FACULTY AGENDA ITEM

Date: 3/18/2024

Submitted by: Sarah Cook, x. 1498

Subject: Significant Program Changes – Mathematics Secondary Education: Advanced Mathematics 6-

12, BEd

Description / Rationale: We are making a number of changes. Some of these are due to ensuring degrees are within 120 hours. Others are curriculum changes to better satisfy the KSDE standards. This change is 'significant' because it inactivates the BA and BS versions, and it also adds an Education course.

We have been offering options of a BA, BS, or BEd in Math Secondary Education. The Math and Education courses were identical in all three degrees to satisfy State requirements. The additional degree requirements for the BS and BA push these options well over the 120 hours, even with the new lowered General Education program. Because of this, we have decided to inactivate the BA and BS versions and keep only the BEd.

We are making curricular changes to better align with the KSDE standards and to lower the math requirements for the degree to 40 credit hours. We are replacing the requirement of MA 204 Number Theory/Discrete with MA 260 Introduction to Number Theory. MA 204 was created to satisfy a KSDE standard for both Middle School Math Education majors and Secondary Education Math majors. We have found that this has not been a good mix as the Middle School majors tend to struggle with the concepts required for the Secondary Ed majors. Making this change will allow us to focus MA 204 on standards for middle school math. The content of MA 260, which is already required for our pure math majors, better aligns with the Secondary Ed standards.

We are eliminating MA 230 Math for Secondary Education as this course has been inactivated (the course should have been removed from the degree previously when we added MA 204 but this change was mistakenly left off).

To bring our required math hours to 40 credits (the same as our other degree tracks), we are reducing the number of times students are required to take MA 380 Problem Solving from twice to once. Students will still have the option to take MA 380 a second time as it is a course listed in our "Select two of the following" courses. We also are adding two 1 credit options to the "Select two of the following" courses list, namely MA 315 Seminar: Teaching Mathematics and ED 349 Middle Level Mathematics Practicum. Our list of options allow students to decide if they want to do a capstone project, obtain more practice with in-depth problem solving, or obtain more practice teaching before doing their student teaching semester.

Financial Implications: None indicated.

Proposed Effective Date: Fall 2024

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

Approved by: AAC on 3/18/2024

Faculty Senate on date

Attachments: Yes X No _

Program Change Request

Date Submitted: 10/12/23 4:09 pm

Viewing: MA-BED: MA:Mathematics Secondary Education: Mathematics/BED Advanced

Mathematics 6-12

Last approved: 06/06/23 11:25 am

Last edit: 03/19/24 9:07 am

Changes proposed by: Sarah Cook (sarah.cook)

Catalog Pages Using this Program

Mathematics Secondary Education: Advanced Mathematics 6-12

Change Type Significant

Summarize Changes and Include Rationale

We are making a number of changes. Some of these are due to ensuring degrees are within 120 hours. Others are curriculum changes to better satisfy the KSDE standards. This change is 'significant' because it inactivates the BA and BS versions and it also adds an Education course.

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((HB 10/12/23: Completed revisions according to new standardization approved by Deans and Provost Office))

((BO 1/23/2024: Program name changed to reflect KSDE licensure wording, as requested by Sarah Cook.))

General Information

Effective Catalog

2024-2025

Edition

Department

Mathematics and Statistics

College of Arts and Sciences

Division Natural Science & Mathematics

Degree Level Undergraduate

In Workflow

- 1. Acad Ops
- 2. MA Chair
- z. IVIA CITA
- 3. Library
- 4. ED Chair
- 5. NSM Chair
- 6. CA Dean
- 7. CFCCC Chair
- 8. Assoc Dean CFC
- 9. CA Assoc Dean
- 10. Governance Check
- 11. AA Committee

12. Faculty Senate

- 13. General Faculty
- 14. WUBOR
- 15. Final Acad Ops
- 16. Registrar

Approval Path

- 1. 10/12/23 4:23 pm Holly Broxterman (holly.broxterman): Approved for Acad
- 2. 10/13/23 12:14 pm Sarah Cook (sarah.cook): Approved for MA
- 3. 10/16/23 7:10 am Sean Bird (sean.bird): Approved for

Library

- 4. 10/19/23 2:57 pm Cherry Steffen (cherry.steffen): Approved for ED Chair
- 5. 10/22/23 1:33 pm Andrew Herbig (andrew.herbig): Approved for NSM Chair
- 6. 01/26/24 3:25 pm Kelly Erby (kelly.erby): Approved for CA Dean
- 7. 01/26/24 3:38 pm Bruce Mactavish (bruce.mactavish): Approved for CFCCC Chair
- 8. 02/13/24 9:42 am Kelly Erby (kelly.erby):
- Approved for Assoc Dean CFC 9. 03/05/24 9:57 pm
- Kelly Erby
 (kelly.erby):
 Approved for CA

