

CHARLES R. DREW
SIMULATION SCIENCE
CENTER

*Leading the Community in Allied
Healthcare Training and Certification*

Post
Secondary
Program
Course
Catalogue
Spring
2022

Certification Program Options:

- Certified Billing & Coding Specialist
- Certified Clinical Medical Assistant
- Certified Medical Administrative Assistant
- Certified EKG Technician
- Certified Electronic Health Records Specialist
- Certified Patient Care Technician
- Certified Pharmacy Technician
- Certified Phlebotomy Technician
- CPR Adult and Pediatric/First-Aid/AED
- Certified Corrective Exercise Specialist
- Certified Nutrition Coach
- Certified Personal Trainer

Students complete a combination of four general core class modules and four elective class modules to meet the criteria for candidacy based on accrediting agency guidelines. Pacing guidelines are set at 5, 10, 15, 20 and 40 weeks depending on student desire and ability to move through the courses successfully.

Course Codes and Titles:

AH-100-2019 Medical Terminology
AH-100-2020 Medical Terminology
AH-101-2020 Medical Language for Certified Healthcare
AH-102-2020 Math and Dosage Calculations for Healthcare Professionals
AH-104-2020 Anatomy and Physiology Lecture
AH-104B-2020 Anatomy and Physiology Lab
AH-105-2020 Anatomy, Physiology and Disease Lecture
AH-105B-2020 Anatomy, Physiology and Disease Lab
ER-101-2019 Electronic Health Records
ER-101-2020 Electronic Health Records
HI-100-2019 Health Science Technology: Exploring Careers
HI-101-2019 Health Science Technology: Capstone
HI-102-2020 Health Information Management and Technology
HI-103-2020 Computers in the Medical Office
HI-200-2020 Medical Insurance in Healthcare
MA-100-2019 Medical Assisting Administrative and Clinical A
MA-100-2020 Medical Assisting Administrative and Clinical B
MA-104-2020 Electrocardiography for Healthcare Professionals
MBC-100-2019 Introduction to Common Procedural Terminology
MBC-101-2019 Introduction to International Classification of Diseases
MBC-102-2020 Advanced Medical Billing and Coding
ME-100-2019 Medical Ethics
ME-100-2020 Medical Ethics
MOP-101A-2019 Medical Office Procedures
MOP-101A-2020 Medical Office Procedures
MOP-102-2020 Medical Office Simulations
NF-100-2020 Nutrition and Fitness Calc+
NF-101-2020 Nutrition for Health, Fitness and Sport
NF-102-2020 Exercise Physiology
NF-103-2020 Principles of Athletic Training
NF-104-2020 Sports in Society: Issues and Controversies

NF-105-2020 Essentials of Athletic Injury Management
PH-101-2019 Administering Medications
PH-101-2020 Administering Medications
PH-102-2019 Pharmacology: An Introduction
PHL-100-2019 Principles of Phlebotomy
PHL-101-2020 Principles of Phlebotomy

Course Titles and Course Descriptions

AH-100-2019 Medical Terminology

The course involves the study of the words used to describe the human body as a critically important subject for those looking to work in a health care profession. The general course reviews prefix, root, suffix and combined form most commonly used. This online general education health science course; can be taken by students from all certification areas.

AH-100-2020 Medical Terminology

This course is an update to the study of the words used to describe the human body as a critically important subject for those looking to work in a health care profession. The general course reviews prefix, root, suffix and combined form most commonly used. This online general education health science course; can be taken by students from all certification areas.

AH-101-2020 Medical Language for Certified Healthcare

In this course, the study of medical terminology introduces students to the language of medicine. Students will gain an understanding of basic elements, rules of building and analyzing medical words, and medical terms associated with the body as a whole. The use of medical terminology principles of combined root form word building will help the student develop the extensive medical vocabulary used in health care occupations. Students receive a thorough grounding in basic medical terminology through a study of root words, prefixes and suffixes while incorporating cases of disease and disorder.

