UNIVERSITY FACULTY SENATE FORMS

Academic Program Approval

This form is a routing document for the approval of new and revised academic programs. Proposing department should complete this form. A checklist is available to assist in the preparation of a proposal. For more information, call the Faculty Senate Office at 831-2921.

Submitted by: __Louis Rossi_____phone number_831-1880_____

Department: _Mathematical Sciences_____email address_rossi@math.udel.edu

Date: _29 November 2013_____

Action: Revise major

(Example: add major/minor/concentration, delete major/minor/concentration, revise major/minor/concentration, academic unit name change, request for permanent status, policy change, etc.)

Effective term__14 F_____
(use format 04F, 05W)

Current degree__BA_____
(Example: BA, BACH, BACJ, HBA, EDD, MA, MBA, etc.)

Proposed change leads to the degree of: __BA_____
(Example: BA, BACH, BACJ, HBA, EDD, MA, MBA, etc.)

Proposed name:_____
Proposed new name for revised or new major / minor / concentration / academic unit (if applicable)

Revising or Deleting:

Undergraduate major / Concentration:_BA Secondary Mathematics Education___
(Example: Applied Music – Instrumental degree BMAS)

Undergraduate minor:_____
(Example: African Studies, Business Administration, English, Leadership, etc.)

Graduate Program Policy statement change:_____
(**Must attach** your Graduate Program Policy Statement)

Graduate Program of Study:_____
(Example: Animal Science: MS Animal Science: PHD Economics: MA Economics: PHD)

Graduate minor / concentration:_____

Note: all graduate studies proposals must include an electronic copy of the Graduate Program Policy Document, highlighting the changes made to the original policy document.

List new courses required for the new or revised curriculum. How do they support the overall program objectives of the major/minor/concentrations)?
(Be aware that approval of the curriculum is dependent upon these courses successfully passing through the **Course Challenge** list. If there are no new courses enter "None")

None.

Supply support letter from the Library, Dean, and/or Department Chair if needed
(all new majors/minors will need a support letter from the appropriate administrator.)

N/A

Supply a resolution for all new majors/programs; name changes of colleges, departments, degrees; transfer of departments from one college to another; creation of new departments; requests for permanent status. **See example of resolutions.**

N/A

Explain, when appropriate, how this new/revised curriculum supports the 10 goals of undergraduate education: http://www.ugs.udel.edu/gened/

Goal 1: Students in the major will attain effective skills in quantitative reasoning and information technology skills through their normal coursework in Mathematics.

Identify other units affected by the proposed changes:
(Attach permission from the affected units. If no other unit is affected, enter "None")

None.

Describe the rationale for the proposed program change(s):
(Explain your reasons for creating, revising, or deleting the curriculum or program.)

The proposed change adds flexibility to our Seconary Mathematics Education program without weakening the curriculum. Rather than requiring a specific proof-based course (Math 451: Abstract Algebra), we would require one of two proof-based courses (Math 451 or Math 401:Real Analysis). The change does not affect our NCATE accreditation. However, it does permit students to take a proof-based course either in the fall or spring semester. This flexibility is especially important for Secondary Education majors because they cannot take additional classes in their final spring semester while they are student teaching. This revision permits students who changed into the program during their sophomore or junior years to distribute their upper division mathematics courses more evenly and still graduate in four years.

Program Requirements:
(Show the new or revised curriculum as it should appear in the Course Catalog. If this is a revision, be sure to indicate the changes being made to the current curriculum and **include a side-by-side comparison** of the credit distribution before and after the proposed change.) **See example of side by side.**

See attached.

ROUTING AND AUTHORIZATION: (Please do not remove supporting documentation.)

Department Chairperson _____ Date_____

Dean of College_____ Date_____

Chairperson, College Curriculum Committee_____ Date_____

Chairperson, Senate Com. on UG or GR Studies_____ Date_____

Chairperson, Senate Coordinating Com._____ Date_____

Secretary, Faculty Senate_____ Date_____

Date of Senate Resolution_____Date to be Effective_____

Registrar _____Program Code_____Date_____

Vice Provost for Academic Affairs & International Programs_____Date_____

Provost _____Date_____

Board of Trustee Notification_____Date_____

Revised 02/09/2009 /khs

Academic Year: 2013-2014 ▾

[34455]
2013-2014 UD Catalog -->
2013-2014 Undergraduate Programs -->
College of Arts and Sciences -->
Mathematical Sciences --
>
BACHELOR OF ARTS - MATHEMATICS EDUCATION

DEGREE: BACHELOR OF ARTS
MAJOR: MATHEMATICS EDUCATION

CURRICULUM		CREDITS
UNIVERSITY REQUIREMENTS		
ENGL 110 (minimum grade C-)	Critical Reading and Writing	3
First Year Experience (FYE)		0-4
University Breadth Requirement (minimum grade C-) Up to 3 credits from each of the University Breadth Requirement categories may be used to simultaneously satisfy the College of Arts and Sciences Breadth Requirements.		12
Discovery Learning Experience (DLE)		3
Multi-cultural Courses		3

COLLEGE REQUIREMENTS
Writing: (minimum grade C-) 3 A second writing course involving significant writing experience including two papers with a combined minimum of 3,000 words to be submitted for extended faculty critique of both composition and content. This course must be taken after completion of 60 credit

Academic Year: 2013-2014 ▾

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REVISED

DEGREE: BACHELOR OF ARTS
MAJOR: MATHEMATICS EDUCATION

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hours.

