

This model is in effect for all students entering the program after 9/1/2009

Name: \_\_\_\_\_

## PROGRAM GUIDE, BACHELOR OF SCIENCE, MATHEMATICS

- ◆ All students are required to take a minimum combined total of 42 semester hours of General Education and Rowan Experience courses. *(Italics indicate prerequisites)*

GENERAL EDUCATION REQUIREMENTS (choice from Approved Gen Ed Guide)				44 S.H.
<b>Transfer</b>	<b>Rowan</b>	<b>Hegis #</b>	<b>COMMUNICATIONS BANK</b> <i>minimum 6 s.h.</i>	<b>6 S.H.</b>
		COMP01.111	College Composition I (3 s.h.) or	3 s.h.
		COMP01.112	College Composition II ( <i>College Composition I</i> )	3 s.h.
<b>Transfer</b>	<b>Rowan</b>	<b>Hegis #</b>	<b>SCIENCE/MATHEMATICS BANK</b> <i>minimum 7 s.h.</i>	<b>14 S.H.</b>
			Choice from approved General Education courses	4 s.h.
			Lab Science (Choice from approved General Education courses)	4 s.h.
			Choice from approved General Education courses	3
			Choice from approved General Education courses	3
<b>Transfer</b>	<b>Rowan</b>	<b>Hegis #</b>	<b>SOCIAL &amp; BEHAVIORAL SCIENCES BANK</b> <i>minimum 6 s.h.</i>	<b>6 S.H.</b>
			Choice from approved General Education courses	
			Choice from approved General Education courses	
<b>Transfer</b>	<b>Rowan</b>	<b>Hegis #</b>	<b>HISTORY/HUMANITIES/LANGUAGE BANK</b> <i>minimum 6 s.h.</i>	<b>6 S.H.</b>
			Choice from approved General Education courses	
			Choice from approved General Education courses	
<b>Transfer</b>	<b>Rowan</b>	<b>Hegis #</b>	<b>NON-PROGRAM COURSES</b> <i>minimum 6 s.h.</i>	<b>12 S.H.</b>

ROWAN EXPERIENCE REQUIREMENTS (choose from Approved RE Guide)				
(Can be taken as a Gen Ed OR within the major requirements.)				
<b>Transfer</b>	<b>Rowan</b>	<b>Hegis #</b>		<b>6 S.H.</b>
		CMS 04205	Public Speaking ( <i>College Composition I and II</i> )	3 s.h.
			Artistic/Creative Experience	3 s.h.
<b>CHECK TO BE SURE THE FOLLOWING REQUIREMENTS ARE COMPLETED</b>				
			Broad Based Literature Course (LIT)	s.h.
			Writing Intensive Course (WI)	
			Multicultural/Global Course (M/G)	
			Lab Science Course (LAB)	
			Computer Competency Exam or Computer Literacy Course	
			Rowan Seminar (RS) – <i>Freshmen Only</i>	

- ◆ **NOTE:** *M/G, LIT, ACE, WI and RS courses, if taken within the major program of study, CAN NOT COUNT towards the minimum total of Gen Ed 42 credits.*
- ◆ This information has been provided by the department listed above as of the date listed below and is subject to change.
- ◆ To declare this major go to the CAP Center in Savitz Hall.
- ◆ ***Students should consult with their program advisor for suggested General Education and Rowan Experience courses***

**MAJOR REQUIREMENTS**

**67 s.h.**

**Required Core**

**33 s.h**

Course #	COURSE NAME	S.H.	PREREQUISITES
MATH 01.130	Calculus I	4	
MATH 01.131	Calculus II	4	
MATH 01.210	Linear Algebra	3	
MATH 01.230	Calculus III	4	
MATH 01.231	Ordinary Differential Equations	3	
MATH 01.330	Introduction to Real Analysis I	3	
MATH 01.340	Modern Algebra	3	
STAT 02.360	Probability and Random Variables	3	
MATH 01.430	Intro to Complex Analysis	3	
MATH 01.498	Math Seminar (WI)	3	