AH-102-2020 Math and Dosage Calculations for Healthcare Professionals

This course prepares students to learn with the principles of dosage calculations use to provide treatment to patients. The curriculum is specialized as an easy-to-use homework and learning management solution with a clear digital advantage embedded in a strong mathematical foundation. There is a review of calculations including decimals, fractions, scientific conversions, and dimensional analysis. Routes of transmission and medical devices uses are secondary topics covered throughout the course.

AH-104-2020 Anatomy and Physiology Lecture

The fundamentals of anatomy and physiology in this course use core themes and solid vocabulary. This introductory course offers review lessons in gross anatomy and basic biological principles that are the foundation to understanding more complex human systems concepts. The study includes the structure, function, and relationship between body systems, and parts as well as how they work as a whole.

AH-104B-2020 Anatomy and Physiology Lab

This course is the practicum course to Anatomy and Physiology Lecture. Scientific study of the chemistry and basis physics of the human body is a part of this course. Course concepts include the principles used to understand what happens in a healthy body by studying how it performs daily functions, and how they interact to form tissues, organs and systems. The focus of this course is to introduce cellular and systemic studies through a variety of media and mechanisms.

AH-105-2020 Anatomy, Physiology and Disease Lecture

This course is the study of human anatomical structure and function, physiology and disease pathology. The course design is for health care professionals in long-term patient care. Students will explore the causes, pathology, signs, and symptoms of diseases and use medical terminology to explore how specific illnesses effect the body. Studies of histology and embryology are included as many congenital disorders have lasting effects.

AH-105B-2020 Anatomy, Physiology and Disease Lab

This Anatomy, Physiology and Disease course is a laboratory-based course that investigates the structure and function of the human body. Topics covered will include the basic organization of the body and major body systems along with the impact of diseases on certain systems. There is an emphasis on growth and development, assessment, diagnosis and treatment of diseases. In order to provide real life simulations for scientific inquiry, medical case review and scenarios; are incorporated into the curriculum.

ER-101-2019 Electronic Health Records

This course introduces basic concepts of electronic implementation and use of Electronic Health Records (EHR) using the latest version of HAMILTON with Spring-Charts Integrated Software. Students who complete this course will learn the appropriate technical skills and medical terminology applications to perform with medical records platforms. Course includes skill development in basic medical computer systems and explores issues regarding privacy, confidentiality and HIPAA regulations in all aspects of the healthcare delivery system

ER-101-2020 Electronic Health Records

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HI-100-2019 Health Science Technology: Exploring Careers

This course introduces the student to health science through career exploration and preparation. The course offers an introductory overview of legal responsibilities, HOSA principles, personal health and qualities of healthcare workers, anatomy and physiology, medical terminology, genetics, human growth and development, pharmacology, administration of drugs, medical math and medicine. This course explores all levels of careers in healthcare and reviews the education and training need for all aspects of the industry. The content of this course is aligned with the Model CTE standards, the NGSS standards, and the California high school academic core content area standards. This course satisfies the high school "g" requirement and serves as an introductory course for the Health Science and Medical Technology CTE Pathway.

HI-101-2019 Health Science Technology: Capstone

This course provides advanced career preparation and experiences for students in the healthcare industry and promotes health science essential knowledge. This course is a culminating demonstration that reflects student's readiness for entry-level careers in the field. The course offers an overview of legal responsibilities, HOSA principles, personal health and qualities of healthcare workers, anatomy and physiology, medical terminology, genetics, human growth and development, sexual reproduction and sexual health, pharmacology, administration of drugs, medical math and medicine, the use of technology in healthcare, mental, emotional, social, and community health & outreach. The course serves as a capstone course for both college-bound and all Health Science and Medical Technology CTE pathways and leads to various areas of possible certification. The content of this course is aligned with, the Model CTE standards, the NGSS standards, and the California high school academic core content area standards. This course satisfies the high school "g" requirement, and serves the Capstone course for the Health Science and Medical Technology CTE Pathway.

