BEREA COLLEGE
2011 – 2012 CURRICULUM GUIDE (as of 8/24/11)

B.A. with major in PHYSICS

NOTE: This guide is subject to change and represents actions approved by Faculty to date. Please refer often to the *2011-2012 Online Catalog & Student Handbook (www.berea.edu/cataloghandbook),* which will be updated with the most current information.

GENERAL EDUCATION PROGRAM

NOTE: No single college course transferred into Berea can meet more than one General Education requirement.

Core Courses	Term	Credit
MAT 010: Prealgebra[a]	_____	NC
MAT 011: Elementary Algebra I[a]	_____	NC
MAT 012: Elementary Algebra II[a]	_____	NC
GSTR 110: Writing Sem. I: Critical Thinking in the Liberal Arts[b]	_____	___
GSTR 210: Writing Sem. II: Identity and Diversity in the United States	_____	1
GSTR 310: Understandings of Christianity	_____	1
GSTR 410: Sr. Sem. in Cont. Global Issues	_____	1

Scientific Knowledge and Inquiry

GSTR 332: Scientific Knowledge & Inquiry	_____	___

OR

Two approved science courses, one of which must be an approved lab course. At this time, only the following courses have been approved to meet this alternative (all of which meet the lab course stipulation): ANR 110, 130, BIO 100, BIO 101, 110, CHM 113, 131, 134, PHY 111, 217, or 315

_____ ____: _____	_____	___
_____ ____: _____	_____	___

Lifetime Health & Fitness: PEH 100 & Phys. Activity

PEH 100: Introduction to Lifetime Wellness	_____	.50
(if swimming proficiency test not passed, take PED 200)		
PED 2___: _____	_____	.25
PED 2___: _____	_____	.25

Practical Reasoning Across the Curriculum (PR & PRQ)

Two courses—at least one firmly grounded in math or statistics (PRQ); the other can be an approved practical reasoning (PR) course or another PRQ course.

_____ ____: _____	_____	1
_____ ____: _____	_____	1

Perspectives—Six Areas Required

Students will satisfy each of the six areas by taking or waiving a course, or through an approved experience. Individual courses may be approved to satisfy more than one Perspective, but no single course may satisfy more than two Perspective areas.

1. Arts _____	_____	_____
2. Social Science _____	_____	_____
3. Western History _____	_____	_____
4. Religion _____	_____	_____
5. Afr. Amer., Appal., Women's _____	_____	_____
6. International (two courses either in area 6A or area 6B):		
A) Same Non-English Language _____	_____	_____
Same Non-English Language _____ (one course may be waived by placement exam)	_____	_____
OR		
B) World Culture (Non-western) _____	_____	_____
World Culture (Western/non-western)____	_____	_____

Active Learning Experience (ALE)

An approved experience, taken for credit or as noncredit.

_____ ____: _____	_____	_____

[a] May be waived on basis of test scores.

[b] Transfer students might waive GSTR 110 if they took College Composition as a degree-seeking student at another college AND earned a grade of B or higher.

MAJOR COURSES

Core Courses	Term	Credit
Minimum of 9.25 PHY credits above 218 level, as follows:		
PHY 315: Intro. Physics I w/Calculus	_____	1
PHY 316: Intro. Physics II w/Calculus	_____	1
PHY 320: Modern Physics	_____	1
PHY 460: Electromagnetic Theory	_____	1
PHY 481: Classical Mechanics	_____	1
PHY 482: Quantum Physics	_____	1

Capstone Course

PHY 492: Physics Seminar (Capstone)	_____	.25

Distribution Courses (Required; count inside the major)

Three (3) additional PHY 200-400 level course credits:

PHY _____: _____	_____	1
PHY _____: _____	_____	1
PHY _____: _____	_____	1

Collateral Courses (Required; count outside the major)

MAT 135: Calculus I (or waiver)	_____	1
MAT 225: Calculus II (or waiver)	_____	1
MAT 330: Calculus III	_____	1
MAT 437: Differential Equations	_____	1

ELECTIVES (count in 20 credits outside the major, unless in the PHY rubric)

Dept. & No.	Title	Term	Credit
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Exploring the Major Guidelines: Students expressing an interest in Physics as a major will be placed in the introductory Physics courses in their first year, depending on the students' mathematics preparation. Students should follow either: MAT 115 or 125 with PHY 217/218, **OR** MAT 135 with PHY 315/316, as described in Course Sequencing in the Physics Major description in the *Catalog & Student Handbook*.

Admission to the Major Guidelines: Students should earn a grade of C or higher in PHY 315, 316, and MAT 135 (or waiver) in order to be admitted into the Physics major.

The Department recommends strongly that students who are interested in majoring in Physics talk with one of the Department's faculty members as early as possible.