

# NATURAL SCIENCE - ASSOCIATE OF SCIENCE

Students can earn an Associate of Science in Natural Science, which prepares them to transfer to a university to major in a number of scientific fields. Students can explore through labs, hands-on class activities, and extra-curricular opportunities. Students will gain marketable skills in empirical and quantitative analysis, critical thinking, communication, and teamwork while completing their coursework and laboratory requirements. COM offers courses in biology, chemistry, geology, and physics.

Students completing an Associate of Science (AS) degree at COM will meet the following requirements:

1. Complete a minimum of 60 semester credit hours that may be comprised of courses from the Core Curriculum, institutional requirements, and Fields of Study.
2. Maintain at least a 2.0 grade point average (GPA). Only credit-bearing College of the Mainland courses will be used to calculate a GPA.
3. Complete last 15 credit hours toward this degree at COM, with the exception of reverse transfer.
4. Satisfy TSI liability.

## Full-Time Student Schedule

Course	Title	Semester Credit Hours
<b>Semester #1</b>		
PSYC 1300 or EDUC 1300	Learning Framework <sup>1</sup> or Learning Framework	3
ENGL 1301	Composition I <sup>1</sup>	3
Select from list of Approved Science Courses <sup>1,2</sup>		4
Select from one of the following: <sup>1</sup>		3
MATH 1314	College Algebra <sup>1</sup>	
MATH 2412	Precalculus <sup>1</sup>	
MATH 2413	Calculus I <sup>1</sup>	
Creative Arts (p. 1)	Select from Core Curriculum <sup>1</sup>	3
<b>Semester Credit Hours</b>		<b>16</b>
<b>Semester #2</b>		
Select from list of Approved Science Courses <sup>1,2</sup>		4
Select from one of the following: <sup>1</sup>		4
MATH 2412	Precalculus <sup>1</sup>	
MATH 2413	Calculus I <sup>1</sup>	
MATH 2414	Calculus II	
ENGL 1302	Composition II <sup>1</sup>	3
GOVT 2305	Federal Government (Federal Constitution & Topics) <sup>1</sup>	3
PHED 1164	Introduction to Physical Fitness and Wellness <sup>1</sup>	1
<b>Semester Credit Hours</b>		<b>15</b>
<b>Semester #3</b>		
Select from list of Approved Science Courses <sup>1,2</sup>		4

Select from one of the following: <sup>1</sup>		3
BIOL 1322	Nutrition and Diet Therapy <sup>1</sup>	
MATH 2413	Calculus I <sup>1</sup>	
MATH 2414	Calculus II <sup>1</sup>	
GOVT 2306	Texas Government (Texas Constitution & Topics) <sup>1</sup>	3
HIST 1301	U S History I <sup>1</sup>	3
SPCH 1315 or SPCH 1318	Public Speaking <sup>1</sup> or Interpersonal Communication	3
<b>Semester Credit Hours</b>		<b>16</b>
<b>Semester #4</b>		
Select from list of Approved Science Courses <sup>1,2</sup>		4
HIST 1302	U S History II <sup>1</sup>	3
Language, Philosophy and Culture (p. 1)	Select from Core Curriculum <sup>1</sup>	3
Social/Behavioral Sciences (p. 1)	Select from Core Curriculum <sup>1</sup>	3
<b>Semester Credit Hours</b>		<b>13</b>
<b>Total Semester Credit Hours</b>		<b>60</b>

## Core Curriculum Choices

Core Component	Course Selection	Minimum Hours Required
Language, Philosophy, and Culture	1 course from the following list: ENGL 2322, ENGL 2323, ENGL 2327, ENGL 2328, ENGL 2332, ENGL 2333, ENGL 2341, ENGL 2351; HUMA 1301, HUMA 1302; PHIL 1301, PHIL 1304, PHIL 2306; SPAN 2311, SPAN 2312	3
Creative Arts	1 course from the following list: ARTS 1301, ARTS 1303, ARTS 1304, ARTS 1313; DRAM 1310, DRAM 2366; MUSI 1306, MUSI 1307, MUSI 1310	3
Social/Behavioral Sciences	1 course from the following list: ECON 2301, ECON 2302; PSYC 2301, PSYC 2314; SOCI 1301, SOCI 1306	3

