Altierus Career College – Catalog Addendum

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Addendum to the College Catalog – Volume VIII Version I

October 2022

The catalog addendum contains the academic calendar and any changes to policy or programming that are effective after the publication of the current catalog version identified above. In addition, this catalog addendum contains temporary changes related to the COVID-19 campus response. All information listed below is considered to be policy based on the effective/change date that corresponds with the item and will be deemed to remain in effect unless removed from the addendum or accompanied by an end date.

As of April 2022, Altierus Career College is no longer accepting applications or enrolling new students. Classes and programs will continue for current students and the campus will continue to provide support resources and career services through graduation and for a period of time thereafter.

Due to the campus teach-out, the 2022 College Catalog – Volume VIII Version I will remain valid and in effect through the teach out of the campus in 2023 unless a new version is published before that date.

CAMPUS ADMINISTRATION

Tampa Administration	
Tim Dengler	Campus Director
Amy VanAuken	Academic Dean
Deidre Gates	Director of Career Services

CAMPUS OPERATING HOURS

Administration:	Financial Aid:
Monday 9:00 am to 5:00 pm Tuesday through Thursday 9:00 am to 7:00 pm *Academic Dean 9-6pm* Friday 9:00 am to 3:00 pm	Remote Support Monday through Friday 9:00 to 5:00 pm Ph: 1-877- 548-0010 altierusfinanicalaid@altierus.edu

TUITION AND FEES*

Diploma Program	Program Length	Quarter Credits	Tuition	Textbooks & Equipment	Total Cost (estimated)
Dental Assistant	37 weeks	54	$15,822	Included in tuition	$15,822
Electrical Construction Technician	36 weeks	54	$15,822	Included in tuition	$15,822
HVAC Technician	36 weeks	54	$15,822	Included in tuition	$15,822
Industrial Electrical Technician	36 Weeks	54	$15,822	Included in tuition	$15,822
Massage Therapy	36 weeks	48	$13,200	Included in tuition	$13,200
Medical Assistant	41 weeks	60	$18,060	Included in tuition	$18,060
Medical Billing and Coding	33 weeks	48	$14,976	Included in tuition	$14,976
Pharmacy Technician	33 weeks	48	$14,976	Included in tuition	$14,976
Refrigeration Technician	36 Weeks	54	$15,822	Included in tuition	$15,822
Associate of Science Program	**Program Length**	**Quarter Credits**	**Tuition**	**Textbooks & Equipment**	**Total Cost (estimated)**
Nursing, (RN)	24 months	108	$345/credit hour attempted	Included in tuition	Expected total $37,260

** The campus stopped enrolling new students in April 2022. As of July 2022, the Nursing (RN) program has been taught out.*

Textbooks are included in the undergraduate tuition and are provided as eBook or hard copy at the School's discretion. When electronic books are issued, hard copies may be purchased at an additional cost.

Book Costs and Opt-Out Policy - The School has an arrangement with a third-party textbook provider that enables the School to make required books available to students below competitive market rates. These book costs are included in tuition, and the School provides these books to students, without additional charges, by the seventh day of the financial aid payment period. Opting out of the included books and automatic delivery of required print/electronic books and materials, is not recommended. However, students wishing to opt-out of receiving their books from the School may obtain an Opt-Out and Waiver of Supplied Books Request form by requesting one from a Financial Aid planner or student services advisor, and complete and return the form to the Financial Aid planner at least 10 days before the beginning of the term. Students who register late and wish to opt-out may receive books automatically delivered, and must return such automatically delivered books in new, unused condition. As there is no additional charge for books, opting out of receiving books from the School will not result in any change to tuition.

The tuition table only applies to:

1. New enrolling students. A new student is defined as a student who has never attended a Zenith Education Group school or has graduated and enrolled in a new program; or
2. Re-entering students who have withdrawn and are re-entering greater than 180 days from their withdrawal date (The withdrawn time period is calculated from the student's withdrawal date to the new module or term start date.); or
3. Re-entering degree students who are re-entering within 180 days

For re-entering diploma students who have withdrawn and are re-entering within 180 days, the following tuition charges apply:

- Same Program (Same / New Program Version): Will be charged tuition at the original tuition rate reflected on the original enrollment agreement less the amount charged on the prior period of enrollment (Charges plus or minus any tuition adjustments).

