Multi-Skilled Health Technology

Multi-Skilled Health Technology Certificates/Areas of Specialization

- Administrative Medical Office Assistant
- Coding
- Electrocardiography
- Emergency Medical Technology-Basic
- Emergency Medical Technology-Paramedic
- Health and Wellness
- Health Coach
- Medical Assisting
- Nursing Assistant
- Personal Trainer
- Phlebotomy
- Polysomnography

Each of these certificates can also be used as an area of specialization for the Multi-Skilled Health Technology degree program.

- Students must earn a "C" or higher in all prerequisite and technical courses required for the certificate to be eligible for that certificate.
- Students must complete a minimum of one half of the required certificate courses at Lakeland to be eligible for the certificate.

<table>
<thead>
<tr>
<th>Gainful Employment</th>
<th>Program Name</th>
<th>Program Type</th>
<th>Area of Study</th>
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<tbody>
<tr>
<td>G/E</td>
<td>Multi-Skilled Health Technology (9325), AAS (<a href="https://catalog.lakelandcc.edu/degree-certificate-programs/hlth/9325">https://catalog.lakelandcc.edu/degree-certificate-programs/hlth/9325</a>)</td>
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*Gainful employment programs; reporting available in compliance with the U.S Department of Education*
EMTS 1010 Emergency Medical Technician-Basic  
Prerequisite: CPR-American Heart Association: Health Care Provider, 18 years of age or older.
This introductory course provides basic knowledge and skills used in the treatment and transport of the sick or injured until they reach the hospital. The course places emphasis on anatomy and physiology related to the EMT's role in lifting and moving patients, trauma and medical patient management, and airway and cardiac management. Successful completion of this course qualifies students to take the National Registry Certification Exam for Basic EMT.
(9 contact hours: 6 lecture, 3 lab)

EMTS 2011 Paramedic Beginner  
Prerequisite: Admission to the Paramedic program, current Ohio EMT certification, current American Heart Association: Health Care Provider or American Red Cross: Professional Rescuer CPR card.
This is an introductory course for Emergency Medical Technician Paramedic (EMT-P) which provides the basic knowledge and skill for general patient assessment, general pharmacology, pathophysiology of shock, burn management, communicable disease prevention, respiratory management, and trauma care in the pre-hospital setting. Classroom and clinical experiences provide refinement of skills learned. This is the first of a series of four courses required for state certification.
(28 contact hours: 7 lecture, 6 lab, 15 clinical)

EMTS 2021 Paramedic Intermediate A  
Prerequisite: EMTS 2011 or permission of instructor.
This course provides students with the concepts, principles, and skills needed to care for respiratory and cardiac emergencies. Classroom and clinical experiences provide refinement of skills learned. This is the second of four courses needed for paramedic certification.
(12 contact hours: 1 lecture, 6 lab, 5 clinical)

EMTS 2031 Paramedic Intermediate B  
Prerequisite: EMTS 2021 or permission of instructor.
This course provides students with knowledge and skills needed to care for neurological, obstetrical, gynecology, and neonatology emergencies. Classroom and clinical experiences provide refinement of skills learned. This is the third course in a series of four needed for state certification.
(12 contact hours: 1 lecture, 6 lab, 5 clinical)

HIMT 1220 Coding and Classification Systems: HCPCS/CPT  
Prerequisite: HLTH 1215, HLTH 2100 or HLTH 1238.
In this introductory Health Care Common Procedure Coding (HCPCS) coding class, which includes Current Procedural Terminology (CPT), students will learn the history and structure of the HCPCS medical classification system that is used to describe and report procedures for physician and outpatient claims. Students will attain basic HCPCS coding skills in order to apply this coding system in a variety of provider settings and develop an understanding of the impact these codes have on provider reimbursement, internal reporting, and statistical and quality reporting needs within the healthcare industry.
(5 contact hours: 2 lecture, 3 lab)

