Allied Health - Science with Biology Concentration, Pre-Baccalaureate

Associate in Science
Minimum of 61-62 credit hours

Today, there are millions of workers employed as allied health professionals in the United States. And, the number of workers needed is only expected to rise, making this an excellent career field to enter.

If you’re interested in a career in sonography, radiography, radiation therapy, nuclear medicine, nutritional science, communication science, physical therapy or occupational therapy, consider enrolling in the associate in science degree program in allied health at Oklahoma City Community College.

**COURSE SEQUENCE**

<table>
<thead>
<tr>
<th>Course ID</th>
<th>Course Name</th>
<th>Credits</th>
<th>Type</th>
<th>Min GD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Term 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCL 1001</td>
<td>Success in College and Life</td>
<td>1</td>
<td>Life Skills</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Students will learn best practices for academic, career, and personal success. Students will discover their individual strengths, interests, and values to create a personalized plan; select and utilize resources that are applicable to their growth and success; and engage as active and responsible members of the academic community. This course should be taken during a student’s first semester of college work at Oklahoma City Community College and is a required course in degree plans to satisfy the Life Skills requirement. <strong>Prerequisites:</strong> ENGL 0106 or adequate reading/writing assessment scores</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 1483</td>
<td>Functions and Modeling</td>
<td>3</td>
<td>Gen Ed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The student will demonstrate: an understanding of the general concepts of relation and function and specifically of polynomial, rational, exponential and logarithmic functions; the ability to solve systems of equations by utilizing matrices and determinants; and, the ability to solve practical problems using algebraic and digital techniques. <strong>Prerequisites:</strong> MATH 0313 or adequate math placement; ENGL 0203, adequate placement score, or by meeting determined placement measures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIO 1124</td>
<td>General Biology I (Majors)</td>
<td>4</td>
<td>Major</td>
<td></td>
</tr>
<tr>
<td></td>
<td>An introductory course required for all biological science majors and pre-health profession students. The fundamental principles of biology are described using a cellular approach. Students gain knowledge regarding the chemical basis of life, structural characteristics of cells to include a discussion of energetics, metabolism and genetics. Evolution and ecology are also discussed in order to provide an understanding of both the diversity of living organisms and the living world. Students recognize, discuss and correctly apply fundamental biological principles influencing their personal relationship with other life forms. A discussion of the scientific method, logical (deductive) reasoning, hypothesis testing and some common fallacies and misconceptions that cloud scientific explanations of the natural world are included. Laboratory work, an integral and required part of the course, will enhance the student’s understanding of fundamental biological concepts as well as scientific procedures, laboratory technical skills, dissection and statistical analysis. <strong>Prerequisites:</strong> ENGL 0203 or adequate placement score or by meeting determined placement measures; MATH 0313 or adequate math placement.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Term 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEM 1115</td>
<td>General Chemistry I</td>
<td>5</td>
<td>Major</td>
<td></td>
</tr>
</tbody>
</table>
This course is designed for science and engineering majors. The course covers nomenclature, atomic and molecular structure, stoichiometry, acid/base and other aqueous reactions, states of matter, phase changes, gas laws, and an introduction to thermochemistry. Laboratory experience is an integral part of the course.

**Prerequisites:**
ENGL 0203, adequate placement score, or by meeting determined placement measures; MATH 1483 or MATH 1533, or both MATH 0313 and High School Chemistry or CHEM 1123.

ENGL 1113  
English Composition I  
3  
Gen Ed

The student will write well-developed compositions which demonstrate the principles of unity, coherence, and organization and which contain specific details and vivid language. The students will locate library material and incorporate researched materials into compositions.

**Prerequisites:**
ENGL 0203, adequate placement score, or by meeting determined placement measures

---

**Term 3**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
<th>Notes</th>
</tr>
</thead>
</table>
| BIO AH  | Pre-Bacc Allied Health (Biology)  
Support Electives | 3  
Support | 9 credit hours of support electives from the following: AHP 1013, ACCT 2113, BIO 1023, BIO 2114, BIO 2203, BIO 2215, BIO 2255, BIO 2404, CHEM 2114, CHEM 2111, COM 2213, MATH 1613, MATH 1743, MATH 2013, PHYS 1114, PHYS 1214, or any 5 credit hour GRMN, FREN, or SPAN course. |
| ENGL 1213 | English Composition II  
Support | 3  
Gen Ed | In this advanced writing course, students will create essays that explore and evaluate a variety of issues and perspectives suggested by fiction, poetry, drama, essays, and other types of cultural texts. Students will refine and augment the writing techniques they learned in ENGL 1113 or ENGL 1103 to develop well-reasoned, well-structured arguments in a clear, fluid, and engaging prose style. |

**Prerequisites:**
ENGL 1103 or ENGL 1113 taken within the last year, with strong encouragement for immediate continuation.