- Same Program (New Program Version of Different Credits / Length of Program): Will be charged tuition at the current catalog rate for the program of enrollment less the amount charged on the prior period of enrollment (Charges plus or minus any tuition adjustments).

- Different / New Program (Program Change): Will be charged tuition at the current catalog rate for the program of enrollment. A tuition credit will be determined for the student's prior period of enrollment.

ACADEMIC CALENDARS (2022 – 2023)

DIPLOMA MODULAR PROGRAMS

Modular/Diploma Calendar 2022-2023	
Module Start Dates	**End Dates***
1/10/2022	2/06/2022
2/07/2022	3/06/2022
3/07/2022	4/03/2022
4/11/2022	5/08/2022
5/09/2022	6/05/2022
6/06/2022	7/03/2022
7/11/2022	8/07/2022
8/08/2022	9/04/2022
9/06/2022	10/09/2022***
10/10/2022	11/06/2022
11/07/2022	12/04/2022
12/05/2022	1/08/2023
1/09/2023	2/05/2023
2/06/2023	3/05/2023
3/06/2023	4/02/2023

Modular/Diploma Student Holiday/Breaks – 2022 - 2023		
Holiday/ Student Breaks**	**Start Dates**	**End Dates**
Christmas & New Year Holidays	12/24/2021	1/02/2022
Martin Luther King Day	1/17/2022	1/17/2022
Presidents Day	2/21/2022	2/21/2022
Student Break	4/04/2022	04/10/2022
Memorial Day	5/30/2022	5/30/2022
Student Break	7/04/2022	7/10/2022
Labor Day	9/05/2022	9/05/2022
Veterans Day	11/11/2022	11/11/2022
Thanksgiving Holiday	11/23/2022	11/25/2022
Christmas & New Year Holidays	12/24/2022	1/02/2023
Martin Luther King Day	1/16/2023	1/16/2023
Presidents Day	2/20/2023	2/20/2023

* For programs that contain externships/practicums, the typical scheduled end date will be one week later as there is an additional scheduled week of instruction for those courses. This time is reflected in the approved program length for each applicable program. The scheduled end date will be adjusted for scheduled breaks.

** For published breaks not exceeding 5 calendar days, students will be able to access and complete online assignments through Canvas. Externship courses will be scheduled to exclude holiday breaks. Students working at externship sites may be asked to complete hours during these published breaks and will have attendance posted for any hours completed during any breaks.

*** Due to Hurricane Ian the module that was originally scheduled to end on 10/2/2022 has been extended to 10/9/2022 and the Student Break previously scheduled from 10/3/2022 – 10/9/2022 was removed. Though all online hours completed through any extended due dates will be consolidated and reflected in attendance posted 10/2/2022, all lab hours impacted by the hurricane were rescheduled during the week of 10/3/2022 and are reflected in present or absent attendance in the extended module date through 10/9/2022.

CATALOG UPDATES

Any updated School policies or information since the last publication date of the catalog will be included below.

ACADEMIC AND DISTANCE EDUCATION ADVISING AND READINESS

Online Readiness – *Revision to information on Page 7 of the Catalog – Correction to minimum score*
Prospective students are required to complete an Online Readiness Demonstration (ORD) and Online Readiness Assessment (ORA) and prior to enrollment. In the comprehensive process, individuals will demonstrate their ability to use course-related technology and will be assessed on their readiness to complete distance learning in their coursework. Any prospective student who scores below 25 points on the Online Readiness Assessment (ORA) will be required to meet with an advisor to discuss his/her scores and will be reassessed.

PROGRAM UPDATES

Any updated program information since the last publication date of the catalog, including updated program tables and additional course descriptions will be provided below.

As of April 2022, Altierus Career College is no longer accepting applications or enrolling new students. Classes and programs will continue for current students and the campus will continue to provide support resources and career services through graduation and for a period of time thereafter. As of July 2022, the AS – Nursing (RN) degree program has been taught out.

DENTAL ASSISTANT – *Revision to information on Pages 44-46 of the Catalog – Effective March 2022*
Diploma Program
37 Weeks – 840 Hours - 54 Quarter Credit Hours
Modality: Blended

Dental assistants have become indispensable to the dental care field, and dentists have become more reliant upon the dental assistant to perform a wide range of patient procedures. As the need for their services continues to grow, the role and responsibilities of the dental assistant also continue to expand.

