

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** ☒ **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	<p>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.</p> <p>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.</p> <p>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.</p> <p>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).</p> <p>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.</p> <p>((HB 10/12/23: Completed revisions according to new standardization approved by Deans and Provost Office))</p> <p>((BO 1/23/2024: Program name changed to reflect KSDE licensure wording, as requested by Sarah Cook.))</p>

General Information

Effective Catalog Edition	2024-2025
Department	Mathematics and Statistics
College	College of Arts and Sciences
Division	Natural Science & Mathematics
Degree Level	Undergraduate

In Workflow

- Acad Ops
- MA Chair
- Library
- ED Chair
- NSM Chair
- CA Dean
- CFCCC Chair
- Assoc Dean CFC
- CA Assoc Dean
- Governance Check
- AA Committee
- Faculty Senate
- General Faculty
- WUBOR
- Final Acad Ops
- Registrar

Approval Path

- 10/12/23 4:23 pm
Holly Broxterman (holly.broxterman):
Approved for Acad Ops
- 10/13/23 12:14 pm
Sarah Cook (sarah.cook):
Approved for MA Chair
- 10/16/23 7:10 am
Sean Bird (sean.bird):
Approved for Library
- 10/19/23 2:57 pm
Cherry Steffen (cherry.steffen):
Approved for ED Chair
- 10/22/23 1:33 pm
Andrew Herbig (andrew.herbig):
Approved for NSM Chair
- 01/26/24 3:25 pm
Kelly Erby (kelly.erby):
Approved for CA Dean
- 01/26/24 3:38 pm
Bruce Mactavish (bruce.mactavish):
Approved for CFCCC Chair
- 02/13/24 9:42 am
Kelly Erby (kelly.erby):
Approved for Assoc Dean CFC
- 03/05/24 9:57 pm
Kelly Erby (kelly.erby):
Approved for CA

Program Title	MA: Mathematics Secondary Education: Mathematics/BED <u>Advanced Mathematics 6-12</u>
Degree to be Offered	Bachelor of Education (BED)
Is this program offered completely online?	<u>No</u>
Does this program lead to a teaching certification?	Yes
Program Code	MA-BED
Is this program an interdisciplinary program?	No
CIP Code	<u>13.1311 - 13.1311</u>
Modality	<u>Hybrid</u>

Assoc Dean
10. 03/06/24 9:17 am
Beth O'Neill
(beth.oneill):
Approved for
Governance Check
11. 03/19/24 9:07 am
Holly Broxterman
(holly.broxterman):
Approved for AA
Committee

History

1. Apr 21, 2022 by clmig-jwillging
2. Jul 15, 2022 by Steve Luoma (steven.luoma)
3. Jul 15, 2022 by Steve Luoma (steven.luoma)
4. Jul 15, 2022 by Steve Luoma (steven.luoma)
5. Sep 30, 2022 by Holly Broxterman (holly.broxterman)
6. Oct 26, 2022 by Holly Broxterman (holly.broxterman)
7. Jun 5, 2023 by Holly Broxterman (holly.broxterman)
8. Jun 6, 2023 by Holly Broxterman (holly.broxterman)

Admission and Curriculum

Admission Criteria

Total Number of
Semester Credit
Hours for the
Degree
Curriculum

~~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.

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, GEN S	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, GEN S	9

Subtotal		27
ED 155	Teaching, Learning, Leadership	3
ED 165	Ed. 1, Examining Teaching as a Profession: Diversity 1, Literacy 1, Technology 1	3
ED 275	Ed. 2 Exploring Teaching as a Profession (Classroom Management 1, Diversity 2, Technology 2) Ed. 2	3
ED 285	Educational Psychology	3
ED 295	Ed. 3 Experiencing Teaching as a Profession (Classroom Management 2, Diversity 3, Literacy 2)	3
ED 302	Teaching Exceptional Learners	3
ED 354	Curriculum and Assessment	3
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
ED 410	Secondary Student Teaching	6-12
Subtotal		39

Students seeking certification to teach mathematics must also be formally admitted to the University's Professional Teacher Education Programs.

Required Courses Inside Mathematics Department

MA 140	Statistics	3
MA 151	Calculus & Analytic Geometry I	5
MA 152	Calculus & Analytic Geometry II	5
MA 253	Calculus/Analytic Geometry III	3
MA 204	Number Theory and Discrete Math for Middle School Teachers	3
MA 230	Course MA 230 Not Found	4
MA 260	<u>Introduction to Number Theory</u>	<u>3</u>
MA 301	Linear Algebra	3
MA 307	Discrete Mathematics	3
MA 354	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:

MA 315	<u>Seminar: Teaching Mathematics</u>	
MA 316	Teaching Algebra	
MA 317	Teaching Trigonometry	
MA 318	Teaching Statistics	
MA 380	Problem Solving Strategies (taken a second time)	
MA 388	Capstone Research	
ED 349	<u>Middle Level Mathematics Practicum</u>	

Subtotal		<u>40</u>
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Required Courses Inside Education Department

ED 155	<u>Teaching, Learning, Leadership</u>	<u>3</u>
ED 165	<u>Ed. 1, Examining Teaching as a Profession: Diversity 1, Literacy 1, Technology 1</u>	<u>3</u>
ED 275	<u>Ed. 2 Exploring Teaching as a Profession (Classroom Management 1, Diversity 2, Technology 2) Ed. 2</u>	<u>3</u>
ED 285	<u>Educational Psychology</u>	<u>3</u>
ED 295	<u>Ed. 3 Experiencing Teaching as a Profession (Classroom Management 2, Diversity 3, Literacy 2)</u>	<u>3</u>
ED 302	<u>Teaching Exceptional Learners</u>	<u>3</u>
ED 354	<u>Curriculum and Assessment</u>	<u>3</u>
ED 363	<u>Methods of Teaching Math in Secondary School</u>	<u>3</u>
ED 395	<u>Ed. 4 Extending Teaching as a Profession (Classroom Management 3, Literacy 3, Technology 3)</u>	<u>3</u>
ED 410	<u>Secondary Student Teaching</u>	<u>12</u>

Pathway

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

Supplemental Files

Reviewer

Beth O'Neill (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.