---

**Term 4**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
<th>Notes</th>
</tr>
</thead>
</table>
| GEN ED SCI  
ELEC | General Education Science Electives  
Support | 4  
Gen Ed | 8 hours of general education science chosen from the following: BIO 2125 Microbiology; BIO 1134 General Biology II (Majors) ; BIO 2215 General Zoology; CHEM 1215 General Chemistry II; PHYS 1114 College Physics I |
| HIST 1483 | U.S. History to 1877  
OR | 3  
Gen Ed | After analyzing events in American history from 1400 to 1877 in such areas as revolution, geographic and social mobility, political reform, government precedents and war, students will be able to identify patterns of present day mobility, describe governmental operations in their society and help resolve conflict in society based on the student’s search for change, precedents, and conflict in the American past. A general education requirement. |
| HIST 1493 | U.S. History 1877 to Present  
Support | 3  
Gen Ed | After analyzing events in American history from 1877 to the present in such areas as geographic and social mobility, political reform, government precedents and war, students will be able to identify patterns of present day mobility, describe governmental operations in their society and help resolve conflict in society based on the student’s search for change, precedents, and conflict in the American past. A general education requirement. |

**Prerequisites:**
ENGL 0203, adequate placement score, or by meeting determined placement measures

---

**Term 5**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
<th>Notes</th>
</tr>
</thead>
</table>
| BIO AH  
SUPP ELEC | Pre-Bacc Allied Health (Biology)  
Support Electives | 3  
Support | 9 credit hours of support electives from the following: AHP 1013, ACCT 2113, BIO 1023, BIO 2114, BIO 2203, BIO 2215, BIO 2255, BIO 2404, CHEM 2114, CHEM 2111, COM 2213, MATH 1613, MATH 1743, MATH 2013, PHYS 1114, PHYS 1214, or any 5 credit hour GRMN, FREN, or SPAN course. |
| POLSC 1113 | American Federal Government  
Support | 3  
Gen Ed | A study of the principles, structure, processes and functions of the United States federal government. |

**Prerequisites:**
ENGL 0203, adequate placement score, or by meeting determined placement measures

---

**Term 6**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
<th>Notes</th>
</tr>
</thead>
</table>
| GEN ED SCI  
ELEC | General Education Science Electives  
Support | 4  
Gen Ed | 8 hours of general education science chosen from the following: BIO 2125 Microbiology; BIO 1134 General Biology II (Majors) ; BIO 2215 General Zoology; CHEM 1215 General Chemistry II; PHYS 1114 College Physics I |

2021-2022 Catalog • www.occc.edu
### Term 7

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO AH</td>
<td>Pre-Bacc Allied Health (Biology)</td>
<td>3</td>
<td>Support</td>
</tr>
<tr>
<td>SUPP ELEC</td>
<td>Support Electives</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

- 9 credit hours of support electives from the following: AHP 1013, ACCT 2113, BIO 1023, BIO 2114, BIO 2203, BIO 2215, BIO 2255, BIO 2404, CHEM 2114, CHEM 2111, COM 2213, MATH 1613, MATH 1743, MATH 2013, PHYS 1114, PHYS 1214, or any 5 credit hour GRMN, FREN, or SPAN course.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 1113</td>
<td>General Psychology</td>
<td>3</td>
<td>Gen Ed</td>
</tr>
</tbody>
</table>

- A survey of the major areas of study in psychology such as motivation, learning, physiology, personality, social psychology, abnormal behavior, perception, memory, cognition/thought, and treatment.
- **Prerequisites:** ENGL 0203, adequate placement score, or by meeting determined placement measures

### Term 8

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 2234</td>
<td>Human Physiology</td>
<td>4</td>
<td>Major</td>
</tr>
</tbody>
</table>

- Students discuss major systems of the human body, contrast functional and regulatory activities of each and identify factors influencing homeostasis. Through the use of models, the student will recognize the relative influences and interrelationships between circulation, digestion, metabolism, respiration, kidney function, muscle action, endocrine and nervous control, and reproduction of other systems and the organism as a whole. Laboratory work which requires dissection is an integral and required part of the course.
- **Prerequisites:** BIO 1124 and one college-level chemistry course.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 1113</td>
<td>Introduction to Sociology</td>
<td>3</td>
<td>Gen Ed</td>
</tr>
</tbody>
</table>

- The student will identify the sociological dimensions of human behavior by analyzing the concepts of society, culture, socialization, institutions, social stratification and social change.
- **Prerequisites:** ENGL 0203, adequate placement score, or by meeting determined placement measures

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 2403</td>
<td>Developmental Psychology</td>
<td>3</td>
<td>Gen Ed</td>
</tr>
</tbody>
</table>