PROGRAM DESCRIPTION: The goal of the Dental Assistant Program is to provide graduates with the skills and knowledge that will enable them to qualify for entry-level positions as dental assistants. Since they are trained in clinical and radiographic procedures, general dentists, dental office facilities specializing in pedodontics, orthodontics, endodontics and other specialties, dental schools, hospital dental departments, and correctional dental clinics, seek their services.

OBJECTIVES: The objective of the Dental Assisting program is to provide the student with the appropriate didactic theory and hands-on skills required and necessary to prepare them for entry-level positions as dental assistants in today's modern dental care offices, dental clinics, and facilities. Students will study diagnostic and procedural terminology as it relates to the accurate completion of dental examinations, procedures, and daily tasks.

The skills taught in this program will prepare students for the ever-changing field of dentistry. Students study preventive dentistry, nutrition, dental health, restorative dentistry, dental sciences, dental radiography, and dental specialties such as endodontics, periodontics, pedodontics, prosthodontics and oral surgery. Other areas of study are dental materials, dental pharmacology, law and ethics, front office procedures and software, and career development.

PROGRAM OUTCOMES: Completion of the Dental Assistant Program, including the classroom training and externship or practicum, is acknowledged by the awarding of a diploma. Upon successful completion of this program, the graduate will be able to:

- Explain and demonstrate proper infection control procedures in the dental setting with OSHA and HIPAA guidelines
- Demonstrate knowledge and competence in responding to office emergencies
- Gain CPR certification
- Take and record vital signs
- Explain the role of HIPAA in the operation of the dental office
- Understand and discuss the requirements and protocol for Blood-borne Pathogen and HIV and AIDS training
- Identify and explain the use of dental instruments
- Demonstrate aspirating techniques on a patient
- Demonstrate dental health and preventive measures such as diet and nutrition as well as dental fluorides and sealants
- Demonstrate chair-side assisting duties and techniques practiced in general dentistry with emphasis on four-handed dentistry during restorative procedures with dental manikins. Students will also demonstrate the use of Bases, liners and bonding systems
- Demonstrate the appropriate skills and techniques involved in taking impressions and constructing study and master casts
- Demonstrate proper isolation such as dental dam placement and removal on dental manikins;
- Articulate the dental sciences, anatomy and physiology as related to the head and neck as well as dental anatomy as well as the body systems
- Apply knowledge of various dental materials and dental technology such as CAD/CAM;
- Understand all dental specialties such as Endodontics, Oral and Maxillofacial Surgery, Pediatric Dentistry, Prosthodontics and Orthodontics
- Demonstrate knowledge of dental pharmacology and the proper assembly of the anesthetic syringe;

- Explain and demonstrate appropriate skills involved in processing exposed radiographs using the manual and automatic techniques, mounting a full-mouth survey of radiographs, identifying radiographic errors, and demonstrating how to correct those errors
- Students will prepare for their future as a dental assistant through various career development techniques such as resume building and interviewing skills
- Demonstrate the skills necessary to perform functions as an expanded duty dental assistant

Dental Assistant Program – Program-Specific Admissions Requirements

- Due to regulations regarding X-rays, applicants of the Dental Assistant program must be at least 17 years old.
- Applicants must complete a student disclosure form.

This 840-clock hour/54.0 credit hour program consists of eight (8) individual learning units, plus a hands-on clinical externship or practicum. Each of these "modules" stands alone as a unit of study and is not dependent upon previous training. If students do not complete any portion of a module, the entire module must be repeated. Students must start the program in IHC1000 – Introduction to the Healthcare Profession. After successful completion of IHC1000, students may enter the program at the beginning of any other module and continue through the sequence until all modules have been completed. Upon completion of the eight, (8), classroom modules, the students participate in a 200-clock-hour-externship.

