



The Core is the basic course of study required of all students seeking a bachelor's degree. These foundation courses should be addressed early in your freshman/sophomore years. In addition to the 42 hours required in Areas A-E detailed here, Area F has 18 major specific credits for a total of 60 hours of foundation work. You should study your program requirements (major track sheet/catalog) and work with your academic advisor to develop a plan for completing your degree requirements in a timely manner. Though you have some options, your program may have specific core requirements or preferences, so work with your advisor.

"Science Track" majors include Biology, Chemistry, Computer Science, Mathematics & Physics.

<b>A R E A  A</b>	<b>ENGL 1101</b> or ENGL 1113 (Honors)	Grade of C or better is require in each. After 18 hrs earned, you must register for ENGL1101 until successfully completed.		3 hours	
	<b>ENGL 1102</b> or ENGL 1114 (Honors)	After 27 hrs earned, you must register for ENGL1102 until successfully completed.		3 hours	
	<b>NON-SCIENCE TRACK</b>		<b>SCIENCE TRACK</b>		3 hours
	<i>Choose one:</i>		<i>Required course:</i>		
	MATH 1111	MATH 1101	MATH 1113		
<b>Total Semester Hours required for Area A = 9 hours</b>					

<b>A R E A  B &amp; C</b>	<b>COMS 1010</b> (2 hrs) or <b>COMS 1020</b> (3 hrs) or HONR 1010 (Honors)	Communications/Speech course required for all ASU majors.	2 hours
	HUMN 2001	Follows successful completion of ENGL 1102 or 1114. Humanities is a two semester, 8 hour sequence.	4 hours
	HUMN 2002		4 hours
<b>Total Semester Hours required for Area B &amp; C = 10 hours</b>			

<b>A R E A  D</b>	<b>NON-SCIENCE TRACK</b>		<b>SCIENCE TRACK</b>		8-11hrs
	<i>Choose any two or three:</i>		<i>Choose a sequence:</i>		
	<b>BIOL 1101</b>	<b>GEOL 1121</b>	<b>BIOL 1107</b> & <b>BIOL 1108</b>		
	<b>BIOL 1102</b>	GEOL 1122			
	<b>BIOL 1107</b>	PHYS 1111	CHEM 1211 & CHEM 1212		
	BIOL 1108	PHYS 1112			
	CHEM 1151	PHYS 2211	PHYS 1111 & PHYS 1112		
	CHEM 1152	PHYS 2212			
	CHEM 1211	<b>PHSC 1011</b>	PHYS 2211 & PHYS 2212		
	CHEM 1212	<b>ASTR1000</b>			
<i>Choose one or zero:</i>		<i>Choose one:</i>		0-3 hrs	
MATH 1120	MATH 2011	MATH 2011			
MATH 1113	MATH 2210	MATH 2210 (option for Biology majors only)			
MATH 1220					
<b>Total Semester Hours required for Area D = 11 hours</b>					

<b>A R E A  E</b>	<b>HIST 2111</b> or <b>HIST 2112</b>	EITHER CLASS satisfies GA&US History legislative requirements.		3 hours	
	<b>POLS 1101</b>	Satisfies GA & US Constitution legislative requirements.		3 hours	
	<i>Choose one:</i>	<b>ANTH 2011</b>	<b>PSYC 1101</b>	3 hours	
		<b>ECON 1810</b>	<b>SOCI 1101</b>		
	<i>Choose one not chosen above:</i>				3 hours
	<b>ANTH 1102</b>	<b>HIST 1111</b>	<b>PSYC 1101</b>		
	<b>ANTH 2011</b>	<b>HIST 1112</b>	<b>PSYC 1103</b>		
	<b>ECON 1810</b>	<b>HIST 2111</b>	<b>PSYC 2150</b>		
	ECON 2106	<b>HIST 2112</b>	<b>SOCI 1101</b>		
	ECON 2105	PHIL 1000	<b>SOCI 1103</b>		
<b>GEOG 1111</b>	POLS 2401	SOCI11160			
		SOCI 2241			
<b>Total Semester Hours required for Area E = 12 hours</b>					

