This model is in effect for all students entering the program after 9/1/2008

Name: _____

PROGRAM GUIDE
BACHELOR of SCIENCE, PHYSICAL SCIENCE, PHYSICS

- 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 sh
Transfer	**Rowan**	**Hegis #**	**COMMUNICATION BANK** ***minimum 6 s.h.***	**6 S.H.**
		COMP01.111	College Composition I	3 s.h.
		COMP01.112	College Composition II *(College Composition I)*	3 s.h.
		Hegis #	**SCIENCE/MATHEMATICS BANK** ***minimum 7 s.h.***	**11 S.H.**
			Math/Science (choice from Approved General Education Courses)	3 s.h.
			Lab Science (choice from Approved General Education Courses)	4s.h.
		Hegis #	**SOCIAL & BEHAVORAL SCIENCES BANK** ***minimum 6 s.h.***	**6 S.H.**
			(choice from Approved General Education Courses)	3 s.h.
			(choice from Approved General Education Courses)	3 s.h.
		Hegis #	**HISTORY/HUMANITIES/LANGUAGE BANK** ***minimum 6 s.h.***	**6 S.H.**
			(choice from Approved General Education Courses)	3 s.h.
			(choice from Approved General Education Courses)	3 s.h.
		Hegis #	**NON-PROGRAM COURSES** ***minimum 6 s.h.***	**9 S.H.**
				3 s.h.
				3 s.h.
				3 s.h.

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

- 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.***

Bachelor of Science, Physical Science, Physics

Major Requirements ..... **60-64 s.h.**
Physical Science Core ..... **45-48 s.h.**

Course #	COURSE NAME	S.H.	*PREREQUISITES*
MATH 01.131	Calculus II	4	
PHYS 02.200	Introductory Mechanics—RS	4	
PHYS 02.201	Introductory Electricity & Magnetism	4	
PHYS 02.210	Introductory Thermo, Fluids, Waves & Optics	4	
PHYS 02.300	Modern Physics	4	
	Approved Astr, Atm Sci, Geol course:	3-4*	
CHEM 06.100	Chemistry I	4	
CHEM 06.101	Chemistry II	4	
CHEM 07.200	Organic Chemistry I	4	
CHEM 09.250	Quantitative Analysis	4	
	Approved Career Track course:	3-4*	
	Approved Career Track course:	3-4*	

Physics Specialization **14-16 sh**

ASTR 11.241	Astronomy and Astrophysics	4	
	An approved 300+ level Physics:	4	
	An approved 300+ level Physics:	3-4*	
	An approved Physics Elective:	3-4*	

*At least one of these courses must be 4 sh to meet the 60 sh requirement for the B.S. degree.

Other Program Requirements ..... **s.h.**

	Following courses can be used for Gen Ed Math/Science		
GEOG 06.130	Geology I—LAB	4	
MATH 01.130	Calculus I	4	
CS 01.104 Or CS 04.103	Intro to Scientific Programming or Computer Science & Programming	3	
	Following courses can be used for Gen Ed HHL & Rowan Experience		
PHIL 09.368	Philosophy of Science—WI	3	

NOTE:

Free Electives ..... 12-16 s.h.

General Education (see other side)..... 44 s.h.

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

Possible Physical Science-Physics Major-Course Sequence (Incoming Freshman

Fall Freshman	**S.H.**
College Composition I	3
Chemistry I	4
Calculus I	4
Introductory Mechanics—RS	4
Semester Total	**15**

Spring Freshman	**S.H.**
College Composition II	3
Chemistry II	4
Calculus II	4
Intro Thermo, Fluids, Waves, & Optics	4
Semester Total	**15**

Fall Sophomore	**S.H.**
Public Speaking	3
Intro Electricity and Magnetism	4
Astronomy and Astrophysics	4
Programming Course	3
Gen. Ed. Elective (NPC)	3
Semester Total	**17**

Spring Sophomore	**S.H.**
Phil of Science—WI (HHL)	3
Geology—LAB	4
Modern Physics	4
GE/RE Elective (ACE)	3
Free Elective	3
Semester Total	**17**

Fall Junior	**S.H.**
Organic Chemistry I	4
Career Track Course	3-4
GE/RE Elective (HHL, LIT)	3
Free Elective	3
Semester Total	**13-14**

Spring Junior	**S.H.**
Quantitative Analysis	4
Career Track Course	3-4
GE/RE Elective (SBS, M/G)	3
Free Elective	3
Free Elective	3
Semester Total	**16-17**

Fall Senior	**S.H.**
300+ Level Physics Course	4
Astronomy or Atmospheric Sci or Geology	3-4
Gen Ed Elective (SBS)	3
Gen Ed Elective (NPC)	3
Semester Total	**13-14**

Spring Senior	**S.H.**
300+ Level Physics	3-4
Physics Elective	3-4
Gen Ed Elective (NPC)	3
Free Elective	3
Semester Total	**12-14**

General Education requirements include 6 semester hours in Social and Behavioral Science (SBS), 6 semester hours in History, Humanities and Languages (HHL), and 9 semester hours in Non-Program Courses (NPC). Rowan Experience requirements include 3 semester hours in Public Speaking (PS) and Artistic and Creative Experience (ACE) each, as well as at least one course each designated as Multicultural/Global (M/G), Literature (LIT). These may be taken at anytime. The above specified courses are for illustration only. Note that the Rowan Experience Writing Intensive (WI), Rowan Seminar (RS), Math (MATH), and Lab Science (LAB) requirements are accounted for in Program Requirements.

Approved Physics Elective Courses

- Physics of Sound and Music (PHYS 02.140)
- Physics of Everyday Life (PHYS 02.150)
- Optics and Light (PHYS 02.305)
- Independent Study (PHYS 02.310)
- Analytical Mechanics (PHYS 02.315)
- Mathematical Physics (PHYS 02.325)
- ZEMAX (PHYS 02.333)
- Statistical Physics (PHYS 02.387)
- Electric Circuits (PHYS 02.399)
- Quantum Mechanics I (PHYS 02.401)
- Electricity & Magnetism I (PHYS 02.430)
- Electricity & Magnetism II (PHYS 02.431)
- Quantum Mechanics II (PHYS 02.402)
- Advanced Lab (PHYS 02.440)
- Selected Topics (PHYS 02.470)
- Physics Research I, II, III, IV (PHYS 02.211, 212, 311, 411)
- Astronomy Research I, II, III, IV (ASTR 11.209, 212, 312, 412)

Career Tracks

- Secondary Education—second major in Education: K-12 Subject Matter
- Environmental Science—concentration offered through Biology
- Marketing/Technical Representative—minor or second major in Business
- Pre-Med—concentration offered through Biology
- Pre-Law—minor in Law & Justice or Political Science (both have pre-law tracks)
- Technical Writing Track—minor in Journalism