Pittsburg State University

College of Arts and Sciences Program Guide

Degree: Bachelor of Science
Major: Physics
Emphasis/Option: Professional
Minor (if required):

As of Fall 2015

General Education Component (36-41 hours)

Basic Skills** (9 hours)

General Education Electives (27-32 hours)

Sciences** (4-5 hours)

Social Studies (3 hours)

Political Studies (3 hours)

Producing and Consuming** (2-3 hours)

Fine Arts and Aesthetic Studies (2-3 hours)

Cultural Studies (3 hours)

Health and Well-Being (4-6 hours)

Human Heritage (6 hours)

** MATH 150, CIS 230 or CIS 240, and PHYS 104/130 or PHYS 100/130 required in the major partially fulfill General Education requirements.

Core Physics Courses (39 hours)

(a) Physics

PHYS 500: Mathematical Physics 3
PHYS 510: Analytical Mechanics I 3
PHYS 512: Electricity and Magnetism I 3
PHYS 516: Modern Physics I 3
PHYS 530: Intermediate Physics Laboratory (____) 3
PHYS 699: Senior Review and Assessment 1

(b) Other

CHEM 215: General Chemistry I 3
and CHEM 216: General Chemistry I Laboratory 2
CHEM 225: General Chemistry II. 3
and CHEM 226: General Chemistry II Laboratory 2
MATH 150: Calculus I 5
MATH 155: Calculus II 5
CIS 230: Visual Basic Programming 3
or CIS 240: C ++ Programming 3

Professional Emphasis (33 hours)

(a) Physics

PHYS 104: Engineering Physics I 4
and PHYS 130: Elementary Physics Laboratory I 1
PHYS 105: Engineering Physics II 4
and PHYS 131: College Physics Laboratory II 1
PHYS 532: Electronic Circuits I 3
PHYS 612: Electricity and Magnetism II 3
PHYS 616: Modern Physics II 3
PHYS 691: Senior Research Project 2
PHYS 714: Statistical Thermodynamics 3
PHYS 716: Introductory Quantum Mechanics 3

(b) Electives

Choose three hours of upper-division electives from physics, mathematics, chemistry or technology subject to the approval of the Physics Department.

(c) Mathematics

MATH 253: Calculus III 3
MATH 553: Differential Equations 3

The Professional Physics emphasis area is for students seeking further study in graduate school. A minor in Mathematics is recommended.

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GENERAL EDUCATION REQUIREMENTS (36-41 hrs.)

Basic Skills **9 hours**

COMM	207	Speech Communication	3
ENGL	101	English Composition	3
ENGL	190	Honors English Composition	3
OR ENGL	299	Introduction to Research Writing	3

Sciences **4-5 hours**

Natural Sciences *(Select one)*

BIOL	111/112	General Biology and Laboratory	5
BIOL	113	Environmental Life Science	4
BIOL	211	Principles of Biology I	4

Social Studies **3 hours**

SOC	100	Introduction to Sociology	3
WGS	200	Introduction to Women's Studies	3

Political Studies *(Select one)* **3 hours**

POLS	101	U.S. Politics	3
POLS	103	Comparative Political Institutions	3

Producing and Consuming **2-3 hours**

(Select one from two of the following three categories)

Economy

ECON	191	Issues in Today's Economy	3
FCS	230	Consumer Ed. and Personal Finance	3

Technology

EET	247	Computer Programming for Electronic Sys.	3
GT	190	Introduction to Technological Systems	2
GT	350	Technology and Civilization.	3
EDTH	330	Technology for the Classroom	3
TE	551	Integrated Technology for Educators.	3
TM	350	Societal Influence of Technology	3

Fine Arts and Aesthetic Studies *(Select one)*..... **2-3 hours**

ART	155	Printmaking and Paper Arts	3
ART	178	Introduction to the Visual Arts	3
ART	188	The Designed World	3
ART	217	Crafts I	3
ART	222	Jewelry Design I	3
ART	233	Drawing I	3
ART	244	Ceramics I	3
ART	266	Sculpture I	3
ART	277	Painting I	3
ART	288	Introduction to Art History I	3
ART	289	Introduction to Art History II	3
ART	311	Art Education	3
ART	351	Printmaking, Papermaking, Bookarts and the Letterpress	3
ART	430	Automotive: Art and Design	3
COMM	105	Performance Appreciation	3
COMM	205	Performance Studies	3
COMM	295	Theatre History	3
ENGL	250	Introduction to Creative Writing	3
HHP	151	Dance Appreciation	3
MUSIC	120	Music Appreciation	3
MUSIC	121	Introduction to Music Literature	2
MUSIC	321	History of Music	3

Cultural Studies *(Select one)* **3 hours**

ANTH	101	Introduction to Cultural Anthropology	3
MLL	114	Chinese Language and Culture I	3
MLL	124	French Language and Culture I	3
MLL	154	Spanish Language and Culture I	3
MLL	184	Russian Language and Culture I	3
MLL	194	Korean Language and Culture I	3
GEOG	106	World Regional Geography	3
GEOG	300	Elements of Geography	3
GEOG	304	Human Geography	3
WGS	399	Global Women's Issues	3

Health and Well Being **4-6 hours**

Psychological

PSYCH	155	General Psychology	3

Physical *(Select one)*

FCS	203	Nutrition and Health	3
FCS	301	Nutrition	3
HHP	150	Lifetime Fitness Concepts.	1
NURS	303	Introduction to Public Health	3

Human Heritage **6 hours**

(Select one from two of the following three categories)

History

HIST	101	World History to 1500.	3
HIST	102	World History from 1500	3
HIST	201	American History to 1865.	3
HIST	202	American History from 1865	3

Literature

ENGL	113	General Literature.	3
ENGL	114	General Literature(Genre)	3
ENGL	116	General Literature(Theme).	3
ENGL	120	Literature and Film	3
ENGL	315	Mythology	3
ENGL	320	Literature and Film	3

Philosophy

PHIL	103	Introduction to Philosophy.	3
PHIL	105	Ethics	3
PHIL	111	Ethics: Applied Emphasis(____).	3
PHIL	112	Biomedical Ethics	3
PHIL	113	Business Ethics	3
PHIL	114	Environmental Ethics	3
PHIL	207	Critical Thinking	3
PHIL	208	Logic	3
PHIL	231	World Religions.	3

Notes

NOTE: The information contained herein is intended to be used for the planning of a student's academic program and does not constitute a contract. While this guide was prepared with the latest information, courses, graduation requirements, and curricula are subject to change.

When a student attains 85 semester hours of credit (including current enrollment) the student must apply for a degree check in the Office of the Registrar (Degree Checking Section), Room 102 Russ Hall.

MINIMUM GENERAL REQUIREMENTS: The minimum requirements for graduation include 124 semester hours of which 60 hours must be from a four year university. In addition, 45 semester hours must be upper division and 30 hours in residence at PSU (including 24 of the last 30). Minimum GPA for non-education degree is 2.0 overall [2.0 in major], secondary education degree is 2.5 overall [2.75 in major], and early/late childhood/unified degree is 2.80 overall [3.0 in major]. A minimum GPA of 2.0 in any minor and in residence coursework is required. General Education and all degree requirements are provided in the online catalog. Refer to individual departments for specific requirements.