

**Physical Science, Physics B. S. Program
Program Planning and Check-off Sheet**

Student Name: _____

Advisor Name: _____ Date: _____

General Education **38 sh**
Communications **6 sh**

Sem/Yr	Grade	Course	Course #	Credits
		College Composition I	COMP 01.111	3
		College Composition II	COMP 01.112	3

Science and Mathematics **11 sh**

Sem/Yr	Grade	Course	Course #	Credits
		Calculus I—MATH	MATH 01.130	4
		Geology I—LAB	GEOG 06.130	4
		Intro. Sci. Prog. <i>or</i> Comp. Sci. & Prog.	CS 01.104 <i>or</i> CS 04.103	3

Social and Behavioral Sciences **6 sh**

Sem/Yr	Grade	Course	Course #	Credits

History, Humanities, and Languages **6 sh**

Sem/Yr	Grade	Course	Course #	Credits
		Phil of Science—WI, M/G (or other approved):	PHIL 09.369	3

Non-Program Courses (outside PHSC, PHYS, CHEM) **9 sh**

Sem/Yr	Grade	Course	Course #	Credits

Rowan Experience **≥6 sh**

Sem/Yr	Grade	Course	Course #	Credits
		Public Speaking—PS	CMS 06.202	3
		ACE course:		3

Comp. Lit. or Comp Exam _____ WI _____ M/G _____ LIT _____

Major Requirements**60–64 sh****Physical Science Core****45–48 sh**

Sem/Yr	Grade	Course	Course #	Credits
		Calculus II	MATH 01.131	4
		Introductory Mechanics—RS	PHYS 02.200	4
		Introductory Thermo, Fluids, Waves & Optics	PHYS 02.210	4
		Introductory Electricity & Magnetism	PHYS 02.201	4
		Modern Physics	PHYS 02.300	4
		Approved Astr, Atm Sci, Geol course:		3–4*
		Chemistry I	CHEM 06.100	4
		Chemistry II	CHEM 06.101	4
		Organic Chemistry I	CHEM 07.200	4
		Quantitative Analysis	CHEM 09.250	4
		Approved Career Track course:		3–4*
		Approved Career Track course:		3–4*

Physics Specialization**14–16 sh**

Sem/Yr	Grade	Course	Course #	Credits
		Astronomy and Astrophysics	ASTR 11.241	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 4sh to meet the 60sh requirement for the B.S. degree.

Free Electives**12–16 sh**

Sem/Yr	Grade	Course	Course #	Credits

Total Credits Needed**120 sh**

A Possible Physical Science: Physics Major Program

Freshman Year

Fall	15 s.h.	Spring	15 s.h.
College Composition I	3	College Composition II	3
Calculus I—MATH	4	Calculus II	4
Intro Mechanics—RS	4	Intro TFW&O	4
Chemistry I	4	Chemistry II	4

Sophomore Year

Fall	17 s.h.	Spring	17 s.h.
Public Speaking—PS	3	Philosophy of Science—WI [HHL*]	3
Astronomy & Astrophysics	4	Geology I—LAB	4
Intro E&M	4	Modern Physics	4
Programming course	3	GE/RE Elective [ACE*]	3
Gen Ed Elective [NPC*]	3	Free Elective	3

Junior Year

Fall	13–14 s.h.	Spring	16–17 s.h.
Organic Chemistry I	4	Quantitative Analysis	4
Career Track Course	3–4	Career Track Course	3–4
GE/RE Elective [HHL*, LIT]	3	GE/RE Elective [SBS*, M/G]	3
Free Elective	3	Free Elective	3
		Free Elective	3

Senior Year

Fall	13–14 s.h.	Spring	12–14 s.h.
300+ level Physics	4	300+ level Physics	3–4
Astr <i>or</i> Atm Sci <i>or</i> Geology	3–4	Physics Elective	3–4
Gen Ed Elective [SBS*]	3	Gen Ed Elective [NPC*]	3
Gen Ed Elective [NPC*]	3	Free Elective	3

*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 any time, 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