HI-102-2020 Health Information Management and Technology

This course focuses on the history and evolution of the healthcare delivery system in the United States. The concepts in this course begin with new government laws, regulations, reform and summarizes the roles of key stakeholders in the transformation of modern health. Students learn relative concepts such as employment responsibilities, credential and professional development requirements, educational opportunities, management strategies, and information technology systems. The course includes an overview in the area of fiscal management, accounting, quality and risk assessment, loss prevention and HIPAA guidelines.

HI-103-2020 Computers in the Medical Office

This course focuses on the fundamental computer skills needed to work in an administrative or clerical medical office setting. Medi-Soft Software System provides the platform for student introduction to practice management systems. Current and realistic cases that involve billing, scheduling, record keeping, and communications through simulation and scenario case studies a part of the core concepts studied in the course. Students all review basic skills such as Microsoft Office, equipment and media used in communication, such as fax, email, scan, and telecommunications mechanisms.

HI-200-2020 Medical Insurance in Healthcare

This course introduces students to the practice of medical insurance claims submission and processing in the United States healthcare delivery system. Students will gain knowledge in private and government programs such as Medicare and Medicaid as well as changes to coverage under the ACA. Students explore reimbursement and payment methods; examine forms, processes, practices, and the role of the health information professional. Regulations and healthcare legislation are reviewed to provide reinforcement knowledge to the process.

MA-100-2019 Medical Assisting Administrative and Clinical A

This course prepares students for an entry-level position in administration of healthcare. Students practice basic medical terminology and administrative front office procedures. Students demonstrate tasks such as appointment setting, record keeping, phoning in prescriptions, patient communications, healthcare network providers, and medical ethics.

MA-100-2020 Medical Assisting Administrative and Clinical B

This course prepares students for a career in clinical medicine. Students learn patient care skills used in the medical office, hospitals and other clinical settings such as, vital signs, administering medications, phlebotomy, exam room preparation and documentation of lab and test results. This course provides students with a foundation that serves as a gateway to higher-level patient care positions such as Registered Nurse, Physician Assistant, and Laboratory Director.

MA-104-2020 Electrocardiography for Healthcare Professionals

Basic Principles of electrocardiographic devices and their use in testing electrical impulses from the heart. Students learn how to record EKGs, vital signs, cardiac rhythms and stress. Concepts include general anatomy of the cardiovascular system, myocardial infarction, medications and electric therapy, waves and measurements, patient care safety and the general role of the EKG Technician in healthcare.

MBC-100-2019 Introduction to Common Procedural Terminology

This course is a foundational introduction to Common Procedural Terminology (CPT). The CPT system is the descriptive terminology and associated code numbers provide the universal medical nomenclature used to report medical procedures and services. Students learn to code and practice using database simulated scenarios. Students apply knowledge of terminology, anatomy and disease to describe tests, surgeries, evaluations, and any other medical procedure performed. Students learn how to code for the thousands of procedures and their relative

diseases and disorders during the introduction to the complement coding systems ICD-9 and ICD-10.

MBC-101-2019 Introduction to International Classification of Diseases

This course is an introduction to the diagnosis classification system developed by the Centers for Disease Control and Prevention (CDC) to allow healthcare facilities and providers to assign codes for billing purpose. The course provide the student with the basics of the diagnostic coding system used in healthcare. This course focuses on the ICD-10 as the most recent classification system as compared to ICD-9. Students will focus on two subclasses of codes ICD10-CM outlining Clinical Modifications, and ICD-10-PCS outlining the Procedural Coding System.