<sup>1</sup> Course(s) listed in the Texas Common Course Numbering System (<https://tcns.org/institution/id:14/yid:19/>)

<sup>2</sup> Approved Science Course (Select four of the following courses for 16 total SCH):

- BIOL 1406, BIOL 1407, CHEM 1411, CHEM 1412, CHEM 2423, CHEM 2425, GEOL 1403, GEOL 1404, PHYS 1401, PHYS 1402, PHYS 2425, PHYS 2426

## NOTE:

- Students cannot receive credit for the same course twice
- Students cannot receive credit for both PHYS 1401 and PHYS 2425
- Students cannot receive credit for both PHYS 1402 and PHYS 2426
- It is recommended that at Natural Science majors meet with an advisor to discuss area emphasis and transfer details.
- Students who know the university and area of emphasis to which they want to transfer to pursue a related bachelor's degree should contact their advisor for guidance on the Approved Science Courses.

## Part-Time Student Schedule

Course	Title	Semester Credit Hours
<b>Semester #1</b>		
PSYC 1300 or EDUC 1300	Learning Framework <sup>1</sup> or Learning Framework	3
ENGL 1301	Composition I <sup>1</sup>	3
Select from one of the following:		3
MATH 1314	College Algebra <sup>1</sup>	
MATH 2412	Precalculus <sup>1</sup>	
MATH 2413	Calculus I <sup>1</sup>	
<b>Semester Credit Hours</b>		<b>9</b>
<b>Semester #2</b>		
Select from list of Approved Science Courses <sup>1,2</sup>		4
Creative Arts (p. 2)	Select from Core Curriculum <sup>1</sup>	3
<b>Semester Credit Hours</b>		<b>7</b>
<b>Semester #3</b>		
Select from one of the following:		4
MATH 2412	Precalculus <sup>1</sup>	
MATH 2413	Calculus I <sup>1</sup>	
MATH 2414	Calculus II <sup>1</sup>	
ENGL 1302	Composition II <sup>1</sup>	3
<b>Semester Credit Hours</b>		<b>7</b>
<b>Semester #4</b>		
Select from list of Approved Science Courses <sup>1,2</sup>		4
GOVT 2305	Federal Government (Federal Constitution & Topics) <sup>1</sup>	3
PHED 1164	Introduction to Physical Fitness and Wellness <sup>1</sup>	1
<b>Semester Credit Hours</b>		<b>8</b>
<b>Semester #5</b>		
Select from one of the following:		3
BIOL 1322	Nutrition and Diet Therapy <sup>1</sup>	
MATH 2413	Calculus I <sup>1</sup>	
MATH 2414	Calculus II <sup>1</sup>	
GOVT 2306	Texas Government (Texas Constitution & Topics) <sup>1</sup>	3

SPCH 1315 or SPCH 1318	Public Speaking <sup>1</sup> or Interpersonal Communication	3
<b>Semester Credit Hours</b>		<b>9</b>
<b>Semester #6</b>		
Select from list of Approved Science Courses <sup>2</sup>		4
HIST 1301	U S History I <sup>1</sup>	3
<b>Semester Credit Hours</b>		<b>7</b>
<b>Semester #7</b>		
Select from list of Approved Science Courses <sup>2</sup>		4
HIST 1302	U S History II <sup>1</sup>	3
<b>Semester Credit Hours</b>		<b>7</b>
<b>Semester #8</b>		
Language, Philosophy and Culture (p. 2)	Select from Core Curriculum <sup>1</sup>	3
Social/Behavioral Sciences (p. 2)	Select from Core Curriculum <sup>1</sup>	3
<b>Semester Credit Hours</b>		<b>6</b>
<b>Total Semester Credit Hours</b>		<b>60</b>

