

ENDORSEMENT NO. 156
Physics
GRADE LEVEL: 5-12

(Form revision 03/2010)

Institution Name: Cornell College

Date Submitted: 1/11/11

New or Revised (If this is a revision, also submit a letter explaining the changes made)

Undergraduate or Graduate

Professional Education Core:

Requirements unique to this endorsement:

STATE REQUIREMENTS Professional Core	INSTITUTIONAL REQUIREMENTS Course(s) for Demonstrating Competencies
Methods of teaching with an emphasis in Science	EDU 324 Secondary Mathematics, Science and Social Studies EDU 328 Reading in the Content Area
Student Teaching in Physics	EDU 410, 420, 430, 440 Student Teaching

Content:

- A. Completion of a thirty semester hour teaching major which must minimally include
- B. Completion of twenty-four semester hours in Physics or
- C. Thirty semester hours in the broad area of Science to include fifteen semester hours in Physics.

Option 1:

STATE REQUIREMENTS Content Categories	INSTITUTIONAL REQUIREMENTS Course Numbers and Titles	Credit Hrs.
24 semester hours in Physics	1. PHY 111 General Physics I	4
	2. PHY 112 General Physics II	4
	3. PHY 114 Laboratory Physics	4
	4. PHY 302 Electronics	4
	5. PHY 303 Modern Physics	4
	6. PHY 312 Advanced Experimental Physics	4

	...7. Four courses from the following: PHY 221 Astronomy PHY 223 Acoustics, Music & Audio Systems PHY 228 Energy Alternatives PHY 305 Waves PHY 321 Mechanics PHY 322 Electricity and Magnetism PHY 334 Introduction to Quantum Mechanics PHY 315 – Astrophysics	16
	8. MAT 119 AND MAT 120 Calculus of a Single Variable I and II OR MAT 121 Calculus (Single Var.)	4/8
	9. MAT 122 Calculus (Several Variables)	4
	10. CSC 140 Foundations of Computer Science	4
	11. PHY 221 Astronomy (strongly recommended but not required.)	
TOTAL Credit Hours		52/56

OR

Option 2:

STATE REQUIREMENTS Content Categories	INSTITUTIONAL REQUIREMENTS Course Numbers and Titles	Credit Hrs.
30 semester hours in the broad area of Science to include 15 semester hours in Physics	1. PHY 111 General Physics I	4
	2. PHY 112 General Physics II	4
	3. PHY 114 Laboratory Physics	4
	4. PHY 303 Modern Physics	4
	5. MAT 119 AND 120 OR MAT 121	4/8
	Strongly recommended but not required MAT 122 Calculus of Several Variables PHY 221 Astronomy	
	A major in any Cornell science	
TOTAL Credit Hours		20/24