

## **University of Pittsburgh – Main**

The following course titles and course numbers are from the main campus of the University of Pittsburgh. The descriptions were taken from the 04-1 FCAS Course Descriptions listing.

If you are located at a branch campus of the University of Pittsburgh, please contact your pharmacy advisor for the correct course information.

## **BIOLOGY (BIO)**

### **0150 Foundations of Biology I**

This is an introductory course divided into two parts. The first part covers the cellular basis of life including a discussion of simple chemistry; cells as units of structure and function; and energy transformations. The second part includes an examination of those functions common to all organisms such as nutrition, gas and fluid transport and hormonal and neuronal control. Throughout, the emphasis is on the mechanisms used to accomplish these basic functions.

3 credits

### **0050 Foundations of Biology Laboratory I**

This is the first course of a two-course series on the study of organisms in the laboratory and the field. We will work with techniques that are important in biology and apply these techniques to illustrate basic biological principles, with an emphasis on living organisms. The laboratory exercises focus on cell structure and function, basic cellular processes, plant structure and function, and basic anatomy and physiology.

1 credit

### **0160 Foundations of Biology II**

This course covers the basic principles of classical and molecular genetics, evolution and ecology. Emphasis will be placed on the experimental and observational basis for our knowledge of these subjects.

3 credits

### **0060 Foundations of Biology Laboratory II**

This is the second course of a two-course sequence on the study of organisms in the laboratory and the field. We will work with techniques that are important in biology and apply these techniques to illustrate basic biological principles, with an emphasis on living organisms. The laboratory exercises focus on cell division, genetics, reproduction, evolution and ecology.

1 credit

## GENERAL CHEMISTRY (CHEM)

### **0110 General Chemistry I**

This is the first half of an introductory two-term sequence. It includes 3 hours of lecture per week and one 4-hour session per week comprising one hour of recitation and 3 hours of laboratory. Chemistry 0110 covers stoichiometry, atomic and molecular structure, and states of matter.

4 credits

### **0120 General Chemistry II**

This is the second half of the introductory two-term sequence. It includes 3 hours of lecture per week and one 4 hour session per week comprising one hour of recitation and 3 hours of laboratory. Chemistry 0120 covers chemical thermodynamics and equilibrium, electrochemistry, nuclear chemistry, kinetics, and descriptive chemistry of the elements.

4 credits

## **ORGANIC CHEMISTRY (CHEM)**

### **0310 Organic Chemistry I**

This course is an introduction to the theory and practice of organic chemistry through the study of structural principles, reaction mechanisms, and synthesis leading toward the end of the second term, when complex molecules of biological interest are discussed. The basic goals of the course are to develop appreciation and skill in the methods of molecular analysis which have made organic chemistry such a powerful intellectual discipline. Topics covered will include conformational analysis of alkanes, stereochemistry and various reactions of alkanes, alkenes, alkynes, and conjugated systems. The course will prepare the student for work in advanced topics in organic chemistry, biochemistry, chemical engineering and the health related sciences.

3 credits

### **0330 Organic Chemistry Laboratory I**

The laboratory program in organic chemistry is designed to train students in the important techniques used by the professional organic chemist and to demonstrate many of the principles discussed in the organic lecture courses. Chemistry 0330 is devoted to the purification, characterization, and identification of organic molecules using the techniques of recrystallization, distillation, thin-layer, column and gas-liquid chromatography, melting point determination, and infrared and nuclear magnetic resonance spectroscopy.

1 credit

### **0320 Organic Chemistry II**

This course is a continuation of CHEM 0310. The reactions of aromatic molecules and more complex functional groups will be considered. Molecules of biological interest may be discussed toward the end of the term.

3 credits

### **0340 Organic Chemistry Laboratory II**

The second term organic lab course, Chem 0340, provides an opportunity to carry out important synthetic reactions and characterize the products using techniques mastered in Chem 0330. Some molecular modeling experience is also gained.

1 credit

## CALCULUS (MATH)

### **0220 Analytic Geometry and Calculus I**

This is the first course in the basic calculus sequence and is intended for all mathematics, engineering, science, and statistics students. Math 0220 covers the derivative and integral of functions of a single variable. A lab component in which students apply numeric, algebraic, and graphing technologies to calculus problems is an integral part of the course. A scientific calculator is required, preferably a graphing calculator.