## Core Curriculum Choices

Core Component	Course Selection	Minimum Hours Required
Language, Philosophy, and Culture	1 course from the following list: ENGL 2322, ENGL 2323, ENGL 2327, ENGL 2328, ENGL 2332, ENGL 2333, ENGL 2341, ENGL 2351; HUMA 1301, HUMA 1302; PHIL 1301, PHIL 1304, PHIL 2306; SPAN 2311, SPAN 2312	3
Creative Arts	1 course from the following list: ARTS 1301, ARTS 1303, ARTS 1304, ARTS 1313; DRAM 1310, DRAM 2366; MUSI 1306, MUSI 1307, MUSI 1310	3
Social/Behavioral Sciences	1 course from the following list: ECON 2301, ECON 2302; PSYC 2301, PSYC 2314; SOCI 1301, SOCI 1306	3

<sup>1</sup> Course(s) listed in the Texas Common Course Numbering System (<https://tcns.org/institution/id:14/yid:19/>)

<sup>2</sup> Approved Science Course (Select four of the following courses for 16 total SCH):

- BIOL 1406, BIOL 1407, CHEM 1411, CHEM 1412, CHEM 2423, CHEM 2425, GEOL 1403, GEOL 1404, PHYS 1401, PHYS 1402, PHYS 2425, PHYS 2426.

## NOTE:

- Students cannot receive credit for the same course twice
- Students cannot receive credit for both PHYS 1401 and PHYS 2425
- It is recommended that at Natural Science majors meet with an advisor to discuss area emphasis and transfer details.
- Students who know the university and area of emphasis to which they want to transfer to pursue a related bachelor's degree should contact their advisor for guidance on the Approved Science Courses.

## Transfer Information - Natural Science

**Important Notes:** The schools represented here are only a small sample of transfer options. Information is subject to change, and this suggested pathway is a guide, not a contract. Students should use this in consultation with a COM advisor, COM catalog, Texas Pathways state-wide transfer guidelines, and advisor at the transfer institution.

- **University of Houston - Clear Lake (BS Biological Sciences, BS Environmental Science) (p. 3)**
- **University of Houston - Clear Lake (BS Biology) (p. 3)**
- **University of Houston (BS Biology) (p. 4)**
- **University of Houston (BS Biochemical and Biophysical Sciences) (p. 4)**
- **University of Houston - Downtown (BS Biology) (p. 5)**
- **University of Houston - Downtown (BS Chemistry with Concentration in Biochemistry) (p. 5)**
- **Texas State University - San Marcos (BS Biology) (p. 6)**
- **Texas State University - San Marcos (BS Biochemistry) (p. 6)**
- **Texas A&M University (BS Biology) (p. 6)**
- **Texas A&M University (BS Chemistry, Biological-Chemistry Track) (p. 7)**
- **Sam Houston State University (BS Biology) (p. 8)**

### University of Houston - Clear Lake (BS Biological Sciences, BS Environmental Science)

Course	Title	Semester Credit Hours
<b>Semester #1</b>		
PSYC 1300	Learning Framework	3
ENGL 1301	Composition I	3
BIOL 1406	Biology for Science Majors I	4
MATH 2412	Precalculus	4
ARTS 1301	Art Appreciation	3
<b>Semester Credit Hours</b>		<b>17</b>
<b>Semester #2</b>		
BIOL 1407	Biology for Science Majors II	4
MATH 2413	Calculus I	4
ENGL 1302	Composition II	3
GOVT 2305	Federal Government (Federal Constitution & Topics)	3

