mathematical assessments.
2. Describe current instructional principles, research, and appropriate assessment practices as related to the use of computers and technology resources in the mathematics curriculum.
3. Carry out statistical computing and creation of graphics using R Programming.
4. Develop proficiency with LaTeX, math typeset, to create mathematics documents and error analysis of code.
5. Students will examine and create simulations of experiments utilizing algebraic functions through such programs as Desmos, Geogebra, or TI-graphing Calculators with the TI Innovator System.

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted