

**FACULTY AGENDA ITEM**

Date: **4/8/19**

Submitted by: Kevin Charlwood

SUBJECT: *Bachelor of Education, Mathematics Secondary Education*

Description:

University Requirements  
General Education Requirements  
(b) Education Core Courses

Course Credit Hours Area Credit Hours upon approval of the B.Ed. degree from Education Department  
WU 101 3

Arts & Humanities 9 (to include: PH 220 & CN 150)

EN 101 3 Social Sciences 9

MA 116

(or higher) (covered by major) Natural Sciences

(at least 2 departments) 9 (no MA classes)

(CM 101/105 if needed)

EN 300

(teaching emphasis) 3

Total 9 Total 27 Total 39

(b) Math Content

MA 151 Calculus 1 5

MA 152 Calculus 2 5

MA 253 Calculus 3 3

MA 140 Statistics 3

MA 204 Discrete/Number Theory (new course)

3

MA 230 Math for Middle & Secondary (new course) 4

MA 207 Discrete Mathematics 3

MA 381 History & Literature of Mathematics 3

MA 367 Modern Geometry 3

MA 301 Linear Algebra 3

MA 354 Abstract Algebra 3

Total 45

MA 380 Problem Solving 1

MA 380 Problem Solving (take it a second time)

1

MA 371 Real Analysis I 3

Choose at least TWO of the following: 2

MA 316 Teaching Algebra (algebra-based courses) (new course)

MA 317 Teaching Trig (help teach: MA 117, 131) (new course)

MA 318 Teaching Stats (help teach: MA 140) (new course)

MA 380 (take it for a third time)

MA 388 Capstone Research

DEGREES OFFERED

Bachelor of Education

Mathematics: Secondary Education

GENERAL REQUIREMENTS

General requirements for the Bachelor of Arts degree, or the Bachelor of Science degree, or the Bachelor of Education degree are listed in the catalog. See pages listed in the index. Graphics calculators are required in all courses MA 112 to MA 152 inclusive, and MA 253.

Secondary Math Education Emphasis Courses

Calculus I, II, III (MA 151, 152, 253), Number Theory/Discrete (MA 204), Mathematics for Middle and Secondary (MA 230), Discrete Mathematics, (MA 207), Linear Algebra (MA 301), Statistics (MA 140), Abstract Algebra (MA 354), Modern Geometry (MA 367), Introduction to Real Analysis I (MA 371), History & Literature of Mathematics (MA 381) a minimum of 2 hours of Problem Solving Strategies (MA 380), and a choice of at least 2 of the following: Teaching Algebra (MA 316); Teaching Trigonometry (MA 317); Teaching Statistics (MA 318); Problem Solving Strategies (MA 380); Math Research (MA 388). Students seeking certification to teach mathematics must also be formally admitted to and take additional coursework in the University's Professional Teacher Education Program. For admission requirements, see EDUCATION in this catalog.

Rationale: (a) provide program in a minimum of 120 credit hours; (b) prepare students to pass two different Kansas tests: Math content & Pedagogy; (c) meet new KSDE Standards for Secondary Mathematics; (d) address graduation exit interview results, where students indicate concern over enough pedagogy, particularly in Trigonometry.

Financial Implications: No new faculty positions are needed for this program initially. If student demand warrants, new faculty tenure-track and/or lecturer lines will be requested. This is especially the case if any courses currently on the two-year rotation need to be offered annually or every semester. We may need adjunct support for a course or two per semester as a result of two new course offerings in this program as compared to the current BA/BS in mathematics for secondary education degrees. We plan to advertise this program through Admissions, and we will incur costs for printing brochures and mailing costs of materials to prospective students.

Proposed Effective Date: Fall 2019

Request for Action: *Approval by AAC /FS/Gen Fac*

Approved by: *AAC on date*

*Faculty Senate on date*

Attachments Yes  No