PHED 1164	Introduction to Physical Fitness and Wellness	1
<b>Semester Credit Hours</b>		<b>15</b>
<b>Semester #3</b>		
CHEM 1411	General Chemistry I	4
BIOL 1322	Nutrition and Diet Therapy	3
GOVT 2306	Texas Government (Texas Constitution & Topics)	3
HIST 1301	U S History I	3
SPCH 1315	Public Speaking	3
<b>Semester Credit Hours</b>		<b>16</b>
<b>Semester #4</b>		
CHEM 1412	General Chemistry II	4
HIST 1302	U S History II	3
Select from one of the following:		3
HUMA 1301	Introduction to the Humanities I	
PHIL 1301	Introduction to Philosophy	
SPAN 2311	Intermediate Spanish I	
Select from one of the following:		3
ECON 2301	Principles of Macroeconomics	
ECON 2302	Principles of Microeconomics	
PSYC 2301	General Psychology	
SOCI 1301	Introduction to Sociology	
SOCI 1306	Social Problems	
<b>Semester Credit Hours</b>		<b>13</b>
<b>Total Semester Credit Hours</b>		<b>61</b>

Note: Recommended Additional/Substitute Coursework: College Physics I/II, Organic Chemistry I, Organic Chemistry II

### University of Houston - Clear Lake (BS Biology)

Course	Title	Semester Credit Hours
<b>Semester #1</b>		
PSYC 1300	Learning Framework	3
or EDUC 1300	or Learning Framework	
ENGL 1301	Composition I	3
BIOL 1406	Biology for Science Majors I	4
MATH 2413	Calculus I	4
Select from one of the following:		3
ARTS 1304	Art History II	
DRAM 1310	Theater Appreciation	
<b>Semester Credit Hours</b>		<b>17</b>
<b>Semester #2</b>		
BIOL 1407	Biology for Science Majors II	4
MATH 2414	Calculus II	4
ENGL 1302	Composition II	3
GOVT 2305	Federal Government (Federal Constitution & Topics)	3
PHED 1164	Introduction to Physical Fitness and Wellness	1
<b>Semester Credit Hours</b>		<b>15</b>

<b>Semester #3</b>		
CHEM 1411	General Chemistry I	4
BIOL 1322	Nutrition and Diet Therapy	3
GOVT 2306	Texas Government (Texas Constitution & Topics)	3
HIST 1301	U S History I	3
SPCH 1315 or SPCH 1318	Public Speaking or Interpersonal Communication	3
<b>Semester Credit Hours</b>		<b>16</b>
<b>Semester #4</b>		
CHEM 1412	General Chemistry II	4
HIST 1302	U S History II	3
Select from one of the following:		3
PHIL 1301	Introduction to Philosophy	
PHIL 2306	Introduction to Ethics (Select from one of the following:)	
Select from one of the following:		3
ECON 2301	Principles of Macroeconomics	
ECON 2302	Principles of Microeconomics	
PSYC 2301	General Psychology	
SOCI 1301	Introduction to Sociology	
<b>Semester Credit Hours</b>		<b>13</b>
<b>Total Semester Credit Hours</b>		<b>61</b>

### University of Houston (BS Biology)

Course	Title	Semester Credit Hours
<b>Semester #1</b>		
PSYC 1300 or EDUC 1300	Learning Framework or Learning Framework	3
ENGL 1301	Composition I	3
BIOL 1406	Biology for Science Majors I	4
MATH 2413	Calculus I	4
ARTS 1304 or DRAM 1310	Art History II or Theater Appreciation	3
<b>Semester Credit Hours</b>		<b>17</b>
<b>Semester #2</b>		
BIOL 1407	Biology for Science Majors II	4
MATH 2414	Calculus II	4
ENGL 1302	Composition II	3
GOVT 2305	Federal Government (Federal Constitution & Topics)	3
PHED 1164	Introduction to Physical Fitness and Wellness	1
<b>Semester Credit Hours</b>		<b>15</b>
<b>Semester #3</b>		
CHEM 1411	General Chemistry I	4
BIOL 1322	Nutrition and Diet Therapy	3
GOVT 2306	Texas Government (Texas Constitution & Topics)	3
HIST 1301	U S History I	3

SPCH 1315 or SPCH 1318	Public Speaking or Interpersonal Communication	3
<b>Semester Credit Hours</b>		<b>16</b>
<b>Semester #4</b>		
CHEM 1412	General Chemistry II	4
HIST 1302	U S History II	3
PHIL 1301	Introduction to Philosophy	3
Select from one of the following:		3
ECON 2301	Principles of Macroeconomics	
ECON 2302	Principles of Microeconomics	
PSYC 2301	General Psychology	
SOCI 1301	Introduction to Sociology	
<b>Semester Credit Hours</b>		<b>13</b>
<b>Total Semester Credit Hours</b>		<b>61</b>

Note: Recommended Additional/Substitute Coursework: Calculus III, Organic Chemistry.