HIMT 2050 Coding and Coding Classification Systems: ICD-10-CM & ICD-10-PCS  
Prerequisite: HLTH 1215, HLTH 2100 or HLTH 1238.
In this introductory ICD-10-CM and ICD-10-PCS coding class, students will learn the history and structure of the ICD-10-CM and ICD-10-PCS medical classification system that is used to describe and report diagnoses and procedures. Students will attain basic ICD-10-CM and ICD-10-PCS coding skills in order to apply this coding system in a variety of provider settings and develop an understanding of the impact these codes have on provider reimbursement, internal reporting, and statistical and quality reporting needs within the healthcare industry. Students will also explore other classification and vocabulary systems such as DSM-IV and SNOMED-CT.
(5 contact hours: 2 lecture, 3 lab)

HIMT 2530 Reimbursement Methodologies  
Prerequisite: HIMT 1220, HIMT 2050.
Students will explore how the U.S. healthcare reimbursement system functions from the perspective of the patient, the payer, and the provider. They will learn how the government and other third party payers reimburse hospitals, ambulatory surgical centers, physicians, and other healthcare providers through a prospective payment system.
(2 contact hours)

HIMT 2540 Advanced Coding  
Prerequisite: HIMT 1220, HIMT 2050.
Having already attained their basic coding skill, students will focus on case studies to determine diagnoses and procedure coding utilizing both ICD-9-CM and CPT-4. They will examine medical records and learn how to interpret actual charts, adhere to coding regulations and guidelines in code assignments, and ensure accuracy of diagnoses/procedure groupings such as DRG, APC, etc.
(5 contact hours: 2 lecture, 3 lab)
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
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<td>HLTH 1160</td>
<td>Health Coach I</td>
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<td>HLTH 1170</td>
<td>Health Coach Externship</td>
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<tr>
<td>HLTH 1238</td>
<td>Structure, Function, Disease, and Therapeutics of the Human Body</td>
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<tr>
<td>HLTH 1240</td>
<td>Phlebotomy</td>
<td>3</td>
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<tr>
<td>HLTH 1260</td>
<td>Phlebotomy Clinical Practicum</td>
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<td>HLTH 1265</td>
<td>Phlebotomy Seminar</td>
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<td>HLTH 1300</td>
<td>Nutrition and Family Health</td>
<td>(TAG) 2</td>
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<td>HLTH 1310</td>
<td>Nutrition and Diet Therapy</td>
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<tr>
<td>HLTH 1350</td>
<td>Nursing Assistant</td>
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</table>

This course introduces pre-health career students to the concept of a health coach to assist case managers with home visits after discharge from a care facility. The course will introduce learners to health coach concepts, role, and issues. It places emphasis on healthcare, coaching skills, communication skills, motivational interviewing, ethical and legal considerations, health, nutrition and wellness, disease and mental health, and accessing community resources.

(4 contact hours: 1 lecture, 3 lab)

**Prerequisite:** HLTH 1160 Health Coach I.

This course specializes in the application of skills acquired in HLTH 1160 Health Coach I. Students will gain experience in performing Health Coach skills with a supervising registered nurse (RN).

(13 contact hours: 13 clinical)

This course introduces students to basic human body structure and function using the body-systems approach. It emphasizes the interrelationships between body system structure and function with common diseases, diagnostic tests and treatments.

(4 contact hours)

**Prerequisite:** HLTH 1215, admission to the Phlebotomy program or admission to the Medical Assisting program or permission of the Phlebotomy program coordinator.

This course introduces and reinforces the theory and practice of phlebotomy. Students will become familiar with the evacuated tube, syringe, butterfly, and capillary methods of blood collection. The course also introduces point-of-care testing and CLIA waived laboratory test procedures along with collection, processing, and handling of nonblood and blood samples. It explores errors in the pre-analytical process and their effect on laboratory results. Laboratory procedures include venipuncture, capillary puncture, and point-of-care testing.

(5 contact hours: 2 lecture, 3 lab)

**Prerequisites:** HLTH 1240, HLTH 1265 (must be taken concurrently).

This course specializes in the practice of phlebotomy procedures as performed by students in the clinical laboratory or associated facilities, with practical application of phlebotomy techniques learned in HLTH 1240 Phlebotomy.

