

# ALLIED HEALTH

## Contact Information

### Division

Nursing and Allied Health

### Dean

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## Overview

Allied Health offers alternatives to nursing and medicine for students interested in healthcare professions. Careers include Dental Hygiene, Licensed Vocational Nursing, Medical Assisting, Physical Therapy Assistant, Respiratory Therapist, Radiology Technician, Sonography, and others. Allied Health at Sierra College is designed to help identify and train for these alternative healthcare careers and to prepare students for success working in hospitals, clinics, dental offices and long term care facilities.

### Carey Shannon

Assistant Professor, Allied Health

B.A., University of Nevada, Reno

## Allied Health Advisory Committee

- Alpine Allergy and Asthma, Auburn, CA
- ARC Point Labs, Sacramento and Roseville, CA
- Dr. Allison McCormick, MD, Auburn, CA
- Dr. Mark Vaughn, MD, Auburn, CA
- ELICA Greater Sac. Region, Greater Sacramento Region
- Kaiser Permanente Roseville Medical Center, Roseville, CA
- Marshall Medical Center, Placerville, CA
- Sutter Health, Sacramento, CA (HQ)

## Degrees/Certificates

### Associate Degrees

- Allied Health-General Option (p. 1)
- Allied Health-Pre-Nursing Option (p. 2)

### Certificates of Achievement

- Allied Health-General Option (p. 1)
- Medical Assisting (p. 2)

## Allied Health - General Option

### AS Degree and/or Certificate of Achievement

The Allied Health General Option is designed as a gateway into allied health professions and to prepare students for success in Allied Health degree and certificate programs at Sierra and other institutions. This may include training programs for professions such as Dental Hygiene, LVN, Medical

Assistant, Occupational Therapy Assistant, Physical Therapy Assistant, Respiratory Care, Radiology Technician, Sonography and others. Some variation in degree/certificate requirements may exist for particular Allied Health programs, therefore, it is essential that students refer to the catalog of their intended transfer institution and contact a counselor to ensure that all required coursework is completed. For the degree, students must fulfill the following major requirements with grades of "C" or better, complete a minimum of 60 degree-applicable semester units (12 of which must be completed at Sierra College) with a grade point average of at least 2.0 and complete one of the following three general education patterns:

- Sierra College Associate Degree Requirements (<http://catalog.sierracollege.edu/archive/2021-2022/student-resources/general-education/associate-degree-requirements/>);
- California State University General Education Breadth pattern (<http://catalog.sierracollege.edu/archive/2021-2022/student-resources/general-education/california-state-university-general-education-breadth-requirements/>);
- Intersegmental General Education Transfer Curriculum (IGETC) (<http://catalog.sierracollege.edu/archive/2021-2022/student-resources/general-education/intersegmental-general-education-transfer-curriculum-igetc/>).

A certificate is designed to provide career technical skills; it is not equivalent to an associate degree.

### Required Courses

Code	Title	Units
ALH 0020	Introduction to Allied Health	1
<b>Select 17 units from the following:</b> <sup>1</sup>		<b>17</b>
ANTH 0002	Cultural Anthropology	
BIOL 0001	General Biology	
BIOL 0004	Microbiology	
or BIOL 0008A & BIOL 0008B	Microbiology I and Microbiology II	
BIOL 0005	Human Anatomy	
or BIOL 0007A & BIOL 0007B	Human Anatomy I and Human Anatomy II	
BIOL 0006	Human Physiology	
BIOL 0055	General Human Anatomy and Physiology	
BIOL 0056 & 0056L	Biology: A Human Perspective and Biology: A Human Perspective Laboratory	
BUS 0250	Computer Applications for Business	
CHEM 0001A	General Chemistry I	
or CHEM 0003A & CHEM 0003B	General Chemistry I - Part 1 and General Chemistry I - Part 2	
CHEM 0001B	General Chemistry II	
CHEM 0002A	Introduction to Chemistry I	
CHEM 0002B	Introduction to Chemistry II	
CSCI 0010	Introduction to Computing	
COMM 0001	Fundamentals of Public Speaking	
COMM 0003	Small Group Communication	
COMM 0005	Communication Foundations	
COMM 0007	Intercultural Communication	
COMM 0008	Interpersonal Communication	
ENGL 0000N	Introduction to College Writing	