### University of Houston (BS Biochemical and Biophysical Sciences)

Course	Title	Semester Credit Hours
<b>Semester #1</b>		
PSYC 1300 or EDUC 1300	Learning Framework or Learning Framework	3
ENGL 1301	Composition I	3
BIOL 1406	Biology for Science Majors I	4
MATH 2413	Calculus I	4
Select from one of the following:		3
ARTS 1304	Art History II	
DRAM 1310	Theater Appreciation	
<b>Semester Credit Hours</b>		<b>17</b>
<b>Semester #2</b>		
BIOL 1407	Biology for Science Majors II	4
MATH 2414	Calculus II	4
ENGL 1302	Composition II	3
GOVT 2305	Federal Government (Federal Constitution & Topics)	3
PHED 1164	Introduction to Physical Fitness and Wellness	1
<b>Semester Credit Hours</b>		<b>15</b>
<b>Semester #3</b>		
CHEM 1411	General Chemistry I	4
BIOL 1322	Nutrition and Diet Therapy	3
GOVT 2306	Texas Government (Texas Constitution & Topics)	3
HIST 1301	U S History I	3
SPCH 1315 or SPCH 1318	Public Speaking or Interpersonal Communication	3
<b>Semester Credit Hours</b>		<b>16</b>
<b>Semester #4</b>		
CHEM 1412	General Chemistry II	4
HIST 1302	U S History II	3

Select from one of the following:	3
PHIL 1301 Introduction to Philosophy	
PHIL 2306 Introduction to Ethics	
Select from one of the following:	3
PSYC 2301 General Psychology	
SOCI 1301 Introduction to Sociology	
ECON 2301 Principles of Macroeconomics	
ECON 2302 Principles of Microeconomics	
<b>Semester Credit Hours</b>	<b>13</b>
<b>Total Semester Credit Hours</b>	<b>61</b>

### University of Houston - Downtown (BS Biology)

Course	Title	Semester Credit Hours
<b>Semester #1</b>		
PSYC 1300 or EDUC 1300	Learning Framework or Learning Framework	3
ENGL 1301	Composition I	3
BIOL 1406	Biology for Science Majors I	4
MATH 2413	Calculus I	4
ARTS 1303 or ARTS 1303	Art History I or Art History I	3
<b>Semester Credit Hours</b>		<b>17</b>
<b>Semester #2</b>		
BIOL 1407	Biology for Science Majors II	4
MATH 2414	Calculus II	4
ENGL 1302	Composition II	3
GOVT 2305	Federal Government (Federal Constitution & Topics)	3
PHED 1164	Introduction to Physical Fitness and Wellness	1
<b>Semester Credit Hours</b>		<b>15</b>
<b>Semester #3</b>		
CHEM 1411	General Chemistry I	4
BIOL 1322	Nutrition and Diet Therapy	3
GOVT 2306	Texas Government (Texas Constitution & Topics)	3
HIST 1301	U S History I	3
SPCH 1315 or SPCH 1318	Public Speaking or Interpersonal Communication	3
<b>Semester Credit Hours</b>		<b>16</b>
<b>Semester #4</b>		
CHEM 1412	General Chemistry II	4
HIST 1302	U S History II	3
Select from one of the following:	3	
HUMA 1301	Introduction to the Humanities I	
HUMA 1302	Intro to the Humanities II	
ENGL 2322	British Literature I	
ENGL 2323	British Literature II	
Select from one of the following:	3	
PSYC 2301	General Psychology	

SOCI 1301	Introduction to Sociology	
<b>Semester Credit Hours</b>		<b>13</b>
<b>Total Semester Credit Hours</b>		<b>61</b>

Note: Recommended Additional/Substitute Coursework: College Physics I, College Physics II, Organic Chemistry I.