Course Code	Course Title	Lecture Hours	Lab Hours	Other Hours (Externship)	Total Contact Hours	Quarter Credit Hours
Prerequisite Course						
IHC1000	Introduction to the Healthcare Profession	40	40	0	80	6.0
Core Courses						
DAD1010	Preventive Dentistry, Nutrition, Periodontics and Pedodontics	40	40	0	80	6.0
DAD1020	Restorative Dentistry	40	40	0	80	6.0
DAD1030	Dental Sciences, Oral and Maxillofacial Surgery, Pharmacology	40	40	0	80	6.0
DAD1040	Prosthodontics and Dental Materials	40	40	0	80	6.0
DAD1050	Anatomy, Endodontics and Orthodontics	40	40	0	80	6.0
DAD1060	Office Administration, Law & Ethics and Career Development	40	40	0	80	6.0
DAD1070	Dental Radiography	40	40	0	80	6.0
DAD1080	Dental Assistant Externship	0	0	200	200	6.0
	Program Totals:	**320**	**320**	**200**	**840**	**54.0**

COURSE DESCRIPTIONS

IHC1000 – Introduction to the Healthcare Profession **6.0 Quarter Credit Hours**

This course is designed to provide an introduction to the healthcare profession for new students starting an allied health diploma program. Students will learn the basics of medical terminology, anatomy and physiology, infection control, HIPAA, OSHA and HIV/AIDS. Additional topics covered include professional codes of ethics, medical insurance and billing, keyboarding, computer applications, basic mathematical skill, and critical professionalism skills. Students will have the opportunity to learn program-specific topics throughout the course. CPR certificate is also included in the course. Prerequisite: None Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

DAD1010 - Preventive Dentistry, Nutrition, Periodontics and Pedodontics **6.0 Quarter Credit Hours**

This module covers the specialty area of periodontics with an emphasis in preventive dentistry and nutrition. Diet and nutrition will be discussed highlighting on how it is related to dental caries and periodontal disease with attention to patient education. Related areas of dental sealants and fluorides are presented. Coronal polish, fluoride application and pit and fissure sealant theory and procedures are taught and practiced. The specialty Pedodontics is also discussed. Related spelling and terminology are studied throughout the module.

Prerequisite: IHC1000 Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

DAD1020 - Restorative Dentistry **6.0 Quarter Credit Hours**

This module introduces students to chair-side assisting duties and techniques practiced in general dentistry with emphasis on four-handed dentistry during restorative procedures. Students practice required skills such as dental dam placement, placement, wedging and removal of Tofflemire retainers. Procedures to include placement of bases, liners, and bonding systems are also practiced. Related spelling and terminology are studied throughout the module.
Prerequisite: IHC1000 Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

DAD1030 - Dental Sciences, Oral and Maxillofacial Surgery, Pharmacology 6.0 Quarter Credit Hours

In this module the area of the dental sciences, Oral and Maxillofacial Surgery as a specialty and dental pharmacology are studied. Dental sciences will have an emphasis in embryology and histology, oral pathology and basic microbiology. The sciences will focus on how they relate to dentistry and dental procedures. Theory and common clinical procedures of the specialty in Oral and Maxillofacial Surgery are presented and demonstrated on dental manikins. Pharmacology will be discussed as related to anesthesia and pain management and other basic pharmacology in the dental setting. Related areas of the dental anesthetics and syringe assembly are presented. Related spelling and terminology are studied throughout the module.
Prerequisite: IHC1000 Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

DAD1040 - Prosthodontics and Dental Materials 6.0 Quarter Credit Hours

This module covers the specialty area of prosthodontics in conjunction with dental materials. Prosthodontics will focus on fixed and removable prosthodontics including dental implants and latest advances in technology related to prosthodontics such as CAD/CAM. In conjunction, students will discuss and demonstrate the use and manipulation of various materials used in the dental setting such as dental cements, alginate impression materials, hydrocolloids, elastomerics, dental plasters and other impression materials used in prosthodontic fabrications. Students will gain hands on experience with many dental materials used chairside and in the dental lab. Related spelling and terminology is studied throughout the module.
Prerequisite: IHC1000 Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

DAD1050 – Anatomy, Endodontics and Orthodontics 6.0 Quarter Credit Hours

In this module the body systems, head and neck anatomy, physiology and the dental specialties of Endodontics and Orthodontics are studied. The dental specialties of Endodontics and Orthodontics and their scope of practice and educational levels will be introduced. Theory and common clinical procedures of each specialty are presented and demonstrated on dental manikins. Related spelling and terminology is studied throughout the module.
Prerequisite: IHC1000 Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

DAD1060 - Office Administration, Law & Ethics and Career Development 6.0 Quarter Credit Hours