4 credits

## **STATISTICS (STAT)**

### **0200 Basic Applied Statistics**

This course teaches descriptive and inferential statistics, making use of a user-friendly computer package. Students who complete this course will be able to conduct their own analysis of standard one-sample or two-sample data sets, follow statistical reasoning and read statistical reports with understanding. Introductory topics in linear regression, analysis of variance and contingency table analysis will also be covered.

4 credits

**OR**

### **1000 Applied Statistical Methods**

This course is an intensive introduction to statistical methods. It is designed for students who want to do data analysis and to study further ideas in applied statistics beyond this course. The topics covered include descriptive statistics, elementary probability, random sampling, controlled experiments, hypothesis testing, regression and the analysis of variance. Emphasis will be placed on the statistical reasoning underlying the methods. Students will also become proficient at the use of a statistical software package.

4 credits

## **ECONOMICS (ECON)**

### **0800 Introduction to Economics**

This is an introductory course in economics, designed primarily for the non-major. The first half of the course will cover some of the theories and basic analytical tools used by economists in both macroeconomics and microeconomics. This will involve learning how the U.S. economy works and how economic incentives and institutions are related to important social problems. The second half of the course will cover a variety of issues and problems, which command the interest of concerned citizens and policy makers alike. The class as a group will select the topics to be studied from the material provided in the textbook. Other topics can be covered by special request. The principles that students learn here will help in understanding problems and issues beyond those presented in this course.

3 credits

**OR**

### **0100 Intro Microeconomic Theory**

This course is designed to introduce students to the principles of microeconomics. It focuses on the structure and functions of markets in order to explain how prices are determined and the role that prices play in our economic system. By examining some of the basic economic decisions made by consumers and firms, students will learn to analyze market events and to understand the ways in which government policy can affect market outcomes. Students may use this course as a gateway to a wide variety of applied economics courses and as a foundation for more advanced study. It also provides information that is basic to inquiry in many other disciplines.

3 credits

## **PSYCHOLOGY (PSY)**

### **0010 Introduction to Psychology**

This course is a survey of the field of psychology, with an emphasis on the application of scientific reasoning, the empirical method, and careful observation and measurement to the study of topics, such as learning, information processing, the biological bases of behavior, individual differences, personality, motivation, social and group dynamics, developmental processes, and psychological disorders, and treatment. In covering the methods, theory, and basic phenomena of psychology, this course will also emphasize applications of psychological principles in real-world issues, and to the problems faced in other related disciplines. It is intended primarily for students from other disciplines who do not plan on majoring in psychology. Additional out-of-class research participation or an equivalent research paper is required.

3 credits

## **ENGLISH COMPOSITION (ENGCMP)**

### **0200 Seminar in Composition**

This is a course in the theory and practice of reading and writing. Students will work with texts of several genres (fiction, poetry, non-fiction) chosen to pose particular problems of reading and understanding. The writing assignments, similarly, will turn attention to the problems and possibilities of contemporary writing both in and out of the academy. Students will be responsible for a paper (or a substantial revision of a paper) each week. The course assumes students' basic abilities to write a classroom essay.

3 credits

### **AND**

### **0400 Written Professional Communication**

In this course, we will examine the contexts for and rhetorical dimensions of a variety of professional documents, including those documents students produce in the course itself. Major assignments include a set of career materials (resume, cover letter, career report); a correspondence packet that addresses a conflict; a proposal; and a longer report based on research and analysis. As we engage in this work we will explore the nature of professionalism, common features and efforts (enabling and disabling) of professional discourse, and strategies for negotiating the "borders" of specialized and non-specialized discourse.

3 credits

### **OR**

Any combination of two courses from English composition (ENGCMP) and English writing (ENGWRT), except for poetry and journalism, is acceptable for the English composition requirement. Courses in English literature will not count towards the English composition requirement.

### **English Composition (ENGCMP)**

<http://www.pitt.edu/~caswww/cdesc/desc042/engcmp.htm>

### **English Writing (ENGWRT)**

<http://www.pitt.edu/~caswww/cdesc/desc042/engwrt.htm>

## **HUMANITIES (6 credits)**

Courses fulfilling the humanities requirement (2 courses equivalent to 6 semester credits) will be accepted from the following College of Arts and Sciences departments:

African Studies  
Classics  
Communication  
English  
History of Art & Architecture  
Foreign Language  
Music  
Philosophy  
Religious Studies  
Studio Arts  
Theatre Arts

Course descriptions for each department may be accessed through the University Registrar's Web site:

<http://www.pitt.edu/~registrar/crinPgCrslInfo.htm>

If you are a transfer student, please verify that your humanities electives have corresponding University of Pittsburgh courses.