### University of Houston - Downtown (BS Chemistry with Concentration in Biochemistry)

Course	Title	Semester Credit Hours
<b>Semester #1</b>		
PSYC 1300 or EDUC 1300	Learning Framework or Learning Framework	3
ENGL 1301	Composition I	3
BIOL 1406	Biology for Science Majors I	4
MATH 2413	Calculus I	4
Select from one of the following:	3	
ARTS 1301	Art Appreciation	
ARTS 1303	Art History I	
<b>Semester Credit Hours</b>		<b>17</b>
<b>Semester #2</b>		
BIOL 1407	Biology for Science Majors II	4
MATH 2414	Calculus II	4
ENGL 1302	Composition II	3
GOVT 2305	Federal Government (Federal Constitution & Topics)	3
PHED 1164	Introduction to Physical Fitness and Wellness	1
<b>Semester Credit Hours</b>		<b>15</b>
<b>Semester #3</b>		
CHEM 1411	General Chemistry I	4
BIOL 1322	Nutrition and Diet Therapy	3
GOVT 2306	Texas Government (Texas Constitution & Topics)	3
HIST 1301	U S History I	3
SPCH 1315 or SPCH 1318	Public Speaking or Interpersonal Communication	3
<b>Semester Credit Hours</b>		<b>16</b>
<b>Semester #4</b>		
CHEM 1412	General Chemistry II	4
HIST 1302	U S History II	3
Select from one of the following:	3	
ENGL 2332	World Literature I	
ENGL 2333	World Literature II	
ENGL 2322	British Literature I	
ENGL 2323	British Literature II	
Select from one of the following:		

SOCI 1301	Introduction to Sociology	3
or PSYC 2301	or General Psychology	
<b>Semester Credit Hours</b>		<b>13</b>
<b>Total Semester Credit Hours</b>		<b>61</b>

### Texas State University - San Marcos (BS Biology)

Course	Title	Semester Credit Hours
<b>Semester #1</b>		
PSYC 1300	Learning Framework	3
or EDUC 1300	or Learning Framework	
ENGL 1301	Composition I	3
BIOL 1406	Biology for Science Majors I	4
MATH 2413	Calculus I	4
ARTS 1303	Art History I	3
or ARTS 1304	or Art History II	
<b>Semester Credit Hours</b>		<b>17</b>
<b>Semester #2</b>		
BIOL 1407	Biology for Science Majors II	4
MATH 2414	Calculus II	4
ENGL 1302	Composition II	3
GOVT 2305	Federal Government (Federal Constitution & Topics)	3
PHED 1164	Introduction to Physical Fitness and Wellness	1
<b>Semester Credit Hours</b>		<b>15</b>
<b>Semester #3</b>		
CHEM 1411	General Chemistry I	4
BIOL 1322	Nutrition and Diet Therapy	3
GOVT 2306	Texas Government (Texas Constitution & Topics)	3
HIST 1301	U S History I	3
SPCH 1315	Public Speaking	3
or SPCH 1318	or Interpersonal Communication	
<b>Semester Credit Hours</b>		<b>16</b>
<b>Semester #4</b>		
CHEM 1412	General Chemistry II	4
HIST 1302	U S History II	3
Select from one of the following:		3
PHIL 1301	Introduction to Philosophy	
PHIL 2306	Introduction to Ethics	
Select from one of the following:		3
ECON 2302	Principles of Microeconomics	
PSYC 2301	General Psychology	
SOCI 1301	Introduction to Sociology	
<b>Semester Credit Hours</b>		<b>13</b>
<b>Total Semester Credit Hours</b>		<b>61</b>