In this module the student will learn the essential skills of understanding dental office etiquette such as delivering quality customer service, phone skills and effective communication with other dental professionals and patients. Patient records and The Health Insurance Portability and Accountability Act (HIPAA) of 1996 are discussed. Law and ethics related to the dental environment are explored. Students are also introduced to the various billing and financial methods in the dental office utilizing the Dentrix dental software system. Students will have the opportunity to become acquainted with accounts receivables and payables. Students will be oriented in treatment planning and communicating with the patient. Business operating systems and marketing are also discussed. Students will also prepare for a successful career in the dental field by understanding the role and duties of the professional dental assistant and complete a resume and cover letter. Writing skills are emphasized as well as mock job interviews. State required certifications are explored as well as national certification.
Prerequisite: IHC1000 Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

DAD1070 - Dental Radiography 6.0 Quarter Credit Hours

This course is designed to introduce students to the basic anatomy of the head and teeth in order to be familiarized with the anatomical structures involved in taking successful radiographs. Radiation protection and the hazards of x-ray radiation are covered. Students will study and demonstrate the various methods and techniques in taking dental x-rays with a digital system and understand the process of automatic and manually processing x-rays. Theory and lab practice will meet state guidelines for a Radiation Health and Safety Certificate through the Dental Assisting National Board. Exposure techniques will take place in on-site equipped dental operatories with industry-approved facilities with monitoring devices. Radiographic techniques will be performed on a patient simulated manikin. After showing competence, students will be required to take diagnostically acceptable dental radiographs on (2) patients on-site where applicable or with a contracted facility.
Prerequisite: IHC1000 Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

DAD1080 – Dental Assistant Externship (200 Hours) 6.0 Quarter Credit Hours

In this module, students complete 200 hours of supervised, practical in-service at a dental office or clinic in which the student practices direct application of all clinical functions of dental assisting.
Prerequisite: DAD1010, DAD1020, DAD1030, DAD1040, DAD1050, DAD1060, DAD1070
Lecture Hours: 0 Lab Hours: 0 Outside Hours: 0 Other (Externship) Hours: 200.

Note: Students that cannot demonstrate academic readiness will be registered to take additional coursework. There is no additional charge any academic readiness coursework. Please refer to the **Academic Advising and Readiness** section of the catalog for more information.

ELECTRICAL CONSTRUCTION TECHNICIAN – *Revision to Information on Page 48 of the Catalog – Changed in November 2021*

Diploma Program

36 Weeks – 720 Hours – 54 Quarter Credit Hours

Modality: Blended

COURSE DESCRIPTIONS

BST 1000 – Basic Construction **6.0 Quarter Credit Hours**

This course introduces students to the construction field. The course of instruction will cover basic job safety concepts and regulatory requirements, basic math used in the construction trades, the use of common hand and power tools, and an introduction to blueprint reading. Out-of-class activities will be assigned and assessed as part of this module. Prerequisites: None Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ECT 1110 – Electrical Theory **6.0 Quarter Credit Hours**

Electricity makes the modern world possible by providing the power needed for lighting, air-conditioning, communications, and computers, yet how it works is a mystery to most. This course provides a basic understanding of how electrical energy is used to produce useful work, how it is measured and tested, and the calculations required for analyzing electrical circuits. Topics of study include direct-current (DC) and alternating-current (AC) systems, transformer operation, electrical test equipment, and fitting, conductors and cables.

Prerequisite: BST1000 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ECT 1120 – Electrical Craft Skills **6.0 Quarter Credit Hours**

Electricians use specialized skills to install and repair electrical systems in homes and businesses. This course is designed for students to learn the basic skills needed in the electrical craft that include reading and comprehending electrical drawings, wiring diagrams and schematics, procedures for installing electrical conduit, boxes, wiring, and determining minimum installation requirements of the National Electrical Code, hand bending and mechanical bending of various conduit sizes and materials.

Prerequisite: BST1000 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ECT 1130 – Residential Wiring **6.0 Quarter Credit Hours**

One of the more common jobs for an electrician is the installation or repair of the electrical system in a dwelling. This course familiarizes the student with the materials and methods used for installing a complete 120V electrical system for a typical residence. Students will learn and practice techniques for installing non-metallic sheathed cables, device boxes, receptacles, switches, lighting fixtures, circuit breaker panels, and service entrance equipment.