(12 contact hours: 12 clinical)

**Prerequisites:** HLTH 1260 (must be taken concurrently).

This course specializes in the issues and trends in healthcare, including ethics and law, government regulations, professional development, employment opportunities, interviewing techniques, resume writing and job seeking skills. The course includes discussion of practicum experiences.

(1 contact hour)

This course provides non-nursing majors with an overview of basic nutrition principles. Students will investigate nutrition goals, requirements, and problems of young adults, older adults, pregnant women, infants, preschoolers, children, and adolescents. Students will learn to evaluate food products for their nutritional value, using reliable nutrition information, food guides, and food labels. The course places emphasis on energy balance and maintaining good health by making good nutrition choices.

(2 contact hours)

This course, designed for nursing students, provides fundamental theoretical knowledge related to the basic principles of nutrition. It places emphasis on the practical application of these principles to diet therapy requirements for maintenance of wellness in all age groups. Although it is not a prerequisite for this course, students will benefit from having taken BIOL 1200 Fundamentals of Biology for the Health Technologies prior to taking this course.

(2 contact hours)

This course introduces basic knowledge and skills for care of the clients in a nursing home or long-term care facility. Successful completion of this course qualifies students to take the Ohio Department of Health’s Training Competency Evaluation Test to become a State-Tested Nursing Assistant.

(6 contact hours: 3 lecture, 3 lab)
HLTH 1400 Customer Service and Healthcare  
2 Credits  
This course explores the definition and characteristics of healthcare customers and the importance of customer service in today's competitive healthcare market. It emphasizes patient rights and responsibilities, complaint resolution, verbal and non-verbal communication, telephone etiquette and interviewing skills, and laws and regulations as they apply to customer service.  
(2 contact hours)  

HLTH 1600 Basic Pharmacology  
2 Credits  
Prerequisite: HLTH 1215 (can be taken concurrently), MATH 0745 or placement into MATH 0850.  
This course introduces basic principles and concepts of pharmacology, including dosage calculations, drug classifications and uses, sources of drugs, storage and handling of medications, prescribing and dispensing drugs, drug abuse and the role of the healthcare provider concerning medications. The course includes record keeping, documentation and legal concerns.  
(2 contact hours)  

HLTH 1700 Basic Electrocardiography  
2 Credits  
Prerequisite: HLTH 1215.  
This course provides fundamental knowledge of electrocardiography testing, including the anatomy and physiology of the heart and circulatory system, electrophysiology, electrocardiography techniques, and common arrhythmia. Students must provide their own calipers.  
(2 contact hours)  

MDAS 1110 Introduction to Medical Assisting  
3 Credits  
Prerequisite: HLTH 1215.  
This course focuses on preparing for the career of medical assisting. It addresses study skills, therapeutic communications, professional societies, and duties of medical office personnel, including screening and processing mail, scheduling and monitoring appointments, and the physical management of the office.  
(4 contact hours: 2 lecture, 2 lab)  

MDAS 1150 Medical Office Insurance and Reimbursements  
3 Credits  
Prerequisite: HLTH 1215.  
This course focuses on the concept of medical insurance and billing procedures for the medical office. It includes the use of insurance terminology, types of insurance coverage, assignment of benefits, and claim forms preparation.  
(4 contact hours: 2 lecture, 2 lab)  

MDAS 1210 Basic Patient Skills  
2 Credits  
Prerequisite: HLTH 1238, MDAS 1110, MDAS 1150.  
This course applies the theory and practice of common procedures in the physician's office related to the medical record and patient care. Students will learn the medical assistant role in patient charting and documenting in a patient's medical record, which includes performing patient screening using established office protocols, performing and documenting vital signs/anthropometric measurements, and common methods and instruments used to assist a physician during a physician exam.  
(4 contact hours: 1 lecture, 3 lab)  

MDAS 1220 Specialty Medical Assisting  
3 Credits  
Prerequisite: HLTH 1238, MDAS 1110, MDAS 1150.  
This course applies the theory and practice of common procedures in a physician's office related to pharmacology and specialty examinations. Students will discuss the medical assistant's role in identifying common pathology related to body systems, diagnostic measurements, treatment modalities, patient instruction, and the role of the medical assistant in preparation and administration of medications under the direction of a physician.  
(7 contact hours: 1 lecture, 6 lab)  

