



# Pittsburg State University

## College of Arts & Sciences Program Guide

Degree: Bachelor of Science	
Major: Mathematics	
Emphasis/Option: Actuarial Science	
Minor (if required):	
	As of Fall 2016

### Major (Mathematics) Core Requirements (50 hours)

MATH 150: Calculus I	5
MATH 155: Calculus II	5
MATH 212: Matrix Algebra	2
MATH 253: Calculus III	3
MATH 413: Introduction to Mathematical Thought	3
MATH 543: Probability and Statistics	3
MATH 553: Differential Equations	3
MATH 617: Linear Algebra	3
MATH 656: Mathematical Modeling	3
or MATH 727: Linear Optimization Models	3
MATH 658: Financial Mathematics	3
MATH 673: Seminar: Actuarial Exam Number 1	1
or MATH 674: Seminar: Actuarial Exam Number 2	1
MATH 699: Senior Seminar	1
MATH 726: Introduction to Stochastic Processes	3
MATH 743: Mathematical Statistics	3
MATH 746: Statistical Methods I	3
Electives, minimum	6

(Electives must be selected from courses numbered above 253, exclusive of courses listed for elementary education majors MATH 304, MATH 307, MATH 503, MATH 705.)

An actuary is a person who works for insurance or investment companies and is primarily responsible for determining rates and benefits for insurance policies and retirement instruments. The profession of actuary regularly ranks near the top in surveys of job satisfaction of all professions. One becomes an actuary, and progresses in the profession, by passing tests administered by the Society of Actuaries and the Casualty Actuarial Society, which govern the profession.

The actuarial emphasis program at Pittsburg State University is designed to help a student pass the first two of these exams before graduation and to give the student an adequate foundation to begin work as an actuary and to progress in the exam sequence.

### Major (Business) Requirements (21 hours)

CIS 230: Visual Basic Programming	3
or a computer programming course approved by the mathematics department	
ACCTG 201: Financial Accounting	3
ECON 200: Introduction to Microeconomics	3
ECON 201: Introduction to Macroeconomics	3
FIN 326: Business Finance	3
ECON 418: Intermediate Microeconomics	3
or ECON 419: Intermediate Macroeconomics	3
FIN 627: Advanced Business Finance	3

The degree requirements for a B.S. Major in Mathematics with Emphasis in Actuarial Science requires a minimum of 124 semester hours. No minor is required.

# GENERAL EDUCATION REQUIREMENTS

**(38-42 hrs.)**

<b>Basic Skills</b>		<b>12-13 hours</b>
COMM 207	Speech Communication.....	3
ENGL 101	English Composition.....	3
ENGL 190	Honors English Composition	
OR ENGL 299	Introduction to Research Writing.....	3
<b>Sciences</b>		<b>8-9 hours</b>
Natural Sciences ( <i>Select one</i> )		
BIOL 111/112	General Biology and Laboratory.....	5
BIOL 113	Environmental Life Science .....	4
BIOL 211	Principles of Biology I.....	4
Physical Sciences ( <i>Select one</i> )		
CHEM 105/106	Introductory Chemistry and Laboratory .....	4
CHEM 107/108	Chemistry for Life Sciences and Laboratory.....	4
PHYS 160/165	Physical Geology and Laboratory .....	4
PHYS 166/167	Meteorology and Laboratory .....	4
PHYS 171/172	Physical Science and Laboratory .....	4
PHYS 175/176	Descriptive Astronomy and Laboratory .....	4
PHYS 375/176	Solar System Astronomy and Laboratory .....	4
<b>Social Studies</b>		<b>3 hours</b>
SOC 100	Introduction to Sociology .....	3
WGS 200	Introduction to Women's Studies .....	3
<b>Political Studies</b> ( <i>Select one</i> )		<b>3 hours</b>
POLS 101	U.S. Politics.....	3
POLS 103	Comparative Political Institutions .....	3
<b>Fine Arts and Aesthetic Studies</b> ( <i>Select one</i> ).....		<b>2-3 hours</b>
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

<b>Cultural Studies</b> ( <i>Select one</i> )		<b>3 hours</b>
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

<b>Health and Well Being</b>		<b>4-6 hours</b>
Psychological		
PSYCH 155	General Psychology .....	3
Physical ( <i>Select one</i> )		
FCS 203	Nutrition and Health.....	3
FCS 301	Nutrition.....	3
HHP 150	Lifetime Fitness Concepts.....	1
NURS 303	Introduction to Public Health.....	3

<b>Human Heritage</b>		<b>6 hours</b>
<i>(Select one from two of the following three categories)</i>		
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 CIS 230 or 240 satisfies the General Education requirement.

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.