Curriculum Proposal Cover Sheet - University-Wide Undergraduate Curriculum Committee

Contact Person(s)	Email Address
Frederick Adkins	fadkins@iup.edu
Proposing Department/Unit	Phone
Mathematics Departement	724-357-2608

Check all appropriate lines and complete all information. Use a separate cover sheet for each course proposal and/or program proposal.

1. Course Proposals (check all that apply)

_____ New Course   _____ Course Prefix Change   _____ Course Deletion

_____ Course Revision   _____ Course Number and/or Title Change   _____ Catalog Description Change

Current course prefix, number and full title: _____

Proposed course prefix, number and full title, if changing: _____

2. Liberal Studies Course Designations, as appropriate
_____ This course is also proposed as a Liberal Studies Course (please mark the appropriate categories below)

_____ Learning Skills _____ Knowledge Area _____ Global and Multicultural Awareness _____ Writing Intensive (include W cover sheet)

_____ Liberal Studies Elective (please mark the designation(s) that applies – must meet at least one)
     _____ Global Citizenship   _____ Information Literacy   _____ Oral Communication

     _____ Quantitative Reasoning   _____ Scientific Literacy   _____ Technological Literacy

3. Other Designations, as appropriate
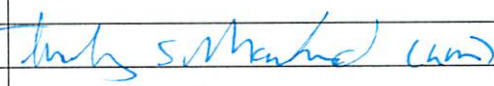_____ Honors College Course   _____ Other: (e.g. Women's Studies, Pan African)
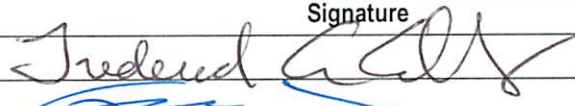
4. Program Proposals
_____ Catalog Description Change   _X_ Program Revision   _____ Program Title Change   _____ New Track

_____ New Degree Program   _____ New Minor Program   _____ Liberal Studies Requirement Changes   _____ Other

Current program name: *Bachelor of Science–Mathematics/Applied Mathematics Track*
Proposed program name, if changing: _____

5. Approvals

	Signature	Date
Department Curriculum Committee Chair(s)	*Frederick Adkins*	2/28/14
Department Chairperson(s)	*[signature]*	3/3/14
College Curriculum Committee Chair	*Anne Kondo*	3/10/14
College Dean	*Deane [signature]*	3/11/14
Director of Liberal Studies (as needed)		
Director of Honors College (as needed)		
Provost (as needed)	*[signature] S Manhual (hm)*	3/14/14
Additional signature (with title) as appropriate		
UWUCC Co-Chairs	*Gail S Sechrist*	4/8/14

Part II. Description of Curriculum Change

1. Revised Catalog Description

    Not needed, fast track for reduction to 60 credits. See table of changes below.

2a. Table comparing old and new programs

Current Program	Proposed Program

Bachelor of Science–Mathematics/Applied Mathematics Track	**Bachelor of Science–Mathematics/Applied Mathematics Track**
Liberal Studies: As outlined in Liberal Studies section 49-50 With the following specifications: **Mathematics:** MATH 125 **Liberal Studies Electives:** 9cr, no courses with MATH prefix; Includes intermediate-level foreign language	**Liberal Studies:** As outlined in Liberal Studies section 49-50 With the following specifications: **Mathematics:** MATH 125 **Liberal Studies Electives:** 9cr, no courses with MATH prefix; Includes intermediate-level foreign language

Major: 42	**Major:** 42

Required Courses:
 	
MATH 126 — Calculus II for Physics, Chemistry, and Mathematics — 3cr
MATH 171 — Introduction to Linear Algebra — 3cr
MATH 216 — Probability and Statistics for Natural Sciences — 3cr
MATH 225 — Calculus III for Physics, Chemistry, and Mathematics — 3cr
MATH 241 — Differential Equations — 3cr
MATH 271 — Introduction to Mathematical Proofs I — 3cr
MATH 272 — Introduction to Mathematical Proofs II — 3cr
MATH 363 — Mathematical Statistics I — 3cr
MATH 447 — Modeling and Simulation — 3cr
MATH 450 — Topics in Applied Computational Mathematics — 3cr
 	
Controlled Electives: (1)
One course from the following: 3cr
    MATH 371, 421, 423, 427, 476
One course from the following: 3cr
    MATH 445 or 446
One course from the following: 3cr
	Required Courses:
	
	MATH 126 — Calculus II for Physics, Chemistry, and Mathematics — 3cr
	MATH 171 — Introduction to Linear Algebra — 3cr
	MATH 216 — Probability and Statistics for Natural Sciences — 3cr
	MATH 225 — Calculus III for Physics, Chemistry, and Mathematics — 3cr
	MATH 241 — Differential Equations — 3cr
	MATH 271 — Introduction to Mathematical Proofs I — 3cr
	MATH 272 — Introduction to Mathematical Proofs II — 3cr
	MATH 363 — Mathematical Statistics I — 3cr
	MATH 447 — Modeling and Simulation — 3cr
	MATH 450 — Topics in Applied Computational Mathematics — 3cr
	
	Controlled Electives: (1)
	One course from the following: 3cr
	    MATH 371, 421, 423, 427, 476
	One course from the following: 3cr
	    MATH 445 or 446
	One course from the following: 3cr

MATH 480 or 493 (2)			MATH 480 or 493 (2)	
One more course from the following: MATH 342, 364, 445, 446	3cr		One more course from the following: MATH 342, 364, 445, 446	3cr
Other Requirements:	21		**Other Requirements:**	18
Computer Science:			**Computer Science:**	
COSC 110 Problem Solving and Structured Programming	3cr		COSC 110 Problem Solving and Structured Programming	3cr
COSC/MATH 250 Introduction to Numerical Methods	3cr		COSC/MATH 250 Introduction to Numerical Methods	3cr
Foreign Language Intermediate Level (3)			Foreign Language Intermediate Level (3)	
Planned Program in Complementary Field (or minor, requires advisor approval) with at least 6cr in 300/400-level courses	15cr		Planned Program in Complementary Field (or minor, requires advisor approval) with at least 6cr in 300/400-level courses	12cr
Free Electives:	7-8 cr		**Free Electives:**	10-11 cr
Total Degree Requirements:	120		**Total Degree Requirements:**	120

Left	Right
(1) A student may select courses for a specialized area. *Statistics/Actuarial Science*: MATH 363, 364, 371, 446. Additionally a student should minor in Applied Statistics. *Math Analysis/Engineering*: MATH 342, 371, 423, 447 *Operations Research*: MATH 371, 421, 445, 446, 447 (2) 3 credits of internship will be applied to the major. Additional credits may count as free electives. (3) Intermediate-level Foreign Language is included in Liberal Studies electives.	(1) A student may select courses for a specialized area. *Statistics/Actuarial Science*: MATH 363, 364, 371, 446. Additionally a student should minor in Applied Statistics. *Math Analysis/Engineering*: MATH 342, 371, 423, 447 *Operations Research*: MATH 371, 421, 445, 446, 447 (2) 3 credits of internship will be applied to the major. Additional credits may count as free electives. (3) Intermediate-level Foreign Language is included in Liberal Studies electives.

2b. List of all associated course changes

Reduction to 12 credits instead of 15 in the planned program of study.
Change is highlighted in red in table above.

2c. Rationale for Change

Reduction to 60 credit hours for major is required due to Pennsylvania State System of Higher Education policies. The major now requires 42 hours of coursework in mathematics plus an additional 18 credits of other requirements for a total of 60 credit hours.