

# Health Science Career Cluster

The Health Science career cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. This career cluster includes occupations ranging from medical assistant, registered nurse, and physical therapist to forensic science technician and athletic trainer.

## Statewide Program of Study: *Diagnostic and Therapeutic Services*

The Diagnostic and Therapeutic Services program of study focuses on occupational and educational opportunities associated with diagnosing and treating acute, episodic, or chronic illness independently or as part of a healthcare team. This program of study includes exploration of patient treatment and rehabilitative programs that help build or restore daily living skills to persons with disabilities or developmental delays.

### Secondary Courses for High School Credit



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|----------------|---|
| <b>Level 1</b> | <ul style="list-style-type: none"> <li>Principles of Health Science</li> <li>Principles of Diagnostic Healthcare</li> <li>Principles of Therapeutic Healthcare</li> <li>Principles of Allied Health</li> <li>Introduction to Dental Science</li> <li>Introduction to Imaging Technology</li> <li>Introduction to Pharmacy Science</li> </ul>  |
| <b>Level 2</b> | <ul style="list-style-type: none"> <li>Medical Terminology</li> <li>Allied Health Therapeutic Services</li> <li>Dental Anatomy and Physiology</li> <li>Disaster Response</li> <li>Imaging Technology I</li> <li>Pharmacy I</li> </ul>   |
| <b>Level 3</b> | <ul style="list-style-type: none"> <li>Anatomy and Physiology</li> <li>Medical Microbiology</li> <li>Medical Assistant</li> <li>Emergency Medical Technician–Basic</li> <li>Clinical Ethics</li> <li>Dental Equipment and Procedures</li> <li>Health Science Theory</li> <li>Health Science Theory + Health Science Clinical</li> <li>Respiratory Therapy I</li> <li>Imaging Technology II</li> <li>Pharmacy II</li> </ul>                            |
| <b>Level 4</b> | <ul style="list-style-type: none"> <li>Mathematics for Medical Professionals</li> <li>Pathophysiology</li> <li>Pharmacology</li> <li>Respiratory Therapy II</li> <li>Optical Technician</li> <li>Practicum in Health Science</li> <li>Practicum in Health Science + Extended Practicum in Health Science</li> <li>Career Preparation for Programs of Study</li> <li>Career Preparation for Programs of Study + Extended Career Preparation</li> </ul> |



### Example Postsecondary Opportunities

#### Apprenticeships

- Medical Assistant



#### Associate Degrees

- Emergency Medical Technology
- Radiologic Technology/Science

#### Bachelor's Degrees

- Emergency Medical Technology
- Medical Insurance Coding

#### Master's, Doctoral, and Professional Degrees

- Medicine
- Occupational Therapy

#### Additional Stackable IBCs/License

- Registered Diagnostic Medical Sonographer

### Work-Based Learning and Expanded Learning Opportunities

- |  |   |
|--|---|
| <b>Work-Based Learning Activities</b>  | <ul style="list-style-type: none"> <li>Intern with a medical assistant at a community clinic, hospital, assisted living, or long-term care facility</li> <li>Participate in job shadowing experiences such as Emergency Medical Services (EMS) ride along or hospital/clinical job</li> </ul> |
| <b>Expanded Learning Opportunities</b> | <ul style="list-style-type: none"> <li>Participate in Health Occupation Students of America (HOSA) or SkillsUSA</li> <li>Participate in Advanced Medical Ambulance Bus (AMBUS) event or Community Emergency Response Team (CERT) event</li> </ul>   |