<b>A R E A  A</b>	<b>ENGL 1101</b> or ENGL 1113 (Honors)	Grade of C or better is require in each. After 18 hrs earned, you must register for ENGL1101 until successfully completed.		3 hours	
	<b>ENGL 1102</b> or ENGL 1114 (Honors)	After 27 hrs earned, you must register for ENGL1102 until successfully completed.		3 hours	
	<b>NON-SCIENCE TRACK</b>		<b>SCIENCE TRACK</b>		3 hours
	<i>Choose one:</i>		<i>Required course:</i>		
	MATH 1111	MATH 1101	MATH 1113		
<b>Total Semester Hours required for Area A = 9 hours</b>					

### ENGL1101 COLLEGE COMPOSITION I (3)

Focuses on skills required for effective writing with emphasis on exposition, analysis, and argumentation; includes introductory use of research skills; includes instruction in word processing & computer-based research.

A grade of C or better is required. **Prerequisite(s): None.**

### ENGL1102 COLLEGE COMPOSITION II (3)

Literature based, ENGL1102 develops writing skills beyond proficiency required in ENGL1101. Interpretation and evaluation are emphasized; includes instruction in composition of a research paper.

A grade of C or better is required. Prerequisite(s): ENGL 1101, with a grade of C or better.

### MATH1111 COLLEGE ALGEBRA (3)

Intensive functional approach to algebra incorporating appropriate technology. Emphasis placed on study of functions and their graphs, inequalities, and linear, quadratic, piece-wise defined, rational, polynomial, exponential, and logarithmic functions. Appropriate applications included.

Prerequisite(s): Placement or the successful completion of MATH 0099.

### MATH1101 INTRO TO MATHEMATICAL MODELING (3)

An introduction to math modeling using graphical, numerical, symbolic, and verbal techniques to describe and explore real-world data and phenomena. Emphasis is on the use of elementary functions to investigate and analyze applied problems and questions, supported by the use of appropriate technology, and on effective communication of quantitative concepts and results.

Credit not awarded for both MATH 1101 and MATH 1111. Not recommended if plan to take MATH 1113 or MATH 1220.

Prerequisite(s): Placement or the successful completion of MATH 0099.

### MATH1113 PRECALCULUS MATHEMATICS (3)

A rigorous study of polynomial, exponential, logarithmic, and trigonometric functions, primarily intended to prepare science and mathematics majors for calculus.

Prerequisite(s): Placement or MATH 1111 (grade of C or better). [MATH 1101 (grade of C or better) allowed, but not recommended.]

**TIP: ASU Writing Center & Math Help labs provide free access to assistance with these basic skills**

<b>A R E A  B &amp; C</b>	<b>COMS 1010</b> (2 hrs) or <b>COMS 1020</b> (3 hrs) or HONR 1010 (Honors)	Communications/Speech course required for all ASU majors.	2 hours
	HUMN 2001	Follows successful completion of ENGL 1102 or 1114. Humanities is a two semester, 8 hour sequence.	4 hours
	HUMN 2002		4 hours
<b>Total Semester Hours required for Area B &amp; C = 10 hours</b>			

### COMS 1010 INTRO TO HUMAN COMMUNICATION (2)

An introduction to the communication process focusing on effectiveness in daily communication opportunities as well as basic public speaking skills.

### OR COMS 1020 FUNDAMENTALS OF HUMAN COMMUNICATION (3)

An overview of the various disciplines of communication: intrapersonal communication, interpersonal communication, small group communication, and public communication.

Cannot receive credit for both COMS 1010 and COMS 1020. Neither has a prerequisite.

### HUMN 2001 WORLD HUMANITIES I (4)

Interdisciplinary study of literature, art, music, and philosophy designed to develop the student's understanding of the evolution of culture in the Western world with appreciation of elements from Asia/Middle East; highlights cross-cultural ideas, ethics, arts, values, and means of human expression; covers the historical period from antiquity to the seventeenth century.

Prerequisite(s): English 1101-1102 or English 1113-1114.

### HUMN 2002 WORLD HUMANITIES II (4)

This second humanities covers the seventeenth century to the present.

Prerequisite(s): ENGL 1101-1102 or 1113 -1114, and HUMN 2001.