ENGL 0001A	College Reading, Writing and Research	
HDEV 0001	Human Development Through the Lifespan	
HED 0001	Standard First Aid/Community CPR	
HSCI 0003	Medical Terminology	
MATH 0000D	Intermediate Algebra	
MATH 0000E	Practical Mathematics	
MATH 0000G	B-STEM Intermediate Algebra	
MATH 0013	Elementary Statistics	
or MATH 0013A & MATH 0013B	Elementary Statistics with Support (Part 1) and Elementary Statistics with Support (Part 2)	
MATH 0027	Trigonometry	
NUTF 0005	Food Preparation for Nutrition and Life Fitness	
NUTF 0010	Principles of Nutrition	
PHYS 0010	Basic Concepts in Physics	
PHYS 0105	General Physics I	
PHYS 0105L	General Physics I Laboratory	
PSYC 0100	General Principles of Psychology	
PSYC 0142	Introduction to Psychological Statistics	
SOC 0001	Introduction to Sociology	
SOC 0015	Introduction to Statistics in Sociology	
<b>Total Units</b>		<b>18</b>

<sup>1</sup>At least one course must be from Biology, Chemistry, or Physics.

## Allied Health - Pre-Nursing Option

### AS Degree

Successful completion of the Associate in Science, Allied Health # Pre# Nursing Option, prepares the student with the knowledge, skills and qualities necessary to apply to most nursing programs. The program includes the prerequisites for necessary for most registered nursing programs at community colleges and may be transferable to nursing majors at various universities. Some variation in degree requirements may exist for a particular program; therefore, it is essential that students refer to the catalog of their intended institution and contact a counselor to ensure that all required coursework is completed. For the degree, students must fulfill the following major requirements with grades of "C" or better, complete a minimum of 60 degree-applicable semester units (12 of which must be completed at Sierra College) with a grade point average of at least 2.0 and complete one of the following three general education patterns:

- Sierra College Associate Degree Requirements (<http://catalog.sierracollege.edu/archive/2021-2022/student-resources/general-education/associate-degree-requirements/>);
- California State University General Education Breadth pattern (<http://catalog.sierracollege.edu/archive/2021-2022/student-resources/general-education/california-state-university-general-education-breadth-requirements/>);
- Intersegmental General Education Transfer Curriculum (IGETC) (<http://catalog.sierracollege.edu/archive/2021-2022/student-resources/general-education/intersegmental-general-education-transfer-curriculum-igetc/>).

### Required Courses

Code	Title	Units
ALH 0020	Introduction to Allied Health	1
ANTH 0002	Cultural Anthropology	3

or SOC 0001	Introduction to Sociology	
BIOL 0004	Microbiology (OR)	5
or BIOL 0008A & BIOL 0008B	Microbiology I and Microbiology II	
BIOL 0005	Human Anatomy (OR)	5
or BIOL 0007A & BIOL 0007B	Human Anatomy I and Human Anatomy II	
BIOL 0006	Human Physiology	5
CHEM 0002A	Introduction to Chemistry I <sup>1</sup>	5-6
or CHEM 0001A	General Chemistry I	
or CHEM 0003A & CHEM 0003B	General Chemistry I - Part 1 and General Chemistry I - Part 2	
COMM 0001	Fundamentals of Public Speaking	3
ENGL 0001A	College Reading, Writing and Research	4
HDEV 0001	Human Development Through the Lifespan	3
or PSYC 0104	Developmental Psychology	
NUTF 0010	Principles of Nutrition	3
PSYC 0100	General Principles of Psychology	3
<b>Demonstrate mathematics proficiency by one of the following:</b>		<b>0-6</b>
MATH 0000A	Elementary Algebra	
MATH 0000D	Intermediate Algebra	
MATH 0000E	Practical Mathematics	
MATH 0000G	B-STEM Intermediate Algebra	
MATH 0012	College Algebra	
MATH 0013	Elementary Statistics	
or MATH 0013A & MATH 0013B	Elementary Statistics with Support (Part 1) and Elementary Statistics with Support (Part 2)	
MATH 0016A	Calculus for Social and Life Sciences	
MATH 0016B	Calculus for Social and Life Sciences	
MATH 0024	Modern Business Mathematics	
MATH 0029	Pre-Calculus Mathematics	
MATH 0030	Analytical Geometry and Calculus I	
MATH 0031	Analytical Geometry and Calculus II	
MATH 0042	Business Calculus	
PSYC 0142	Introduction to Psychological Statistics	
SOC 0015	Introduction to Statistics in Sociology	
Completion of one year (or block schedule) of Algebra I or higher level mathematics in high school with grades of "C" or better		
<b>Total Units</b>		<b>40-47</b>

<sup>1</sup>CHEM 0002A is preferred for most Nursing programs. Speak with a counselor to discuss Chemistry options.