Foreign Language: 0-12
Completion of the intermediate-level course (107 or 112) in a given language. Number of credits needed and initial placement will depend on number of years of high school study of foreign language. Students with four or more years of high school work in a single foreign language may attempt to fulfill the requirement by taking an exemption examination.

BREADTH REQUIRMENTS (minimum grade C-)

Group A	9
Group B	9
Group C	9
Group D	10

MAJOR REQUIREMENTS
A grade of C- or better is required for major courses and EDUC courses and related work. Students lacking preparation for **MATH 242** should begin with **MATH 241**.

MATH 210	Discrete Mathematics I	3
MATH 242	Analytic Geometry and Calculus B	4
MATH 243	Analytic Geometry and Calculus C	4
MATH 245	An Introduction to Proof	3
MATH 308	Historical Development of Mathematical Concepts and Ideas	3
MATH 349	Elementary Linear Algebra	3
MATH 350	Probability Theory and Simulation Methods	3
MATH 450	Mathematical Statistics	3
MATH 451	Abstract Algebra I	3
MATH 518		
or another Modeling course	Mathematical Models and Applications	3
MATH 540	Geometry	3
One of the following Mathematics Courses		3
MATH 302	Ordinary Differential Equations	
MATH 315	Discrete Mathematics II	
MATH 401	Introduction to Real Analysis	
MATH 508	Introduction to Complex Variables	
One of the following Computer Science Courses		3
CISC 106	General Computer Science for Engineers	
or	or	
CISC 108	Introduction to Computer Science I	
PHYS 207	Introductory Physics I	4
MATH 279	Problem Solving Strategies I	1

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MATH 349	Elementary Linear Algebra	3
MATH 350	Probability Theory and Simulation Methods	3
MATH 450	Mathematical Statistics	3
~~**MATH 451**~~	~~Abstract Algebra I~~	~~3~~
MATH 518		
or another Modeling course	Mathematical Models and Applications	3
MATH 540	Geometry	3
Two ~~One~~ of the following Mathematics Courses , with at least one of them being MATH 401 or MATH 451.		~~3~~ 6
MATH 302	Ordinary Differential Equations	
MATH 315	Discrete Mathematics II	
MATH 401	Introduction to Real Analysis	
MATH 508	Introduction to Complex Variables	
MATH 451	Abstract Algebra I	
One of the following Computer Science Courses		3
CISC 106	General Computer Science for Engineers	
or	or	
CISC 108	Introduction to Computer Science I	
PHYS 207	Introductory Physics I	4
MATH 279	Problem Solving Strategies I	1

MATH 379	Problem Solving Strategies	1
MATH 380	Approaches to Teaching Mathematics	3
MATH 382	Student Teaching Seminar: Secondary Math	2
EDUC 400	Student Teaching	9
EDUC 413	Adolescent Development and Educational Psychology	4
EDUC 414	Teaching Exceptional Adolescents	3
EDUC 419	Diversity in Secondary Education	3
EDUC 420	Reading in the Content Areas	1

To be eligible to student teach, Mathematics Education students must have a GPA of 2.5 in their mathematics major and an overall GPA of 2.5. They must also pass a teacher competency test as established by the University Council on Teacher Education. Remaining in the program is subject t periodic review of satisfactory progress and, to be admitted to EDUC 400 Student Teaching, stude must have completed all the mathematics courses required in the secondary mathematics education program. Students should consult the teacher education program coordinator to obtain the stude teaching application and other information concerning student teaching policies.

ELECTIVES

After required courses are completed, sufficient elective credits must be taken to meet the minimum credit requirement for the degree, with 79 credits outside of Mathematics.

CREDITS TO TOTAL A MINIMUM OF **124**

MATH 379	Problem Solving Strategies	1
MATH 380	Approaches to Teaching Mathematics	3
MATH 382	Student Teaching Seminar: Secondary Math	2
EDUC 400	Student Teaching	9
EDUC 413	Adolescent Development and Educational Psychology	4
EDUC 414	Teaching Exceptional Adolescents	3
EDUC 419	Diversity in Secondary Education	3
EDUC 420	Reading in the Content Areas	1

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Although every effort has been made to assure the accuracy of the information in the Catalog, students and others who use the Catalog should note that the policies, rules, regulations, requirements for graduation, course offerings, and other materials reproduced in the Catalog change from time-to-time and that these changes may alter the information contained in this Catalog. see Legal Statement

Checklist for Curriculum Proposals

_X_. 1. Are all **signatures on the hard copy of the proposal?**

_X_. 2. Is the **effective date** correct?

_X_. 3. Is the **rationale** for the proposal consistent with the changes proposed?

_X_. 4. Does the proposed **number of credits** match the stated number?

_X_. 5. Have affected units been identified and contacted? Are required **support letters** attached?

_NA. 6. Is a **resolution** necessary? If so, is it attached?

(Necessary for: establishing a major; disestablishing a major; a name change to any program with permanent status; a name change to a department or college; a transfer or creation of any department; request for permanent status).

_X_. 7. Are all **courses (required or referenced)** in the UDSIS Inventory or in the approval process?

_X_. 8. Are all **university requirements** correctly specified?

_X_. A. Breadth requirements.

_X_. B. Multicultural requirement.

_X_. C. Writing requirement.

_X_. D. DLE requirement.

_X_. 9. Are all **college requirements** correctly specified?

_X_. 9. Is a **side-by-side comparison** provided?