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. 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: 24 October 2012_____

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__13F_____
                                      (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 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.

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 MATH and ECON..

Goal 3: Students will work and learn both independently and collaboratively as they complete the curriculum.

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 change in the computer science requirement reflects changes in the computer science curriculum. It makes no sense to require "CISC 108 or CISC 181" because CISC 108 is now required for CISC 181. Also, the Mathematics Department believes that either CISC 106 or CISC 108 provide satisfactory exposure to computation for our Mathematics Education majors.

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.)

Proposed revisions:

Replace

"CISC 108
 Introduction to Computer Science I (for those with no previous experience)
or
CISC 181   Introduction to Computer Science II"

with

"CISC 106 General Computer Science for Engineers
or
CISC 108 Introduction to Computer Science I"

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

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 hours.

Foreign Language: 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 high school work in a single foreign language may attempt to fulfill the requirement by taking an exemption examination.		0-12

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	

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MAJOR: MATHEMATICS EDUCATION   *Proposed revision*

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Course	Title	Credits
One of the following Computer Science Courses		3
CISC 108	Introduction to Computer Science I (for those with no previous experience)	
or	or	
CISC 181	Introduction to Computer Science II	
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 to periodic review of satisfactory progress and, to be admitted to **EDUC 400** Student Teaching, students 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 student 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**

Marked-up version:

Course	Title	Credits
One of the following Computer Science Courses		3
CISC ~~108~~ 106	Introduction to Computer Science I (for those with no previous experience) [*Introduction to Computer Science I*]	
or	or	
CISC ~~181~~ 108	Introduction to Computer Science II [*General Computer Science for Engineers*]	
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
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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?

n/a. 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?