## **SOCIAL SCIENCES (6 credits)**

Courses fulfilling the social sciences requirement (2 courses equivalent to 6 semester credits) will be accepted from the following College of Arts and Sciences departments:

Anthropology  
Economics  
Geography  
History  
Political Science  
Sociology

Course descriptions for each department may be accessed through the University Registrar's Web site:

<http://www.pitt.edu/~registrar/crinPgCrslInfo.htm>

If you are a transfer student, please verify that your social science electives have corresponding University of Pittsburgh courses.

## **GENERAL ELECTIVES (6 credits)**

Courses fulfilling the general electives requirement (2 courses equivalent to 6 semester credits) will be accepted from the following College of Arts and Sciences departments:

### **Humanities:**

African Studies  
Classics  
Communication  
English  
History of Art & Architecture  
Foreign Language  
Music  
Philosophy  
Religious Studies  
Studio Arts  
Theatre Arts

### **Social Sciences:**

Anthropology  
Economics  
Geography  
History  
Political Science  
Sociology

### **Other Departments:**

Psychology  
History and Philosophy of Science

Course descriptions for each department may be accessed through the University Registrar's Web site:

<http://www.pitt.edu/~registrar/crinPgCrslInfo.htm>

If you are a transfer student, please verify that your general electives have corresponding University of Pittsburgh courses.

# Allegany College of Maryland

Cumberland, Maryland

Requirement	Course No.	Course Title	Credits/Units	Alternate Acceptable Courses
<b>Biology</b>				
	07.101 (BIO)	General Biology I	4	
	07.102 (BIO)	General Biology II	4	
<b>Chemistry</b>				
	11.101 (CHEM)	General Chemistry I	4	
	11.102 (CHEM)	General Chemistry II	4	
<b>Organic Chemistry</b>				
	11.203 (CHEM)	Organic Chemistry I	4	
	11.204 (CHEM)	Organic Chemistry II	4	
<b>Calculus</b>				
	41.201 (MATH)	Calculus I	4	
<b>Statistics</b>				
	41.221 (MATH)	Elements of Statistics (Statistics 221)	3	
<b>Economics</b>				
	21.202 (ECON)	Principles of Microeconomics	3	
<b>Psychology</b>				
	57.101 (PSY)	General Psychology	3	

# Anne Arundel Community College

Arnold, Maryland

Requirement	Course No.	Course Title	Credits/Units	Alternate Acceptable Courses
<b>Biology</b>				
	NONE			
<b>Chemistry</b>				
	CHE 111	General Chemistry 1	4	
	CHE 112	General Chemistry 2	4	
<b>Organic Chemistry</b>				
	CHE 213	Organic Chemistry 1	5	
	CHE 214	Organic Chemistry 2	5	
<b>Calculus</b>				
	MAT 191	Calculus and Analytic Geometry 1	4	
<b>Statistics</b>				
	MAT 135	Elementary Statistics	3	
<b>Economics</b>				
	ECO 121	Introduction to Economics	3	
<b>Psychology</b>				
	PSY 111	Introduction to Psychology	3	

# Bethel College

St. Paul, Minnesota

Requirement	Course No.	Course Title	Credits/Units	Alternate Acceptable Courses
<b>Biology</b>				
	BIO 112D	Introduction to Molecular and Cellular Biology	4	
	BIO 113D	Introduction to Organismic Biology	4	
<b>Chemistry</b>				
	CHE 111D	General Chemistry I	4	
	CHE 212	General Chemistry II	4	
<b>Organic Chemistry</b>				
	CHE 221	Organic Chemistry I	4	
	CHE 222	Organic Chemistry II	4	
<b>Calculus</b>				
	MAT 124M	Calculus I	4	
	MAT 125M	Calculus II	4	
<b>Statistics</b>				
	MAT 131M	Statistical Analysis	3	
<b>Economics</b>				
	NONE			
<b>Psychology</b>				
	PSY 100	Introduction to Psychology	3	