**Restricted Electives- from the following list**

**27 s.h.**

MATH 01.205	Technological Tools for Discovering Mathematics	2	
MATH 01.310	College Geometry (required for teacher certification)	4	
MATH 01.331	Intro to Real Analysis II	3	
MATH 01.332	Numerical Analysis	3	
MATH 01.341	Modern Algebra II	3	
MATH 01.352	Theory of Numbers (at least three math major courses) *may be taken by any major: recommended for certification (Background in modern algebra & linear algebra recommended)	3	
MATH 01.354	Intro to Topology	3	
MATH 01.386	Introduction to Partial Differential Equations	3	
MATH 01.410	History of Mathematics	3	
MATH 01.421	Mathematics Field Experience (permission of instructor)	3	
STAT 02.361	Mathematical Statistics	3	
MATH 03.400	Applications of Mathematics	3	
MATH 03.411	Deterministic Models in Operations Research	3	
MATH 03.412	Stochastic Models in Operations Research	3	

**A maximum of two courses from the following list**

**7 s.h.**

CS 07.340	Design and Analysis of Algorithms	3	
CS 07.422	Theory of Computing	3	
PHYS 02.300	Modern Physics	4	
PHYS 02.315	Analytical Mechanics	4	
PHYS 02.387	Statistical Physics	3	
PHYS 02.401	Quantum Mechanics I	4	
PHYS 02.430	Electricity & Magnetism I	4	
PHYS 08.400	Physical Chemistry I	3	
PHYS 08.401	Physical Chemistry II	3	

**Other Requirements**

CS 01.104	Introduction to Scientific Programming	3	<i>Can be used as Math/Science Gen Ed</i>
MATH 03.150	Discrete Mathematics	3	<i>Can be used as Math/Science Gen Ed</i>
PHYS 02.200	Introductory Mechanics	4	<i>Can be used as Math/Science Gen Ed</i>
PHYS 02.201	Introductory Electricity and Magnetism	4	<i>Can be used as Math/Science Gen Ed</i>
PHIL 09.130	Introduction to Symbolic Logic	3	<i>Can be used as HHL Gen Ed</i>

**Free Electives.....9 s.h.**

**Total Credits in Program ..... 120 S.H.**

## Suggested Course Sequence

### Bachelor of Science, Mathematics

PLEASE NOTE: Considerable flexibility exists for moving courses between spring and fall semesters, except when a course is only offered in spring or fall (noted in some Specialization Courses). When altering course sequences, give careful consideration to prerequisites.

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>	
Calculus I MATH 01130	4		Calculus II MATH 01131	4
Intro to Sci Programming CS 01104	3		Discrete Mathematics MATH 03150	3
Intro to Symbolic Logic PHIL 09130	3		College Comp II COMP 01112	3
College Comp I COMP 01111	3		Introductory Mechanics PHYS 02200	4
Choice/Gen Ed	3		Choice/Gen Ed	3
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>	
Calculus III MATH 01230	4		Ord. Differential Equations MATH 01231	3
Intro. Electricity & Magnetism PHYS 02201	4		Prob & Random Variables STAT 02360	3
Linear Algebra MATH 01210	3		Modern Algebra I MATH 01340 or Intro to Real Analysis MATH 01330 or Math Restricted Elective	3
Public Speaking CMS 06202	3		Choice/Gen Ed (LIT or M/G)	3
Choice/Gen Ed	3		Choice/Gen Ed	3
<b>FIFTH SEMESTER</b>			<b>SIXTH SEMESTER</b>	
Modern Algebra I MATH 01340 or Intro to Real Analysis MATH 01330 or Math Restricted Elective	3		Complex Analysis I MATH 01430	3
Modern Algebra I MATH 01340 or Intro to Real Analysis MATH 01330 or Math Restricted Elective	3		Math Restricted Elective	3
Math Restricted Elective	3		Math Restricted Elective	3
Choice/Gen Ed	3		Choice/Gen Ed (LIT or M/G)	3
Choice/Gen Ed	3		Choice/Gen Ed	3
<b>SEVENTH SEMESTER</b>			<b>EIGHTH SEMESTER</b>	
Math Restricted Elective	3		Mathematics Seminar MATH 01498	3
Math Restricted Elective	3		Math Restricted Elective	3
Math Restricted Elective	3		Math Restricted Elective	3
Choice/Gen Ed	3		Choice/Gen Ed	3
Choice/Gen Ed	3		Choice/Gen Ed	3