MBC-102-2020 Advanced Medical Billing and Coding

This advanced course further prepares students interested in pursuing a career in healthcare in the area of billing and claims management policy and processing. The course allows students to take an in depth look at the four purposes of coding, the structure and set up of the coding manual and differences between procedures. Students examine HCPCS Level II coding and practice process management through real-world case scenarios providing opportunities to incorporate the knowledge of medical terminology, anatomy and disease.

ME-100-2019 Medical Ethics

This course introduces students to issues and conflicts that arise in the healthcare industry and how those situations can be resolved with respect for rights and privileges. Students discuss the ethical responsibilities of the medical professional with mandatory reporting for minors, and other victims and how that important documentation for forensics is used. Students debate issues concerning family decisions on euthanasia, genetic control and treatment for the mentally ill and disabled. Students also learn about the personal and professional impact of the moral decision making process in research and patient care.

ME-100-2020 Medical Ethics

This course provides an opportunity for students to view medical ethics from a concentration case study approach. Recent advancements in technology specifically neurology and reproduction controversies are analyzed. Students examine the role of and access to medicine in society and ways to assess the impact of performing various medical procedures. Students learn how the provider and patient relationship creates a sense of dignity during the treatment process.

MOP-101A-2019 Medical Office Procedures

This administrative course will allow the student to learn about the basics of managing the front office in the medical and allied health industry. Students will learn about the ethical, professional, communications, and technology skills needed in commonly used office procedures. Students receive information on a database of 25-35 fictitious patients to practice scheduling appointments, telecommunications, records management, billing and collections, finance and insurance, patient information brochures, transcription, and emergency procedures.

MOP-101A-2020 Medical Office Procedures

This administrative course will allow the student to learn about the basics of managing the front office in the medical and allied health industry. Students will learn about the ethical, professional, communications, and technology skills needed in commonly used office procedures. Embedded into the curriculum of this course are practice simulation platform scenarios to provide for work-based learning experiences. Students receive information on a database of 25-35 fictitious patients to practice scheduling appointments, telecommunications, records management, billing and collections, finance and insurance, patient information brochures, transcription, and emergency procedures.

NF-100-2020 Nutrition and Fitness Calc+

This supplemental laboratory-based course is an interface tool database consisting of platforms for nutritional profiles, reports, documentation, monitoring and activities. Students will learn proper eating habits, steps of diet analysis, meal preparation and tracking. This dashboard provides students with tools used to assist in the completion of core assignments and helps students learn how to develop a sound nutrition plan for achieving a healthy lifestyle.

NF-101-2020 Nutrition for Health, Fitness and Sport

This course is an introductory to the nutritional principles used in health and fitness. Students will learn about the human energy cycle and the role of carbohydrates and other food categories as the main source of the body's energy. Students will be able to analyze the role of lipids during exercise and the importance of protein as a tissue builder. Concepts in this course also include biochemical analysis of water, electrolytes, and minerals and their relationship to advanced athletic performance. The course reviews energy pathways involved in homeostasis and metabolism. Weight management techniques, the metric system and measurements, athletic dosing concepts are also a part of the curriculum.

NF-102-2020 Exercise Physiology

This course is an in-depth survey of the biomechanics involved in movement, fitness, sports, and daily living. Students study concepts such as cellular signaling, and immune response to exercise, and major regulatory processes of the body. Specific physiology or resistance training, effect of aerobics, acid-base balance principles and nervous system control are a part of this curriculum. Students analyze the relationship between chronic disease, physical activity and healthy eating. Students study and apply factors that affect training performance, biological considerations of training, nutrition vs body composition in combat and ergogenic aids.

NF-103-2020 Principles of Athletic Training

This course introduces the student to the field of sports medicine and the concept that the athletic trainer is a healthcare provider. This course also serves as an introduction to the foundational aspects of injury prevention, treatment, disease and disorders associated with training for and participating in athletic competitions. Students learn about networking and regulatory agencies, as well as legal and insurance concerns. This course includes concepts in vitamins and supplements; fitness and conditioning; protective equipment and environmental considerations. Injury recovery and rehabilitation, acute care response, emergency procedures, are a part of the course. Analysis of psychological and physiological response to athletic injury are a part in this course.