Program Title MA: Mathematics Secondary Education: Mathematics/BED Advanced Assoc Dean Mathematics 6-12 10. 03/06/24 9:17 am Beth ONeill Degree to be Bachelor of Education (BED) (beth.oneill): Offered Approved for **Governance Check** Is this program <u>No</u> 11. 03/19/24 9:07 am offered completely Holly Broxterman online? (holly.broxterman): Does this program Yes Approved for AA lead to a teaching Committee certification? Program Code MA-BED History Is this program an No 1. Apr 21, 2022 by interdisciplinary clmig-jwillging program? 2. Jul 15, 2022 by Steve Luoma CIP Code 13.1311 - 13.1311 (steven.luoma) Modality Hybrid 3. Jul 15, 2022 by Steve Luoma **Admission and Curriculum** (steven.luoma) 4. Jul 15, 2022 by Steve Luoma Admission Criteria (steven.luoma) Total Number of 5. Sep 30, 2022 by Semester Credit Holly Broxterman Hours for the (holly.broxterman) Degree 6. Oct 26, 2022 by Curriculum Holly Broxterman (holly.broxterman) 7. Jun 5, 2023 by Holly Broxterman (holly.broxterman) 8. Jun 6, 2023 by Holly Broxterman

Degree Requirements For degree-specific requirements, see General Education Requirements for Specific Bachelor & Associate Degrees. Degree Education Course Requirements

¹MA380 is a 1 credit course that must be taken at least twice²For further degree specific requirements, see General Education Requirements for Specific Bachelor & Associate Degrees.

In addition to the requirements stated below, students must complete 34-35 hours of General Education, all requirements Education Requirements for a Bachelor of Education degree, and any additional hours needed the BS2/BEd General Education Requirements for the BA2 Students seeking certification to teach mathematics must also be formally admitted to reach the minimum 120 credit hours required for graduation. the University's Professional Teacher Education Programs (see Education in this catalog) Some of the courses below may also fulfill general education or other degree requirements. Please see your advisor for more information.

(holly.broxterman)

Social Sciences, GESS		15	
Humanities, GEHU		9	
PH 220	Symbolic Logic		
CN 150	Public Speaking		
AR, MU or TH course			
Other Humanities General Education courses		6	
Natural Sciences, GENS		12	
Subtotal		42	
Social Sciences, GESS		9	
Humanities, GEHU		9	
PH 220	Symbolic Logic (3 credits)		
CN 150	Public Speaking (3 credits)		
AR, MU or TH course (3 credits)			

Natural Sciences GENS

	<u>Subtotal</u>		27
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61-141 Generality Substrate Teaching 64-30 Substrate Substra	ED 363	Methods of Teaching Math in Secondary School	3
	ED 395	Ed. 4 Extending Teaching as a Profession (Classroom Management 3, Literacy 3, Technology 3)	3
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MA 132 Calculus & Analytic Geometry II 3 MA 233 Calculus Analytic Geometry III 3 MA 244 Authore Theory and Decete Math for Middle School Teachers 2 MA 245 Butted Mathematics 3 MA 250 Introduction to Number Theory 3 MA 201 Linear Algebra 3 MA 297 Discrete Mathematics 3 MA 351 Abstract Algebra 3 MA 372 Introduction to Real Analysis I 3 MA 393 History and Literature of Mathematics 3 MA 381 History and Literature of Mathematics 3 MA 382 Frobins Solving Strategies 1 MA 383 Feminar Teaching Mathematics 2 MA 381 Teaching Rate Mathematics 4 MA 382 Problem Solving Strategies (taken a second time) 4 MA 383 Problem Solving Strategies (taken a second time) 4 MA 380 Problem Solving Strategies (taken a second time) 4 MA 380 Problem Solving Strategies (taken a second time) 4	MA 140	Statistics	3
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MA 260 Introduction to Number Theory 3 MA 301 Unear Algebra 3 MA 302 Discrete Mathematics 3 MA 364 Abstract Algebra 3 MA 367 Modern Geometry 3 MA 371 Introduction to Real Analysis I 3 MA 381 History and Literature of Mathematics 3 MA 380 Problem Solving Strategies 1 Select at least two of the following: 2 MA 315 Seminar: Teaching Mathematics 2 MA 316 Teaching Algebra 1 MA 317 Teaching Statistics 1 MA 318 Teaching Statistics 1 MA 319 Teaching Statistics 1 MA 380 Problem Solving Strategies (taken a second time) 4 MA 381 Teaching Statistics 4 Ma 382 Apptrone Research 5 E 349 Middle Level Mathematics Practicum 4 Subtract Teaching Teaching as a Profession: Diversity 1, Literacy 1, Technology 2 2 E 1 525 </td <td>MA 204</td> <td>Number Theory and Discrete Math for Middle School Teachers</td> <td>3</td>	MA 204	Number Theory and Discrete Math for Middle School Teachers	3
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Secondary Student leacning 12		<u> </u>	
	ED 410	Secondary Student Teaching	<u>12</u>

Subtotal 39
Total Hours 79

Pathway

Faculty Workload Analysis (describe how the course offering schedule and anticipated enrollments correlate to faculty lines)

Supplemental Files

Reviewer Beth ONeill (beth.oneill) (01/23/24 10:35 am): Program name changed to reflect KSDE

Comments licensure wording, as requested by Sarah Cook.

Holly Broxterman (holly.broxterman) (03/19/24 9:07 am): Approved in 3/18/24 Academic

Affairs Committee Meeting.

Key: 138