Prerequisite: BST1000 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ECT 1140 – Residential and Commercial Lighting **6.0 Quarter Credit Hours**

Electrical lighting is essential in residential, commercial and industrial settings. This course prepares students to understand the basic fundamentals of lighting, successfully install residential and commercial lighting, and properly identify commonly used materials in commercial and industrial facilities.

Prerequisites: BST1000 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ECT 1210 – Electrical Motors **6.0 Quarter Credit Hours**

One of the main uses for electricity is to make something move and this is what electric motors are used for. Motors are unique in that the amount of electrical current required to operate them changes with the load that is placed on the motor. This course explores the basic construction, operation, and maintenance of various direct-current (DC) motors, single-phase and three-phase alternating-current (AC) motors, and the minimum National Electrical Code requirements for circuits supplying motors. Students also learn to install basic control circuits to stop, start, and reverse motors.

Prerequisites: BST1000 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ECT 1220 – Transformers and Power Distribution **6.0 Quarter Credit Hours**

One of the more common jobs for an electrician is the installation or repair of the electrical system in a dwelling. This course familiarizes the student with the materials and methods used for installing a complete electrical system for a typical residence. Students will learn and practice techniques for installing non-metallic sheathed cables, device boxes, receptacles, switches, lighting fixtures, circuit breaker panels, and service entrance equipment. Out-of-class activities will be assigned and assessed as part of this module.

Prerequisites: ECT1110, ECT1120, ECT1130, ECT1140 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ECT 1230 – Conductors and Overcurrent Protection **6.0 Quarter Credit Hours**

A properly installed and maintained power distribution system is critical to the operation of commercial buildings and industrial facilities. This course familiarizes the student with the various types of electrical equipment used to distribute power within a building including service entrance equipment, switchgear, transformers, and backup power sources. Additional topics include the process for calculating electrical load and proper sizing and selection of conductors. Out-of-class activities will be assigned and assessed as part of this module.

Prerequisites: ECT1110, ECT1120, ECT1130, ECT1140 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ECT 1240 – Advanced Control Systems **6.0 Quarter Credit Hours**

World-changing advanced controls require a primary trades person responsible for installing and maintaining them. This course introduces the basic principles of control systems, advanced control systems, low-voltage cabling, and primary logic controllers.
Prerequisites: ECT1110, ECT1120, ECT1130, ECT1140 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

Note: Students that cannot demonstrate academic readiness will be registered to take additional coursework. There is no additional charge any academic readiness coursework. Please refer to the **Academic Advising and Readiness** section for more information.

HVAC TECHNICIAN – *Revision to Information on Page 50 of the Catalog – Changed in November 2021*
Diploma Program
36 Weeks – 720 Hours – 54 Quarter Credit Hours
Modality: Blended

COURSE DESCRIPTIONS

BST 1000 - Basic Construction **6.0 Quarter Credit Hours**
This course introduces students to the construction field. The course of instruction will cover basic job safety concepts and regulatory requirements, basic math used in the construction trades, the use of common hand and power tools, and an introduction to blueprint reading. Out-of-class activities will be assigned and assessed as part of this module. Prerequisites: None Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ACR 1111 – HVAC/R Craft Skills **6.0 Quarter Credit Hours**
Air-conditioning and Refrigeration technicians use specialized skills to install, repair, and maintain heating and cooling systems. This course provides the opportunity for students to learn the basic skills used in the craft for installing copper, plastic, and steel piping, reading HVAC drawings and schematics, and selecting the correct hardware and fasteners for an installation.
Prerequisite: BST1000 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ACR 1120 – Basic Air Conditioning **6.0 Quarter Credit Hours**
The basic principle behind air-conditioning is to move heat from inside a building to the outside leaving the interior space cooler. This course introduces the fundamental concepts and technology at the core of every air-conditioning system. Topics include a survey of the basic types of air-conditioning equipment, a thorough study of the heat transfer process, the refrigeration cycle, components of an air-conditioning system, and modern refrigerants. This course also includes the basics of the manifold gauge set and thermometry.
Prerequisite: BST1000 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ACR 1130 – Electricity for HVAC/R Technician **6.0 Quarter Credit Hours**
The machinery used to provide heating, cooling, and refrigeration uses electric motors to turn fans, blowers, and compressors and has complex electrical control systems. Many of the problems encountered by HVAC/R technicians involve electrical systems, so technicians must have a thorough knowledge of electricity to work on the equipment. This course covers basic electrical theory and calculations, using electrical meters, reading schematic diagrams, and basic controls used on HVAC/R systems.
Prerequisite: BST1000 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ACR 1140 - HVAC/R System service and Maintenance **6.0 Quarter Credit Hours**
Most HVAC/R Technicians not only install new systems but also maintain and repair existing ones. This course provides students the opportunity to learn the proper procedures for removing and installing refrigerant in cooling systems, finding leaks, and performing basic maintenance functions. Additional topics include a review of EPA608 certification requirements for handling refrigerant and techniques for ensuring excellent customer service.
Prerequisites: BST1000 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ACR 1211 – Basic Heating Systems **6.0 Quarter Credit Hours**
The installation and maintenance of heating systems requires special care because flame and combustible fuels are involved. This makes the potential for fire or explosion a real threat. This course reviews principles of heat transfer, combustion and the typical fuels and equipment used to heat homes and businesses. These include gas furnaces, electric heating, and heat pumps.
Prerequisites: BST1000 Lecture Hours: 55, Lab Hours: 25 Outside Hours: 20