## Medical Assisting

### Certificate of Achievement

Successful completion of the Medical Assisting Program certificate prepares the student with the knowledge, skills and qualities necessary for the medical assisting profession. The medical assistant acquires a broad scope of skills which makes him/her a valuable allied health professional within the ambulatory care setting. During this program, students will learn and demonstrate vital signs, EKGs, venipunctures, injections, assist with minor office surgeries and patient education, as well as medical office administrative tasks. Students will also

learn basic anatomy, physiology and pharmacology. This comprehensive education allows graduates to find employment in clinics, urgent care facilities, primary care and specialty physician offices. Medical assistants are also employed in medical laboratories, surgical centers, and electrocardiography departments in hospitals, government agencies and educational institutions. Core coursework will be fulfilled in two semesters, followed by a 160-hour externship. A certificate of achievement will be earned after completing all courses with a grade of "C" or better and successfully passing the externship (ALH 0009). The certificate is designed to focus on providing specific career technical skills; it is not equivalent to an associate degree.

#### Required Courses

Code	Title	Units
ALH 0001	Electronic Health Record/Billing	2.5
ALH 0002	Medical Coding	2.5
ALH 0003	Introduction to Pharmacology for Medical Assisting	2.5
ALH 0004	Physical Exam Procedures	3
ALH 0005	Medical Office Procedures	3
ALH 0006	Medical Office Laboratory Procedures	3
ALH 0007	Medical Asepsis and Surgical Procedures	3
ALH 0008	Medication Administration and Injection Procedures	3
ALH 0009	Medical Assisting Clinical Practicum Experience	3

**Total Units** **25.5**

## Courses

Understanding course descriptions (<http://catalog.sierracollege.edu/archive/2021-2022/student-resources/course-information/understanding-course-descriptions/>)

#### ALH 0001. Electronic Health Record/Billing

*Units: 2.5*

Prerequisite: Completion of BIOL 55, BUS 250, HED 2, and HSCI 3 with grades of "C" or better

Hours: 63 (36 lecture, 27 laboratory)

How to document the total patient encounter in the Electronic Health Record using a current vendor product along with Medisoft Clinical Practice Management which incorporates the electronic billing process. (letter grade only) (not transferable)

#### ALH 0002. Medical Coding

*Units: 2.5*

Hours: 63 (36 lecture, 27 laboratory)

Students will acquire basic knowledge of the functions of coding in the ambulatory medical setting. In addition, students will learn to interpret and locate codes in both the CPT (Current Procedural Terminology) and ICD-10-CM (International Classification of Disease, clinical modification 10) manuals. (letter grade only) (not transferable)

#### ALH 0003. Introduction to Pharmacology for Medical Assisting

*Units: 2.5*

Hours: 63 (36 lecture, 27 laboratory)

Introduction to the principles of pharmacology and medication forms, routes of administration, and common medication for each body system as used in the ambulatory setting. (letter grade only) (not transferable)

#### ALH 0004. Physical Exam Procedures

*Units: 3*

Hours: 90 (36 lecture, 54 laboratory)

Prepares students to perform clinical tasks within the scope of practice of a medical assistant. Skill competencies include preparation of exam rooms, acquisition of patient history and vital signs, introduction to oral medication administration, nutritional education planning, orthopedic bracing/casting, handling office emergencies, and performing CPR and electrocardiograms. (letter grade only) (not transferable)

#### ALH 0005. Medical Office Procedures

*Units: 3*

Prerequisite: Completion of ALH 1, 2, 3, and 4 with grades of "C" or better  
Hours: 90 (36 lecture, 54 laboratory)