- A theoretical and research-based course that covers social, emotional, physical and cognitive aspects of human development throughout the life-span.
- **Prerequisites:** PSY 1113

### Term 9

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 1103</td>
<td>Introduction to Computers and</td>
<td>3</td>
<td>Gen Ed</td>
</tr>
<tr>
<td></td>
<td>Applications</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- This hands-on course affords students a basic understanding of computers and their application. Upon completion of this course, the student will be able to demonstrate the ability to use a computer operating system, an office suite, productivity tools, as well as the Internet at an introductory level. Advanced Standing is available. This course satisfies the computer proficiency requirement.
- **Prerequisites:** MATH 0103 or adequate math placement; ENGL 0203, adequate placement score, or by meeting determined placement measures

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUM</td>
<td>Humanities Elective</td>
<td>3</td>
<td>Gen Ed</td>
</tr>
</tbody>
</table>

- Humanities elective

### COURSE GROUPING

**Major Courses:** (13 credit hours) Biology Core: BIO 1124; BIO 2234; CHEM 1115

**General Education Courses:** (38 credit hours) English: ENGL 1113; ENGL 1213; History: HIST 1483 or HIST 1493; Political Science: POLSC 1113; Humanities: Six credit hours*; Social Science: PSY 1113; SOC 1113* or PSY 2403*; Mathematics: MATH 1483; Computer Science: CS 1103; 8 hours of general education science chosen from the following: BIO 2125, BIO 1134, BIO 2215, CHEM 1215, PHYS 1114.

**Life Skills Courses:** (1 credit hour) Life Skills: SCL 1001

**Support Courses:** (9 credit hours): 9 credit hours of support electives from the following*: AHP 1013, ACCT 2113, BIO 1023, BIO 2114, BIO 2203, BIO 2215, BIO 2255, BIO 2404, CHEM 2114, CHEM 2111, COM 2213, MATH 1613, MATH 1743, MATH 2013, PHYS 1114, PHYS 1214.
or any 5 credit hour GRMN, FREN, or SPAN course.

*Course choice depends on the specific program for which the student is applying. See prerequisite course list of the receiving institution.

A minimum grade of “C” required for all prerequisites and general education courses at OUHSC; at UCO all BIO and CHEM courses require a minimum grade of “C.”

PROGRAM NOTES

Notes: This program is designed for students planning to continue their education at a four-year college or university. See the front general section for information and requirements about University Parallel/Transfer Programs.

COURSE DESCRIPTIONS

BIOLOGICAL SCIENCE

BIO 1124 - General Biology I (Majors)

An introductory course required for all biological science majors and pre-health profession students. The fundamental principles of biology are described using a cellular approach. Students gain knowledge regarding the chemical basis of life, structural characteristics of cells to include a discussion of energetics, metabolism and genetics. Evolution and ecology are also discussed in order to provide an understanding of both the diversity of living organisms and the living world. Students recognize, discuss and correctly apply fundamental biological principles influencing their personal relationship with other life forms. A discussion of the scientific method, logical (deductive) reasoning, hypothesis testing and some common fallacies and misconceptions that cloud scientific explanations of the natural world are included. Laboratory work, an integral and required part of the course, will enhance the student’s understanding of fundamental biological concepts as well as scientific procedures, laboratory technical skills, dissection and statistical analysis. 

Prerequisites: ENGL 0203 or adequate placement score or by meeting determined placement measures; MATH 0313 or adequate math placement.

Credits: 4

BIO 2234 - Human Physiology

Students discuss major systems of the human body, contrast functional and regulatory activities of each and identify factors influencing homeostasis. Through the use of models, the student will recognize the relative influences and interrelationships between circulation, digestion, metabolism, respiration, kidney function, muscle action, endocrine and nervous control, and reproduction of other systems and the organism as a whole. Laboratory work which requires dissection is an integral and required part of the course.

Prerequisites: BIO 1124 and one college-level chemistry course.

Credits: 4

CHEMISTRY

CHEM 1115 - General Chemistry I

This course is designed for science and engineering majors. The course covers nomenclature, atomic and molecular structure, stoichiometry, acid/base and other aqueous reactions, states of matter, phase changes, gas laws, and an introduction to thermochemistry. Laboratory experience is an integral part of the course.

Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures; MATH 1483 or MATH 1533, or both MATH 0313 and High School Chemistry or CHEM 1123.

Credits: 5
COMPUTER SCIENCE

CS 1103 - Introduction to Computers and Applications

This hands-on course affords students a basic understanding of computers and their application. Upon completion of this course, the student will be able to demonstrate the ability to use a computer operating system, an office suite, productivity tools, as well as the Internet at an introductory level. Advanced Standing is available. This course satisfies the computer proficiency requirement.