Note: Recommended Additional/Substitute Coursework: College Physics I/II, Organic Chemistry I, Organic Chemistry II

### Texas State University - San Marcos (BS Biochemistry)

Course	Title	Semester Credit Hours
<b>Semester #1</b>		
PSYC 1300	Learning Framework	3
or EDUC 1300	or Learning Framework	
MATH 2413	Calculus I	4
ENGL 1301	Composition I	3
BIOL 1406	Biology for Science Majors I	4
ARTS 1303	Art History I	3
or ARTS 1304	or Art History II	
<b>Semester Credit Hours</b>		<b>17</b>
<b>Semester #2</b>		
BIOL 1407	Biology for Science Majors II	4
MATH 2414	Calculus II	4
ENGL 1302	Composition II	3
GOVT 2305	Federal Government (Federal Constitution & Topics)	3
PHED 1164	Introduction to Physical Fitness and Wellness	1
<b>Semester Credit Hours</b>		<b>15</b>
<b>Semester #3</b>		
CHEM 1411	General Chemistry I	4
BIOL 1322	Nutrition and Diet Therapy	3
GOVT 2306	Texas Government (Texas Constitution & Topics)	3
HIST 1301	U S History I	3
SPCH 1315	Public Speaking	3
or SPCH 1318	or Interpersonal Communication	
<b>Semester Credit Hours</b>		<b>16</b>
<b>Semester #4</b>		
CHEM 1412	General Chemistry II	4
HIST 1302	U S History II	3
Select from one of the following:		3
PHIL 1301	Introduction to Philosophy	
PHIL 2306	Introduction to Ethics	
Select from one of the following:		3
ECON 2302	Principles of Microeconomics	
PSYC 2301	General Psychology	
SOCI 1301	Introduction to Sociology	
<b>Semester Credit Hours</b>		<b>13</b>
<b>Total Semester Credit Hours</b>		<b>61</b>

### Texas A&M University (BS Biology)

Course	Title	Semester Credit Hours
<b>Semester #1</b>		
PSYC 1300	Learning Framework	3
or EDUC 1300	or Learning Framework	
ENGL 1301	Composition I	3

BIOL 1406	Biology for Science Majors I	4
MATH 2413	Calculus I	4
Select from one of the following:		3
ARTS 1303	Art History I	
ARTS 1304	Art History II	
MUSI 1306	Music Appreciation	

**Semester Credit Hours** 17

#### Semester #2

BIOL 1407	Biology for Science Majors II	4
MATH 1342	Elementary Statistical Methods	3
or MATH 2414	or Calculus II	
ENGL 1302	Composition II	3
GOVT 2305	Federal Government (Federal Constitution & Topics)	3
PHED 1164	Introduction to Physical Fitness and Wellness	1

**Semester Credit Hours** 14

#### Semester #3

CHEM 1411	General Chemistry I	4
BIOL 1322	Nutrition and Diet Therapy	3
GOVT 2306	Texas Government (Texas Constitution & Topics)	3
HIST 1301	U S History I	3
SPCH 1315	Public Speaking	3
or SPCH 1318	or Interpersonal Communication	

**Semester Credit Hours** 16

#### Semester #4

CHEM 1412	General Chemistry II	4
HIST 1302	U S History II	3
Select from one of the following:		3
ENGL 2327	American Literature I	
ENGL 2328	American Literature II	
ENGL 2322	British Literature I	
ENGL 2332	World Literature I	
PHIL 1301	Introduction to Philosophy	
SPAN 2311	Intermediate Spanish I	
SPAN 2312	Intermediate Spanish II	

Select from one of the following:

ECON 2301	Principles of Macroeconomics	
ECON 2302	Principles of Microeconomics	
PSYC 2301	General Psychology	
SOCI 1301	Introduction to Sociology	

**Semester Credit Hours** 13

**Total Semester Credit Hours** 60

Note: Recommended Additional/Substitute Coursework: College Physics I/II, Organic Chemistry I, Organic Chemistry II