### Aligned Industry-Based Certifications

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|---|--|
| <ul style="list-style-type: none"> <li>Certified Cardiographic Technician</li> <li>Certified Dental Assistant</li> <li>Certified EKG Technician</li> <li>Certified Nurse Aide (CNA)</li> <li>Certified Occupational Therapy Assistant</li> <li>Licensed Dental Hygienist</li> <li>ECG Technician</li> <li>Emergency Care Attendant (ECA)</li> <li>Emergency Medical Technician - Basic</li> <li>Limited Medical Radiologic Technologist (LMRT)</li> </ul> | <ul style="list-style-type: none"> <li>Medical Assistant</li> <li>Medical Laboratory Assistant</li> <li>Medical Laboratory Technician</li> <li>Patient Care Technician</li> <li>Pharmacy Technician</li> <li>Phlebotomy Technician</li> <li>Registered Dental Assistant (RDA)</li> <li>Registered Dental Assistant X-Ray Certification</li> <li>Respiratory Therapist</li> </ul> |
|---|--|



### Example Aligned Occupations

#### Medical Assistants

Median Wage: \$37,568  
Annual Openings: 11,247  
10-Year Growth: 29%

#### Dental Hygienists

Median Wage: \$89,155  
Annual Openings: 1,047  
10-Year Growth: 32%

#### Physician Assistants

Median Wage: \$131,082  
Annual Openings: 887  
10-Year Growth: 41%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024.



For more information visit:


<https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/hs-diagnostic-and-therapeutic-services-extended.pdf>

# Health Science Career Cluster

## Statewide Program of Study: *Diagnostic and Therapeutic Services*

### Course Information

Level 1

Course	Prerequisites   Corequisites	Career Clusters
<b>Principles of Health Science*</b> 13020200 (1 credit)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	
<b>Principles of Diagnostic Healthcare</b> N1302106 (1 credit)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	
<b>Principles of Therapeutic Healthcare</b> N1302110 (1 credit)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> Biology	
<b>Principles of Allied Health*</b> N1302105 (1 credit)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	
<b>Introduction to Dental Science</b> N1302101 (1 credit)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	
<b>Introduction to Imaging Technology</b> N1302102 (1 credit)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	
<b>Introduction to Pharmacy Science</b> N1302103 (1 credit)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	

Level 2

Course	Prerequisites   Corequisites	Career Clusters
<b>Medical Terminology*</b> 13020300 (1 credit)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	
<b>Allied Health Therapeutic Services*</b> N1302120 (1 credit)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Allied Health <b>Recommended Corequisites:</b> None	

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\* Indicates course is included in more than one program of study in this career cluster.

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Diagnostic and Therapeutic Services



# Health Science Career Cluster

## Statewide Program of Study: *Diagnostic and Therapeutic Services*

### Course Information

Level 2	Course	Prerequisites   Corequisites	Career Clusters
	<b>Dental Anatomy and Physiology</b> N1302122 (1 credit)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Biology and Introduction to Dental Science <b>Recommended Corequisites:</b> None	
	<b>Disaster Response</b> N1303011 (1 credit)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Law, Public Safety, Corrections, and Security <b>Recommended Corequisites:</b> None	
	<b>Imaging Technology I</b> N1302123 (1 credit)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Introduction to Imaging Technology <b>Recommended Corequisites:</b> None	
	<b>Pharmacy I</b> 13021020 (1 credit)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Introduction to Pharmacy Science or Principles of Health Science and one credit in biology <b>Recommended Corequisites:</b> None	

Level 3	Course	Prerequisites   Corequisites	Career Clusters
	<b>Anatomy and Physiology*</b> 13020600 (1 credit)	<b>Prerequisites:</b> One credit in biology and one credit in chemistry, Integrated Physics and Chemistry (IPC), or physics <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> A course from the Health Science career cluster <b>Recommended Corequisites:</b> None	
	<b>Medical Microbiology*</b> 13020700 (1 credit)	<b>Prerequisites:</b> One credit in biology, one credit in chemistry, and at least one credit in a course from the Health Science career cluster <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	

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Diagnostic and Therapeutic Services

