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: _Yuk-J Leung_____phone number___X-1881_____

Department: _Mathematical Sciences email: yleung@math.udel.edu

Action: **Minor revision of major requirements**

_____

(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___**10F**_____

(use format 04F, 05W)

Current degree___**BS in Mathematics Education**_____

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

Proposed change leads to the degree of: _BS in Mathematics Education_____

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

Proposed name:_____**N/A**_____

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

Revising or Deleting:

Undergraduate major / Concentration:_Mathematics Education- BSXMS _____

(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")

There are no new courses required. We are allowing CISC 106 as an extra alternative course to CISC 108 or 181. See attached statement from the CISC Chair

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

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 old CISC 105 has been de-activated. The Computer Science Department has set up Cisc 106 or 108 as new substitutes.

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.)

The addition of CISC 106 as an alternate course to CISC 108 or 181 is printed in blue ink.

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

Department Chairperson Peter Mu Date 5/5/10

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 10/23/2007 /khs

Proposed Change on BS in Mathematics Education

Note on: side by side comparison revised curriculum stays the same except CISC 106 is added as an alternate course to CISC 108.

DEGREE: BACHELOR OF SCIENCE
MAJOR: MATHEMATICS EDUCATION

CURRICULUM	CREDITS
UNIVERSITY REQUIREMENTS	
ENGL 110 Critical Reading and Writing (minimum grade C-)	3
First Year Experience (FYE)	0-4
Discovery Learning Experience (DLE)	3
Multi-cultural Courses	3
COLLEGE REQUIREMENTS	
Writing: (minimum grade C-)	3
Second writing course taken after completion of 60 credit	
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 this requirement in that language by taking an exemption examination.

BREADTH REQUIREMENTS	
Eighteen credits from Groups A, B and C with a minimum of six credits from each group.	
Group A:	6
Group B:	6
Group C:	6
MAJOR REQUIREMENTS	
A grade of C- or better is required for major courses and related work.	
Mathematics Section	
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 302	Ordinary Differential Equations	3
MATH 308	Historical Developments 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	3
MATH 540	College Geometry: A Historical Approach	3

One of the following modeling classes		3
MATH 512	Contemporary Applications of Mathematics	
MATH 518	Mathematical Models and Applications	

One course from the following list		3
MATH 315	Discrete Mathematics II	
MATH 401	Introduction to Real Analysis	
MATH 503	Advanced Calculus for Applications	
MATH 508	Introduction to Complex Variables and Applications	

COMPUTER AND INFORMATION SCIENCES		3
CISC 106	General Computer Science for Engineers	
or		
CISC108	Introduction to Computer Science I	
or		
CISC 181	Introduction to Computer Science II	

SCIENCE

A two-semester, 8 credit sequence of laboratory science (courses designed for non-majors in a discipline are not appropriate, except for CHEM 103/CHEM 104)

8

PROFESSIONAL DEVELOPMENT		
MATH 279	Problem Solving Strategies	1
MATH 379	Problem Solving Strategies	1
MATH 380	Approaches to Teaching Mathematics	3
MATH 382	Student Teaching Seminar in 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

Nine additional credits in mathematics or in related disciplines at the 300 level or above 9

Courses not approved for math majors cannot be counted towards these 9 additional credits. Non mathematics courses can be in CISC, ECON, PHYS and STAT from an approved list maintained by the

Department of Mathematical Sciences.

CREDITS TO TOTAL A MINIMUM OF 124

Academic Year: 2009-2010

DEGREE: BACHELOR OF SCIENCE
MAJOR: MATHEMATICS EDUCATION

CURRICULUM		CREDITS
UNIVERSITY REQUIREMENTS		
ENGL 110 (minimum grade C-)	Critical Reading and Writing	3
First Year Experience (FYE)		0-4
Discovery Learning Experience (DLE)		3
Multi-cultural Courses		3
COLLEGE REQUIREMENTS		
Writing: (minimum grade C-)		3
Second writing course taken after completion of 60 credit		
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 this requirement in that language by taking an exemption examination.

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Mathematics Section

MATH 210	Discrete Mathematics I	3
MATH 242	Analytic Geometry and Calculus B	4
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MATH 302	Ordinary Differential Equations	3
MATH 308	Historical Developments 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	3
MATH 540	College Geometry: A Historical Approach	3
One of the following modeling classes		3
MATH 512	Contemporary Applications of Mathematics	
MATH 518	Mathematical Models and Applications	
One course from the following list		3
MATH 315	Discrete Mathematics II	
MATH 401	Introduction to Real Analysis	
MATH 503	Advanced Calculus for Applications	
MATH 508	Introduction to Complex Variables and Applications	

COMPUTER AND INFORMATION SCIENCES

Either CISC 108 (for those with no previous equivalent experience)		
or		
CISC 181		3

SCIENCE

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PROFESSIONAL DEVELOPMENT

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The University reserves the right to change its policies, rules, regulations, requirements for graduation, course offerings and any other contents of this catalog at any time.