Designed for the Clinical Medical Assistant to learn legal/ethical and accepted procedures for any ambulatory setting. (letter grade only) (not transferable)

#### ALH 0006. Medical Office Laboratory Procedures

*Units: 3*

Prerequisite: Completion of ALH 1, 2, 3, and 4 with grades of "C" or better  
Hours: 90 (36 lecture, 54 laboratory)

Students will acquire skills to competently implement and evaluate standard laboratory tests as performed in medical offices or general lab settings. Emphasis on specimen collection, handling and storing procedures, analysis and interpretation of normal and abnormal lab values. Acquire phlebotomy skills that prepare students to practice within their scope of work as a medical assistant. (letter grade only) (not transferable)

#### ALH 0007. Medical Asepsis and Surgical Procedures

*Units: 3*

Prerequisite: Completion of ALH 1, 2, 3, and 4 with grades of "C" or better  
Hours: 90 (36 lecture, 54 laboratory)

Students will acquire knowledge to apply theory to practice while assisting with minor office surgeries and wound care. Sterile and aseptic techniques, sterile field and instrument sanitization procedures and protocols prepare students with the necessary skills to practice within the scope of practice of a medical assistant. (letter grade only) (not transferable)

#### ALH 0008. Medication Administration and Injection Procedures

*Units: 3*

Prerequisite: Completion of ALH 1, 2, 3, and 4 with grades of "C" or better  
Hours: 90 (36 lecture, 54 laboratory)

Students will acquire and apply knowledge of various routes of medication administration and the related injection safety, techniques, and site selection. Medication dosage calculations, medication side effects and emergencies pertaining to medication administration will prepare students to practice within the scope of practice of a medical assistant. (letter grade only) (not transferable)

#### ALH 0009. Medical Assisting Clinical Practicum Experience

*Units: 3*

Prerequisite: Completion of ALH 5, 6, 7, and 8 with grades of "C" or better  
Hours: 162 laboratory

Students will acquire clinical Medical Assisting experience in the work setting under the supervision of a licensed physician in a Board-Certified medical office setting or outpatient facility. (letter grade only) (not transferable)

**ALH 0010. Introduction to Phlebotomy**

*Units: 3*

Hours: 91 (43 lecture, 48 laboratory)

Introduction to the principles of Phlebotomy. Emphasis on phlebotomy techniques, infection control, safety, specimen collection and handling, medical and legal considerations, patient care and preparation and performance in venipunctures, capillary punctures, and basic laboratory tests expected of the entry level phlebotomy position (CPT 1). Upon successful completion of ALH 10 and ALH 11, students will be eligible to sit for the phlebotomy exam to become a Certified Phlebotomy Technician I (CPT 1) with the state of California. (letter grade only) (CSU)

**ALH 0011. Phlebotomy Clinical Practicum Experience**

*Units: 0.5*

Prerequisite: Completion with grade of "C" or better or concurrent enrollment in ALH 10

Hours: 40 laboratory

Students will acquire Phlebotomy experience in the work setting under the supervision of a certified phlebotomist. The clinical practicum is conducted as a non-paid clinical laboratory experience. Students will perform at least 50 venipuncture procedures on patients that represent a variety of age groups and medical conditions. Emphasis on phlebotomy techniques, infection control, safety, specimen collection and handling, medical and legal considerations, patient care and preparation and performance in venipunctures, capillary punctures, and basic laboratory tests expected of the entry level phlebotomy position (CPT 1). (letter grade only) (CSU)

**ALH 0020. Introduction to Allied Health**

*Unit: 1*

Hours: 18 lecture

Introduction to career choices in the Allied Health field. Topics include: education and career mapping, job outlooks, occupational and professional requirements, pay ranges, and employer expectations. Students will get hands-on experience related to various Allied Health occupations and gain insight into job roles and responsibilities through guest speakers. Course includes an overview of health care delivery systems, associated career opportunities, infection control, and laws governing patient confidentiality. Students will have the opportunity to participate in organized field trips. (letter grade only) (CSU)

## **Program Student Learning Outcomes**

- Demonstrate an understanding of the functions of the organ systems of the human body.
- Use the Scientific Method to investigate biological questions and critically evaluate and effectively communicate scientific data.
- Understand and apply foundational knowledge for a future allied health career or program of study.