# Health Science Career Cluster

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### Course Information

Level 3

Course	Prerequisites   Corequisites	Career Clusters
<b>Medical Assistant</b> 13021015 (1 credit)	<b>Prerequisites:</b> Anatomy and Physiology <b>Corequisites:</b> Anatomy and Physiology <b>Recommended Prerequisites:</b> Medical Terminology <b>Recommended Corequisites:</b> None	
<b>Emergency Medical Technician–Basic</b> N1303015 (2 credits)	<b>Prerequisites:</b> Biology <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Law, Public Safety, Corrections, and Security; and Anatomy and Physiology <b>Recommended Corequisites:</b> None	 
<b>Clinical Ethics*</b> N1302121 (1 credit)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Nursing Science and Science of Nursing <b>Recommended Corequisites:</b> None	
<b>Dental Equipment and Procedures</b> N1302130 (1 credit)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Introduction to Dental Science and Dental Anatomy and Physiology <b>Recommended Corequisites:</b> None	
<b>Health Science Theory*</b> 13020400 (1 credit)	<b>Prerequisites:</b> One credit in biology and at least one credit in a course from the Health Science career cluster <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Medical Terminology <b>Recommended Corequisites:</b> Health Science Clinical	
<b>Health Science Theory + Health Science Clinical*</b> 13020410 (2 credits)	<b>Prerequisites:</b> One credit in biology and at least one credit in a course from the Health Science career cluster <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Medical Terminology <b>Recommended Corequisites:</b> None	
<b>Respiratory Therapy I</b> 13021120 (1 credit)	<b>Prerequisites:</b> At least one credit in a course from the Health Science career cluster <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	

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Diagnostic and Therapeutic Services

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### Course Information

	Course	Prerequisites   Corequisites	Career Clusters
Level 3	<b>Imaging Technology II</b> N1302131 (2 credits)	<b>Prerequisites:</b> Imaging Technology I <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Introduction to Imaging Technology <b>Recommended Corequisites:</b> None	
	<b>Pharmacy II</b> 13021030 (2 credits)	<b>Prerequisites:</b> One credit in biology, one credit in chemistry, and Pharmacy I <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Algebra I, Introduction to Pharmacy Science, and Pharmacy I <b>Recommended Corequisites:</b> None	
Level 4	<b>Mathematics for Medical Professionals*</b> 13020970 (1 credit)	<b>Prerequisites:</b> Geometry and Algebra II <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	
	<b>Pathophysiology*</b> 13020800 (1 credit)	<b>Prerequisites:</b> One credit in biology, one credit in chemistry, and at least one credit in a Level 2 or higher course from the Health Science career cluster <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Anatomy and Physiology <b>Recommended Corequisites:</b> None	
	<b>Pharmacology*</b> 13020950 (1 credit)	<b>Prerequisites:</b> One credit in biology, one credit in chemistry, and at least one credit in a Level 2 or higher course from the Health Science career cluster <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	
	<b>Respiratory Therapy II</b> 13021122 (1 credit)	<b>Prerequisites:</b> Respiratory Therapy I <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	
	<b>Optical Technician</b> N1302126 (1 credit)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Biology or Principles of Health Science <b>Recommended Corequisites:</b> None	

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Diagnostic and Therapeutic Services



# Health Science Career Cluster

## Statewide Program of Study: *Diagnostic and Therapeutic Services*

### Course Information

Level 4

Course	Prerequisites   Corequisites	Career Clusters
<b>Practicum in Health Science*</b> First Time Taken: 13020500 (2 credits) Second Time Taken: 13020510 (2 credits)	<b>Prerequisites:</b> Health Science Theory and biology <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	
<b>Practicum in Health Science + Extended Practicum in Health Science*</b> First Time Taken: 13020505 (3 credits) Second Time Taken: 13020515 (3 credits)	<b>Prerequisites:</b> Health Science Theory and biology <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	
<b>Career Preparation for Programs of Study*</b> First Time Taken: 12701121 (2 credits)	<b>Prerequisites:</b> At least one Level 2 or higher CTE course <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	
<b>Career Preparation for Programs of Study + Extended Career Preparation*</b> First Time Taken: 12701141 (3 credits)	<b>Prerequisites:</b> At least one Level 2 or higher CTE course <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	

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Diagnostic and Therapeutic Services