**2012-2013**

**Bachelor of Science (BS) Non-Teaching** | **Program of Study for Physics Majors**
**Degree Code 270*** | **APPLIED PHYSICS**
**Concentration Code 270B**

## I. GENERAL EDUCATION CURRICULUM .....44

Physics 1150 & 1151 or 1103 & 1104 will fulfill Science Inquiry perspective. MAT 1110 fulfills Quantitative Literacy.

## II. MAJOR REQUIREMENTS (not including 12 s.h. counted in Area 1, above).....50

**2.0 major GPA is required for graduation. Major GPA calculation will include <u>all</u> courses taken in the major department, plus any other courses under II. Minimum of 18 semester hours of courses taken to fulfill major requirements must be courses offered by Appalachian.**

### A. Physics (32 semester hours)

PHY 1103 _____ (4) General Physics I *(Co: MAT 1020/1025)* **OR** PHY 1150_____(5) Analytical Physics I *(Co: MAT 1110)*
PHY 1104 _____ (4) General Physics II *(Pre: PHY 1103)* PHY 1151_____(5) Analytical Physics II *(Co: MAT 1120)*

PHY 2010 _____ (4) Intermediate Physics I *(Pre: PHY 1104/1151; MAT 1120)*
PHY 2020 _____ (4) Intermediate Physics II *(Pre: PHY 2010; MAT 2130)*
PHY 2210 _____ (3) Physics Laboratory Techniques and Data Analysis **[WID]** *(Pre: ENG 2001; Co: PHY 2020)*
PHY 3210 _____ (3) Modern Physics I *(Pre: PHY 1151; Co: PHY 2010)*
PHY 4210 _____ (3) Methods of Experimental Physics **[CAP]** *(Pre: PHY 2210)*

5-7 hours of Physics electives required to complete 32 semester hours:

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### B. Mathematics (12 semester hours)

MAT 1110 _____ (4) Calculus with Analytic Geometry I *(Pre: MAT 1025 w/min grade C-)*
MAT 1120 _____ (4) Calculus with Analytic Geometry II *(Pre: MAT 1110 w/min grade C-)*
MAT 2130 _____ (4) Calculus with Analytic Geometry III *(Pre: MAT 1120 w/min grade C-)*

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### C. At least 18 semester hours in an emphasis area

A committee consisting of three faculty members, at least two of which must be from the Department of Physics and Astronomy, must approve a program of study and any subsequent modification. Some suggested emphasis areas are: astrophysics, geophysics, environmental physics, engineering electronics, radiation safety physics, medical physics, technical management, industrial physics, computational physics, mathematical physics, and technical writing. Many other combinations for emphasis areas are possible and will be developed in consultation with the departmental chairman and the faculty advisory committee.

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## III. MINOR (optional)

## IV. ELECTIVES (taken to total 122 hours for the degree).....<u>28</u>

**2 semester hours of free electives must be outside the major discipline.** **122**