# Ohio State University

Columbus, Ohio

(Quarter System)

Requirement	Course No.	Course Title	Credits/Units	Alternate Acceptable Courses
<b>Biology</b>				
	BIOL 113	Biological Sciences: Energy Transfer and Development	5	
	BIOL 114	Biological Sciences: Form, Function, Diversity, and Ecology	5	
<b>Chemistry</b>				
	CHEM 121	General Chemistry	5	
	CHEM 122	General Chemistry	5	
	CHEM 123	General Chemistry	5	
<b>Organic Chemistry</b>				
	CHEM 251	Organic Chemistry	3	
	CHEM 252	Organic Chemistry	3	
	CHEM 254	Organic Chemistry Laboratory	3	
	CHEM 253	Organic Chemistry	3	
	CHEM 255	Organic Chemistry Laboratory	3	
<b>Calculus</b>				
	MATH 151	Calculus with Analytic Geometry	5	
	MATH 152	Calculus with Analytic Geometry	5	
<b>Statistics</b>				
	STAT 427	Introduction to Probability and Statistics for Engineers and the Sciences I	3	STAT 145
	STAT 428	Introduction to Probability and Statistics for Engineers and the Sciences II	3	
<b>Economics</b>				
	ECON 200	Principles of Microeconomics	5	
<b>Psychology</b>				
	PSYCH 100	General Psychology	5	

# Youngstown State University

Youngstown, Ohio

Requirement	Course No.	Course Title	Credits/Units	Alternate Acceptable Courses
<b>Biology</b>				
	BIOL 2601	General Biology: Molecules and Cells	4	
	BIOL 2602	General Biology: Organisms and Ecology	4	
<b>Chemistry</b>				
	CHEM 1515	General Chemistry 1	4	
	CHEM 1515R	Recitation for General Chemistry 1	1	
	CHEM 1516	General Chemistry 2	4	
	CHEM 1516R	Recitation for General Chemistry 2	1	
<b>Organic Chemistry</b>				
	CHEM 3719	Organic Chemistry 1	4	
	CHEM 3719R	Organic Chemistry Recitation 1	1	
	CHEM 3720	Organic Chemistry 2	4	
	CHEM 3720R	Organic Chemistry Recitation 2	1	
<b>Calculus</b>				
	MATH 1571	Calculus 1	4	MATH 1570
<b>Statistics</b>				
	STAT 3717	Statistical Methods	4	
<b>Economics</b>				
	ECON 2610	Principles 1 (Microeconomics)	3	
<b>Psychology</b>				
	PSYCH 1560	General Psychology	3	

# Allegheny College

Meadville, Pennsylvania

Requirement	Course No.	Course Title	Credits/Units	Alternate Acceptable Courses
<b>Biology</b>				
	Biology 220	Organismal Physiology and Ecology	4	
	Biology 221	Genetics, Development and Evolution	4	
<b>Chemistry</b>				
	Chemistry 110	Principles of Chemistry 1	4	
	Chemistry 112	Principles of Chemistry 2	4	
<b>Organic Chemistry</b>				
	Chemistry 231	Organic Chemistry: Form and Function	4	
	Chemistry 232	Organic Chemistry II: Synthetic Strategies	4	
	Chemistry 234	Organic Chemistry Laboratory II	1	
<b>Calculus</b>				
	Math 160	Calculus 1	4	
<b>Statistics</b>				
	NONE			
<b>Economics</b>				
	Economics 100	An Introduction to Microeconomics: Understanding Prices and Markets	4	
<b>Psychology</b>				
	Psychology 105	Foundations of Psychology	4	

# Bloomsburg University

Bloomsburg, Pennsylvania

Requirement	Course No.	Course Title	Credits/Units	Alternate Acceptable Courses
<b>Biology</b>				
	50.114 (BIO)	Concepts in Biology I	4	
	50.115 (BIO)	Concepts in Biology II	4	
<b>Chemistry</b>				
	52.115 (CHM)	Fundamentals of Inorganic Chemistry	4	
	52.116 (CHM)	Chemical Principles and Measurements	4	
<b>Organic Chemistry</b>				
	52.231 (CHM)	Organic Chemistry I	4	
	52.232 (CHM)	Organic Chemistry II	4	
<b>Calculus</b>				
	53.125 (MAT)	Calculus I	3	
<b>Statistics</b>				
	53.141 (MAT)	Introduction to Statistics	3	
<b>Economics</b>				
	40.122 (ECN)	Principles of Economics II (Microeconomics)	3	
<b>Psychology</b>				
	48.101 (PSY)	General Psychology	3	