## Texas A&M University (BS Chemistry, Biological-Chemistry Track)

Course	Title	Semester Credit Hours
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#### Semester #1

PSYC 1300	Learning Framework	3
or EDUC 1300	or Learning Framework	

ENGL 1301	Composition I	3
MATH 2413	Calculus I	4
BIOL 1406	Biology for Science Majors I	4

Select from one of the following:

ARTS 1303	Art History I	
ARTS 1304	Art History II	
MUSI 1306	Music Appreciation	

**Semester Credit Hours** 17

#### Semester #2

BIOL 1407	Biology for Science Majors II	4
MATH 2414	Calculus II	4
ENGL 1302	Composition II	3
GOVT 2305	Federal Government (Federal Constitution & Topics)	3
PHED 1164	Introduction to Physical Fitness and Wellness	1

**Semester Credit Hours** 15

#### Semester #3

CHEM 1411	General Chemistry I	4
BIOL 1322	Nutrition and Diet Therapy	3
GOVT 2306	Texas Government (Texas Constitution & Topics)	3
HIST 1301	U S History I	3
SPCH 1315	Public Speaking	3
or SPCH 1318	or Interpersonal Communication	

**Semester Credit Hours** 16

#### Semester #4

CHEM 1412	General Chemistry II	4
HIST 1302	U S History II	3
Select from one of the following:		3

ENGL 2327	American Literature I	
ENGL 2328	American Literature II	
ENGL 2322	British Literature I	
ENGL 2323	British Literature II	
PHIL 2306	Introduction to Ethics	
PHIL 1301	Introduction to Philosophy	
SPAN 2311	Intermediate Spanish I	

Select from one of the following:

ECON 2301	Principles of Macroeconomics	
ECON 2302	Principles of Microeconomics	
PSYC 2301	General Psychology	
SOCI 1301	Introduction to Sociology	

**Semester Credit Hours** 13

**Total Semester Credit Hours** 61

**Sam Houston State University (BS Biology)**

Course	Title	Semester Credit Hours
<b>Semester #1</b>		
PSYC 1300 or EDUC 1300	Learning Framework or Learning Framework	3
ENGL 1301	Composition I	3
BIOL 1406	Biology for Science Majors I	4
MATH 2413	Calculus I	4
Select from one of the following:		3
ARTS 1301	Art Appreciation	
ARTS 1303	Art History I	
MUSI 1306	Music Appreciation	
MUSI 1310	American Music	
<b>Semester Credit Hours</b>		<b>17</b>
<b>Semester #2</b>		
BIOL 1407	Biology for Science Majors II	4
MATH 2414	Calculus II	4
ENGL 1302	Composition II	3
GOVT 2305	Federal Government (Federal Constitution & Topics)	3
PHED 1164	Introduction to Physical Fitness and Wellness	1
<b>Semester Credit Hours</b>		<b>15</b>
<b>Semester #3</b>		
CHEM 1411	General Chemistry I	4
BIOL 1322	Nutrition and Diet Therapy	3
GOVT 2306	Texas Government (Texas Constitution & Topics)	3
HIST 1301	U S History I	3
SPCH 1315 or SPCH 1318	Public Speaking or Interpersonal Communication	3
<b>Semester Credit Hours</b>		<b>16</b>
<b>Semester #4</b>		
CHEM 1412	General Chemistry II	4
HIST 1302	U S History II	3
Select from one of the following:		3
ENGL 2332	World Literature I	
ENGL 2333	World Literature II	
PHIL 1301	Introduction to Philosophy	
PHIL 2306	Introduction to Ethics	
SPAN 2311	Intermediate Spanish I	
SPAN 2312	Intermediate Spanish II	
ECON 2301 or ECON 2302	Principles of Macroeconomics or Principles of Microeconomics	3
<b>Semester Credit Hours</b>		<b>13</b>
<b>Total Semester Credit Hours</b>		<b>61</b>

Note: Recommended Additional/Substitute Coursework: Organic Chemistry I, Organic Chemistry II.