**Transfers with partial humanities credit: check options for one/two hour HUMN to meet 8 hour requirement**

<b>A R E A  D</b>	<b>NON-SCIENCE TRACK</b>		<b>SCIENCE TRACK</b>		8-11hrs
	<i>Choose any two or three:</i>		<i>Choose a sequence:</i>		
	<b>BIOL 1101</b>	<b>GEOL 1121</b>	<b>BIOL 1107</b> & <b>BIOL 1108</b>		
	<b>BIOL 1102</b>	GEOL 1122			
	<b>BIOL 1107</b>	PHYS 1111	CHEM 1211 & CHEM 1212		
	BIOL 1108	PHYS 1112			
	CHEM 1151	PHYS 2211	PHYS 1111 & PHYS 1112		
	CHEM 1152	PHYS 2212			
	CHEM 1211	<b>PHSC 1011</b>	PHYS 2211 & PHYS 2212		
	CHEM 1212	<b>ASTR1000</b>			
<i>Choose one or zero:</i>		<i>Choose one:</i>		0-3 hrs	
MATH 1120	MATH 2011	MATH 2011			
MATH 1113	MATH 2210	MATH 2210 (option for Biology majors only)			
MATH 1220					
<b>Total Semester Hours required for Area D = 11 hours</b>					

### BIOL 1101 FUNDAMENTALS OF BIOLOGY (4)

Designed for non-science/math major; topics covered include chemical foundations of biology, cell structure/function, cell division, genetics, animal organ systems and mechanisms of evolution.

BIOL1101 will not substitute for BIOL1107; credit may not be earned for both BIOL1101 & BIOL1107. Prerequisite(s): None. (Registration limits after two unsuccessful attempts - see catalog).

### BIOL 1102 ENVIRONMENTAL BIOLOGY (4)

Designed for the non-science/math major; topics covered include organismal diversity and behavior, ecology, and environmental topics.

BIOL1102 will not substitute for BIOL1108; credit may not be earned for both BIOL1102 & BIOL1108. Prerequisite(s): none. (Registration limits after two unsuccessful attempts - see catalog).

### BIOL 1107 PRINCIPLES OF BIOLOGY I (4)

A study of the unifying concepts of the biotic world including biochemistry, cell biology, energy and metabolism, physiological systems of both plants and animals, animal and plant diversity, animal and plant development, genetics, ecology and evolution, and animal behavior.

Credit may not be earned for both BIOL 1101 and BIOL 1107.

Prerequisite(s): none. (Registration limits after two unsuccessful attempts - see catalog).

### BIOL1108 PRINCIPLES OF BIOLOGY II (4)

A continuation of Biology 1107.

Credit may not be earned for both BIOL 1102 and BIOL 1108. Normally offered each semester.

Prerequisite: BIOL 1107 with a grade of C or better. (Registration limits after two unsuccessful attempts - see catalog).

### CHEM 1151 SURVEY OF CHEMISTRY I (4)

First course designed for pre-allied health students and non-majors; includes elements, compounds, stoichiometry, solutions, equilibrium, acid-base and nomenclature.

Credit may not be earned for both CHEM 1151 and CHEM 1211 or 1212.

Prerequisite(s): MATH 1111 or 1101.

### CHEM 1152 SURVEY OF CHEMISTRY II (4)

Organic and biochemistry designed for allied health students; covers common classes of organic compounds including uses and chemical and physical properties and introduction to structure and function of biological molecules.

Prerequisite(s): CHEM 1151 (grade of C or better) or CHEM 1211 (grade of C or better).

### CHEM1211 PRINCIPLES OF CHEMISTRY I (4)

First course in a sequence designed for science majors; topics include composition of matter, stoichiometry, periodic relations, gas laws, molecular geometry and nomenclature.

Credit may not be earned for both CHEM 1151 and CHEM 1211

Prerequisite(s): MATH 1111 or 1101 (C or better).

### CHEM 1212 PRINCIPLES OF CHEMISTRY II (4)

Second course in a sequence for science majors; topics include solutions, acid-base, colligative properties, equilibrium, electrochemistry, kinetics, and descriptive chemistry.

Credit may not be earned for both CHEM 1151 and CHEM 1212

Prerequisite(s): MATH 1113 and CHEM 1211 (C or better in each).