# Community College of Allegheny County

Pittsburgh, Pennsylvania

Requirement	Course No.	Course Title	Credits/Units	Alternate Acceptable Courses
<b>Biology</b>				
	BIO 151	General Biology 1	4	
	BIO 152	General Biology 2	4	
<b>Chemistry</b>				
	CHM 151	General Chemistry 1	4	
	CHM 152	General Chemistry 2	4	
<b>Organic Chemistry</b>				
	CHM 201	Organic Chemistry 1	4	
	CHM 202	Organic Chemistry 2	4	
<b>Calculus</b>				
	MAT 201	Calculus 1	4	
<b>Statistics</b>				
	MAT 165	Probability & Statistics 1	4	
<b>Economics</b>				
	ECO 103	Principles of Microeconomics	3	
<b>Psychology</b>				
	PSY 101	Introduction to Psychology	3	

# Harrisburg Area Community College

Harrisburg, Pennsylvania

Requirement	Course No.	Course Title	Credits/Units	Alternate Acceptable Courses
<b>Biology</b>				
	BIOL 101	General Biology I	4	
	BIOL 102	General Biology II	4	
<b>Chemistry</b>				
	CHEM 101	General Inorganic Chemistry I	4	
	CHEM 102	General Inorganic Chemistry II	4	
<b>Organic Chemistry</b>				
	CHEM 203	Organic Chemistry I	4	
	CHEM 204	Organic Chemistry II	4	
<b>Calculus</b>				
	MATH 121	Calculus I	4	
<b>Statistics</b>				
	NONE			
<b>Economics</b>				
	ECON 202	Principles of Microeconomics II: Micro	3	
<b>Psychology</b>				
	PSYC 101	General Psychology	3	

# Pennsylvania State University

University Park, Pennsylvania

Requirement	Course No.	Course Title	Credits/Units	Alternate Acceptable Courses
<b>Biology</b>				
	BIOL 110	Biology: Basic Concepts and Biodiversity	4	
	BIOL 230W	Biology: Molecules and Cells	4	BIOL 240 W
<b>Chemistry</b>				
	CHEM 012	Chemical Principles	3	CHEM 017
	CHEM 014	Experimental Chemistry	1	
	CHEM 013	Chemical Principles	3	
	CHEM 015	Experimental Chemistry	1	
<b>Organic Chemistry</b>				
	CHEM 038	Organic Chemistry	3	CHEM 034
	CHEM 039	Organic Chemistry	3	CHEM 035
	CHEM 036	Laboratory in Organic Chemistry	2	
<b>Calculus</b>				
	MATH 140	Calculus with Analytic Geometry 1	4	MATH 110
<b>Statistics</b>				
	STAT 200	Elementary Statistics	4	STAT 250
<b>Economics</b>				
	ECON 014	Principles of Economics	3	ECON 002
<b>Psychology</b>				
	PSY 002	Psychology	3	

# West Virginia University

Morgantown, West Virginia

Requirement	Course No.	Course Title	Credits/Units	Alternate Acceptable Courses
<b>Biology</b>				
	BIOL 115	Principles of Biology I	4	
	BIOL 117	Principles of Biology II	4	
<b>Chemistry</b>				
	CHEM 115	Fundamentals of Chemistry I	4	
	CHEM 116	Fundamentals of Chemistry II	4	
<b>Organic Chemistry</b>				
	CHEM 233	Organic Chemistry I	3	
	CHEM 235	Organic Chemistry Laboratory I	1	
	CHEM 234	Organic Chemistry II	3	
	CHEM 236	Organic Chemistry Laboratory II	1	
<b>Calculus</b>				
	MATH 155	Calculus 1	4	MATH 150 (3 credits)
<b>Statistics</b>				
	STAT 211	Elementary Statistical Inference	3	
<b>Economics</b>				
	ECON 201	Principles of Microeconomics	3	
<b>Psychology</b>				
	PSYC 101	Introduction to Psychology	3	

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