NF-104-2020 Sports in Society: Issues and Controversies

This course is for students who are majoring in sports medicine and related fields. It includes instruction on how narratives and images are used through sports media and broadcasting in today's age. This course also covers major concepts in management and psychology of athletes and their role in society as teammates and individuals. Students discuss issues that athletes face in competition and in society and how those issues effect the athlete as a both a player and person. Aspects of this course include the role of youth sports in childhood, the history, definition, criteria and development of organized sports on all levels, and deviance during performance. Students will also debate trends and policies related to gender and equity.

NF-105-2020 Essentials of Athletic Injury Management

This is an in-depth course on prevention and rehabilitation of injuries sustained in sports. Students will learn about the sports medicine team, and how to create a unique total health care system, matching athletic needs. Nutrition and fitness maintenance, protective equipment use, and adverse conditions, are under review in this course. The course also includes a detailed look of sports injuries and ailments including substance abuse. Students will research basic anatomy and kinesiology principles and become familiar with employment settings and requirements for certification.

PH-101-2019 Administering Medications

This course is for students in the patient care sector of the Health Science industry. Principles of drug interaction and a basic orientation to medicine are covered. Students review measurements and dosage calculations. Students learn concepts of medication therapy and administration of all types of medication. This course introduces drug and treatment specific to areas of anatomy and includes lists of classes, types, schedules, frequently used and common medications. Drugs for special populations in healthcare are studied including, psychotropic, antineoplastic, pediatric and geriatric medicine.

PH-101-2020 Administering Medications

This course includes animations and video platforms for students studying in the patient care sector of the Health Science industry. Principles of drug interaction and a basic orientation to medicine are covered. Students review measurements and dosage calculations. Students learn concepts of medication therapy and administration of all types of medication. Students learn and practice injection techniques, and various anatomical point of entry for all types of medications for the patient. This course introduces drug and treatment specific to areas of anatomy and includes lists of classes, types, schedules, frequently used and common medications. Drugs for special populations in healthcare are studied including, psychotropic, antineoplastic, pediatric and geriatric medicine.

PH-102-2019 Pharmacology: An Introduction

This course approaches principles of pharmacology from a biochemical perspective. Dosage, measurements and calculations are a part of this course. The essential elements of chemical classifications studied include diuretics, hypo-lipidemic, antihypertensive, steroids, and non-steroidal anti-inflammatory drugs. Students research the role and physiological effect of chemo and hormonal therapies and the concepts of immuno-pharmacology. The course includes specialized units in Cardiology that review cardiac physiology and pathology as well as introducing treatment for heart failure.

PHL-100-2019 Principles of Phlebotomy

This course provides the students with the principles of phlebotomy and teaches the important role the professional plays in diagnosis and treatment of disease and disorder. The curriculum introductory unit includes protocol on infection control and safety. Students practice with basic concepts of terminology and anatomy, and review patient and specimen requirements. The course provides opportunities for students to learn and perform relevant laboratory tests, specimen collection and equipment, and venipuncture techniques. Students introduced to The Vacutainer System and practice through on-line platforms and medical simulation databases.

PHL-101-2020 Principles of Phlebotomy

This course provides the students with the principles of phlebotomy and teaches the important role the professional plays in diagnosis and treatment of disease and disorder. The curriculum introductory unit includes protocol on infection control and safety. This phlebotomy course includes a practice atlas emphasizing bodily anatomy involved in collection techniques. Students practice with basic concepts of terminology and anatomy, and review patient and specimen requirements. The course provides opportunities for students to learn and perform relevant laboratory tests, specimen collection and equipment, and venipuncture techniques. Students introduced to The Vacutainer System and practice through on-line platforms and medical simulation databases.