

Cooperative 3-2 Program for students majoring in **MATHEMATICS**
at SUNY Fredonia and an appropriate curriculum
at an affiliated engineering institution

Eng
Mathematics
2011-2012

REQUIREMENTS LISTED IN CATALOG MUST BE FULFILLED FOR GRADUATION

FIRST YEAR (FREDONIA)

<u>First Semester</u>				<u>Second Semester</u>			
CHEM	115-125	Gen. Chemistry I w/Lab	4	CHEM	116-126	Gen Chemistry II w/Lab	4
MATH	122	Univ. Calculus I	4	MATH	123	Univ. Calculus II	4
ENGL	100	English Composition	3	PHYS	230-232	Univ. Physics I w/Lab	5
-----	-----	CCC ▪	<u>3</u>	-----	-----	CCC ▪	<u>3</u>
			14				16

SECOND YEAR (FREDONIA)

<u>First Semester</u>				<u>Second Semester</u>			
MATH	223	Univ. Calculus III	4	MATH	224	Differential Equations	3
PHYS	231-233	Univ. Physics II w/Lab	5	MATH	231	Linear Algebra	4
MATH	210	Found. Of Discrete Math	4	CSIT	121	Computer Science I *	3
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			16				17

(If transcript does not list Math as major, see Director to declare Math)

THIRD YEAR (FREDONIA) ++

<u>First Semester</u>				<u>Second Semester</u>			
MATH	331	Abstract Algebra I	3	MATH	420	Advanced Calculus+++	3
MATH	323	Inter. Real Analysis	3	MATH	-----	Mathematics Electives +	6
-----	-----	Advised Elective **	3			(MATH 351, 332, 325, 457)	
PHYS	321	Engineering Statics	3	PHYS	322	Mechanics of Solids++	4
PHYS	329	Engineering Dynamics++	3				
STAT	350	Probability & Statist.	<u>3</u>	MATH	405	Senior Seminar	<u>1</u>
			18				14

(See Director for transfer interview)

(See Mathematics Chair for transfer letter)

FOURTH AND FIFTH YEARS (AFFILIATED INSTITUTION)

Math Elective (as advised)

- Must complete the College Core Curriculum (CCC) either at Fredonia or engineering institution. Upper level is not required for 3-2 students. Also not required for 3-2: second social science course, second speaking intensive course, foreign language if earn 70 or better on Regent's Checkpoint B, and American History category if earn 85 or better on Regent's exam. See the current undergraduate Catalog for details regarding the CCC.
- * For students transferring to Syracuse, additional CSIT courses are required.
- ** Circuit Analysis (PHYS 323) required for students interested in civil, electrical, and mechanical engineering—other areas of engineering require a 300-400 level mathematics elective.
- + For students interested in electrical engineering, replace one mathematics elective with Circuit Analysis II (PHYS 324).
- ++ Students interested in electrical or computer engineering must take six hours of Circuit Analysis. Circuit Analysis I is required and Circuit Analysis II is recommended for Mechanical Engineering. Electrical, computer and chemical engineers may, in most cases, omit PHYS 322 and 329.
- +++ May substitute PHYS 425 for Advanced Calculus (offered in fall semesters)