MDAS 1250 Medical Office Surgical Procedures  
2 Credits  
Prerequisite: HLTH 1238, MDAS 1110 or MDAS 1150.  
This course introduces students to surgical asepsis, instrumentation, common procedures, and sterilization procedures.  
(3 contact hours: 1 lecture, 2 lab)  

MDAS 1300 Physician Office Laboratory  
2 Credits  
Prerequisite: HLTH 1215, HLTH 1238, MDAS 1110.  
This course focuses on the fundamentals of laboratory procedures for students preparing for a career in Medical Assisting, including theory and practice in basic CLIA (Clinical Laboratory Improvement Amendment) waived tests, specimen transport, laboratory safety, and quality control.  
(3 contact hours: 1 lecture, 2 lab)
MDAS 1700 Medical Assisting Practicum  3 Credits
Prerequisite: CPR-American Heart Association: Health Care Provider, successful completion of all other courses required in the Medical Assisting program, MDAS 1800 (must be taken concurrently).
This course specializes in the application of skills acquired in previous medical assisting coursework. Students will gain experience in both administrative and clinical office procedures.
(15 contact hours: 15 clinical)

MDAS 1800 Medical Assisting Seminar  1 Credit
Prerequisite: successful completion of all other courses required in the Medical Assisting program, MDAS 1700 (must be taken concurrently).
This course introduces issues and trends in medical assisting, government regulations, professional development, employment opportunities, interviewing techniques, resume writing, job seeking skills, and discussion of practicum experiences.
(1 contact hour)

MDLT 2151 Blood Collection Techniques  1 Credit
Prerequisite: MDLT 2150 (can be taken concurrently) or admission to the Medical Assisting program or permission of the MDLT program director.
This course introduces students to theory and practice of blood collection. It focuses on the phlebotomy process and the role of the laboratorian in the pre-analytical process. Laboratory experience includes phlebotomy techniques. Students will learn how to correlate laboratory results with errors in the pre-analytical process.
(1.6 contact hours: 0.7 lecture, 0.9 lab)

PEHR 1250 First Aid  2 Credits
This course introduces students to accident or sudden illness recognition and the analysis and correct application of first aid procedures when immediate or temporary care is needed. Laboratory experience includes practice on both mannequins and classmates. Successful completion of lab experience and standardized exam will enable students to achieve American Red Cross certification in Adult CPR and Responding to Emergencies.
(2 contact hours)

PEHR 1500 Health and Wellness  1 Credit
This course introduces students to topical health information emphasizing the six dimensions of health: physical, emotional, environmental, intellectual, social, and spiritual. It also includes the health and skill-related components of fitness, stress management, disease prevention, and prevention of alcohol, tobacco, and drug abuse. The course emphasizes making positive lifestyle choices for optimal health and wellness.
(1 contact hour)

PEHR 1550 Introduction to Personal Training  2 Credits
This course provides an introduction to the personal training profession, including information pertaining to legal issues, program design, assessment, history and future of the profession, and personal qualifications and certification.
(2 contact hours)

PEHR 1600 Exercise Physiology I  2 Credits
This course emphasizes fundamental principles that provide basic and balanced information for the study of exercise physiology for the introductory level student. It examines both the immediate responses to, as well as the long-term benefits of, exercise and how the body responds to the high physiological demands of physical activity. The course covers the essentials of movement, energy for movement, cardio-respiratory function and performance, environmental influences on performance, optimizing performance in sport, age and sex considerations, and physical activity for health and fitness.
(3 contact hours: 1 lecture, 2 lab)

PEHR 1650 Health Fitness  2 Credits
This course introduces students to the development of optimal fitness and wellness lifestyles. The course emphasizes aerobic conditioning, nutrition, body composition, muscle strength and endurance, flexibility, skill-related fitness components, and early detection and prevention of disease, and alcohol, tobacco, and drug abuse. Laboratory experiences assess fitness classifications and participation in regular cardiovascular exercises.
(3 contact hours: 1 lecture, 2 lab)