### GEOL 1121 INTRO GEOSCI I: PHYSICAL GEOLOGY (4)

Study of minerals and rocks; fundamentals of earth structure & processes (vulcanism, mountain building, erosion, sedimentation,metamorphism); lab (study minerals & rocks, & interpretation of geologic maps and cross sections.

Prerequisite(s): None

### GEOL 1122 INTRO GEOSCI II: HISTORICAL GEOLOGY (4)

Study of geologic principles applicable to earth history: basic stratigraphy & paleontology; survey of geologic time periods (geological/biological earth development events).

Prerequisite(s): GEOL 1121 or permission of the instructor.

### PHYS 1111 INTRODUCTORY PHYSICS I (4)

A trigonometry-based study of mechanics, heat, waves & sound. Emphasis on problem solving.

Credit may not be earned for both PHYS 1111 and PHYS 2211.

Prerequisite(s): MATH 1113 (C or better).

### PHYS 1112 INTRODUCTORY PHYSICS II (4)

A trigonometry-based study of electricity & magnetism, light, and modern physics. Emphasis on problem solving.

Credit may not be earned for both PHYS 1112 and PHYS 2212.

Prerequisite(s): PHYS 1111 or 2211.

### PHYS 2211 PRINCIPLES OF PHYSICS I (4)

A calculus -based study of mechanics, heat, waves and sound. Emphasis on problem solving.

Credit may not be earned for both PHYS 2211 and PHYS 1111.

Prerequisite(s): (Co -requisite) MATH 2012 concurrently.

### PHYS 2212 PRINCIPLES OF PHYSICS II (4)

A calculus-based study of electricity and magnetism, light, & modern physics. Emphasis on problem solving.

Credit may not be earned for both PHYS 2212 and PHYS 1112.

Prerequisite(s): PHYS 2211.

### PHSC 1011 PHYSICAL SCIENCE (4)

A survey of physics including motion and energy. May include heat, sound, light, electricity, magnetism, relativity, atoms and nuclei. Simple applications in problem solving.

Prerequisite(s): Recommended but not required: MATH 1101 or MATH 1111.

### ASTR 1000 INTRO TO THE UNIVERSE (4)

A survey of the universe, examining historical origins of astronomy; motions and physical properties of the Sun, Moon, & planets; formation, evolution, & death of stars; structure of galaxies; expansion of the universe.

Prerequisite(s): none.

### MATH 1120 CONTEMPORARY MATHEMATICS (3)

A second course in mathematics for the liberal arts student. A study of the nature of mathematics and its applications. At least seven (7) topics will be chosen from: set theory, logic, combinatorics, graph theory, probability, statistics, consumer mathematics, history of mathematics, numeration systems, the metric system, number theory, geometry, and algorithm development and computers.

Prerequisite(s): MATH 1111 or MATH 1101 or advanced placement.

### MATH 1220 APPLIED CALCULUS (3)

Intuitive approach to differential & integral calculus with applications in a variety of fields.

Prerequisite(s): **MATH 1111 recommended** or MATH 1101(grade of C or better) or advanced placement.

### MATH 2011 CALCULUS AND ANALYTIC GEOMETRY I (4)

An introduction to calculus including limits and continuity, derivatives of polynomial, rational, trigonometric, inverse trigonometric, exponential, and logarithmic functions, applications of derivatives, and basic integration.

Prerequisite(s): MATH 1113 (grade of C or better) or advanced placement.

### MATH 2012 CALCULUS AND ANALYTIC GEOMETRY II (4)

A continuation of calculus including applications of integration, techniques of integration, improper integrals, sequences, series, and polar coordinates.

Prerequisite(s): MATH 2011 (grade of C or better) or advanced placement.

### MATH 2210 ELEMENTARY STATISTICS (3)

Study of frequency distributions of data, graphical & numerical presentations of data, probability, discrete/continuous distributions, sampling distributions, estimation, hypothesis testing, simple linear regression & correlation & goodness of fit.

Credit will not be given for both MATH 2210 and MATH 3110.

Prerequisite(s): MATH 1111 or MATH 1101 or permission of instructor.

### MATH 1113 PRECALCULUS MATHEMATICS (3) (SEE AREA A)