Prerequisites: MATH 0103 or adequate math placement; ENGL 0203, adequate placement score, or by meeting determined placement measures

Credits: 3

ELECTIVES

BIO AH SUPP ELEC - Pre-Bacc Allied Health (Biology) Support Electives

9 credit hours of support electives from the following: AHP 1013, ACCT 2113, BIO 1023, BIO 2114, BIO 2203, BIO 2215, BIO 2255, BIO 2404, CHEM 2114, CHEM 2111, COM 2213, MATH 1613, MATH 1743, MATH 2013, PHYS 1114, PHYS 1214, or any 5 credit hour GRMN, FREN, or SPAN course.

Credits: 9

GEN ED SCI ELEC - General Education Science Electives

8 hours of general education science chosen from the following: BIO 2125 Microbiology; BIO 1134 General Biology II (Majors); BIO 2215 General Zoology; CHEM 1215 General Chemistry II; PHYS 1114 College Physics I

Credits: 8

HUM - Humanities Elective

Humanities elective

Credits: 3

ENGLISH

ENGL 1113 - English Composition I

The student will write well-developed compositions which demonstrate the principles of unity, coherence, and organization and which contain specific details and vivid language. The students will locate library material and incorporate researched materials into compositions.

Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures

Credits: 3

ENGL 1213 - English Composition II

In this advanced writing course, students will create essays that explore and evaluate a variety of issues and perspectives suggested by fiction, poetry, drama, essays, and other types of cultural texts. Students will refine and augment the writing techniques they learned in ENGL 1113 or ENGL 1103 to develop well-reasoned, well-structured arguments in a clear, fluid, and engaging prose style.

Prerequisites: ENGL 1103 or ENGL 1113 taken within the last year, with strong encouragement for immediate continuation.

Credits: 3

HISTORY

HIST 1483 - U.S. History to 1877

After analyzing events in American history from 1400 to 1877 in such areas as revolution, geographic and social mobility, political reform, government precedents and war, students will be able to identify patterns of present day mobility, describe governmental operations in their society and help resolve conflict in society based on the student’s search for change, precedents, and conflict in the American past. A general education requirement.

Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures
Credits: 3

**HIST 1493 - U.S. History 1877 to Present**

After analyzing events in American history from 1877 to the present in such areas as geographic and social mobility, political reform, government precedents and war, students will be able to identify patterns of present day mobility, describe governmental operations in their society and help resolve conflict in society based on the student’s search for change, precedents, and conflict in the American past. A general education requirement.

**Prerequisites:** ENGL 0203, adequate placement score, or by meeting determined placement measures

Credits: 3

**MATHEMATICS**

**MATH 1483 - Functions and Modeling**

The student will demonstrate: an understanding of the general concepts of relation and function and specifically of polynomial, rational, exponential and logarithmic functions; the ability to solve systems of equations by utilizing matrices and determinants; and, the ability to solve practical problems using algebraic and digital techniques.

**Prerequisites:** MATH 0313 or adequate math placement; ENGL 0203, adequate placement score, or by meeting determined placement measures

Credits: 3

**POLITICAL SCIENCE**

**POLSC 1113 - American Federal Government**

A study of the principles, structure, processes and functions of the United States federal government.

**Prerequisites:** ENGL 0203, adequate placement score, or by meeting determined placement measures

Credits: 3

**PSYCHOLOGY**

**PSY 1113 - General Psychology**

A survey of the major areas of study in psychology such as motivation, learning, physiology, personality, social psychology, abnormal behavior, perception, memory, cognition/thought, and treatment.

**Prerequisites:** ENGL 0203, adequate placement score, or by meeting determined placement measures

Credits: 3

**PSY 2403 - Developmental Psychology**

A theoretical and research-based course that covers social, emotional, physical and cognitive aspects of human development throughout the life-span.

**Prerequisites:** PSY 1113

Credits: 3

**SOCIOLOGY**

**SOC 1113 - Introduction to Sociology**

The student will identify the sociological dimensions of human behavior by analyzing the concepts of society, culture, socialization, institutions, social stratification and social change.

**Prerequisites:** ENGL 0203, adequate placement score, or by meeting determined placement measures

Credits: 3
SUCCESS IN COLLEGE AND LIFE

SCL 1001 - Success in College and Life

Students will learn best practices for academic, career, and personal success. Students will discover their individual strengths, interests, and values to create a personalized plan; select and utilize resources that are applicable to their growth and success; and engage as active and responsible members of the academic community. This course should be taken during a student's first semester of college work at Oklahoma City Community College and is a required course in degree plans to satisfy the Life Skills requirement.

Prerequisites: ENGL 0106 or adequate reading/writing assessment scores
Credits: 1