PEHR 1660 Diet and Weight Management Strategies for Sport and Fitness  2 Credits
This course introduces students to the study of food and the effects on health, physical activity, and performance. It emphasizes dietary intake of vitamins, minerals, protein, fat, carbohydrates, supplements, and water, and how these various components influence energy, body weight, body composition, metabolism rate, and performance, as well as how to incorporate this knowledge into a health-related fitness program for physically active individuals and athletes.
(2 contact hours)
PEHR 1670 Instructional Techniques: Strength and Cardio Fitness Training 2 Credits
This course introduces students to strength and cardio fitness training as a part of total body fitness. The course emphasizes methods of instruction and individualized program development with emphasis on elements of fitness, weight training fundamentals, cardio fitness training, motivation and mental conditioning, muscle identification and function, flexibility, injuries, nutrition, drugs, and equipment use. Laboratory experiences will address methods of instruction, training techniques, proper equipment use, and equipment maintenance. (3 contact hours: 1 lecture, 2 lab)

PEHR 1750 Personal Health 3 Credits
This course includes topical information that enables students to develop a healthy lifestyle of optimal fitness and wellness. The course emphasizes critical thinking on contemporary health issues and includes discussion of fitness (strength/aerobic), nutrition, stress, relationships, heart disease, chronic and infectious diseases, cancer, smoking, alcohol, drugs, disease prevention, psychological health, parenting, aging, and environmental and safety issues and concerns. (3 contact hours)

PEHR 2500 Athletic Training 2 Credits
This course introduces students to the basic components of a comprehensive athletic training program. It includes a study of injury prevention, recognition, and rehabilitation, as well as the healing process, commonly utilized modalities, and administrative procedures. (2 contact hours)

PEHR 2750 Personal Trainer Internship/Seminar 2 Credits
Prerequisite: COMM 1100, PEHR 1250, PEHR 1550, PEHR 1670, PEHR 2500, permission of the Physical Education department chair. Students will gain practical experience by working five hours per week for 15 weeks under the direct supervision of a professional personal trainer within an off-campus work setting. The in-class seminar portion of the course will serve as a forum for student discussion of on-the-job experiences and provide students with an overview of the procedural, ethical, and liability issues faced by a personal trainer. In addition, it will help students develop job-seeking skills and provide information pertaining to professional certifications. (6 contact hours: 1 lecture, 5 lab)

POLY 1100 Beginning Polysomnography 2 Credits
Prerequisite: admission to Polysomnography program, a grade of “C” or better in HLTH 1215.
An overview of the field of Polysomnography including job responsibilities, credentialing, medical ethics, and patient confidentiality. Review of normal sleep and abnormal sleep disorders, integrating the physiological functions of the nervous, respiratory, and cardiovascular system. An emphasis is placed on an overview of basic sleep sciences, physiology, patient monitoring, electrical safety, and various sleep disorder treatments. (2 contact hours)

POLY 1200 Intermediate Polysomnography 4 Credits
Prerequisite: POLY 1100.
This course discusses recording montages for acquisition of Polysomnographic studies and intervention procedures. Students will apply fundamental procedures to simulated case studies and practice them in the laboratory and clinical facilities under the supervision of a registered polysomnographic technologist. (16 contact hours: 2 lecture, 2 lab, 12 clinical)

POLY 1300 Advanced Polysomnography 4 Credits
Prerequisite: POLY 1100, POLY 1200.
This advanced course covers the presentation and discussion of cognitive and psychomotor practices related to interpretation and scoring of the polysomnogram (PSG) for adult and pediatric patients. Students will score acquisitions, apply continuous positive airway pressure (CPAP) and bilevel positive airway pressures (BiPAP) equipment, and focus on artifact and troubleshooting of sleep montages in the clinical setting. The students will also practice Multiple Sleep Latency Testing (MSLT) and Maintenance of Wakefulness Testing (MWT) in the clinical setting. (16 contact hours: 2 lecture, 2 lab, 12 clinical)