ACR 1221 – Advanced HVAC Systems **6.0 Quarter Credit Hours**
There are more efficient ways to heat and cool homes and businesses other than just burning fossil fuels. This course explores some of them. This course covers the installation, operation and maintenance of heat pumps, and surveys alternative heating and cooling systems. These systems include solar heating, pellet stoves, evaporative coolers, spot cooling, and computer room units. This course also covers basic hydronic systems and indoor air quality and systems.
Prerequisites: ACR1111, ACR1120, ACR1130, ACR1140 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ACR 1230 – Air Distribution **6.0 Quarter Credit Hours**

The overall performance of an HVAC system is closely linked to the quality of the air distribution system used to move air to and from the A/C unit. This course prepares students for jobs installing and maintaining the ductwork and air-handling units in residential and commercial buildings. This course covers the installation requirements for various types of ductwork including basic techniques used to fabricate ductwork on the job. Additional course topics include commercial airside units; variable air volume (VAV and variable volume, variable temperature (VVT) systems; and maintaining air quality within buildings.

Prerequisites: ACR1111, ACR1120, ACR1130, ACR1140 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ACR 1240 Energy – Conservation Methods **6.0 Quarter Credit Hours**

This course reviews the various strategies used in the design of energy efficient heating and cooling systems that include calculating heating and cooling loads, laying out and sizing ductwork, and equipment selection.

Prerequisites: ACR1111, ACR1120, ACR1130, ACR1140 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

Note: Students that cannot demonstrate academic readiness will be registered to take additional coursework. There is no additional charge any academic readiness coursework. Please refer to the **Academic Advising and Readiness** section for more information.

INDUSTRIAL ELECTRICAL TECHNICIAN – *Revision to Information on Page 52 of the Catalog – Changed in November 2021*

Diploma Program – Modality Blended

36 Weeks – 720 Hours – 54 Quarter Credit Hours

COURSE DESCRIPTIONS

BST 1000 - Basic Construction **6.0 Quarter Credit Hours**

This course introduces students to the construction field. The course of instruction will cover basic job safety concepts and regulatory requirements, basic math used in the construction trades, the use of common hand and power tools, and an introduction to blueprint reading. Out-of-class activities will be assigned and assessed as part of this module. Prerequisites: None Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ECT 1110 – Electrical Theory **6.0 Quarter Credit Hours**

Electricity makes the modern world possible by providing the power needed for lighting, air-conditioning, communications, and computers, yet how it works is a mystery to most. This course provides a basic understanding of how electrical energy is used to produce useful work, how it is measured and tested, and the calculations required for analyzing electrical circuits. Topics of study include direct-current (DC) and alternating-current (AC) systems, transformer operation, electrical test equipment, and fitting, conductors and cables.

Prerequisite: BST1000 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ECT 1120 – Electrical Craft Skills **6.0 Quarter Credit Hours**

Electricians use specialized skills to install and repair electrical systems in homes and businesses. This course is designed for students to learn the basic skills needed in the electrical craft that include reading and comprehending electrical drawings, wiring diagrams and schematics, procedures for installing electrical conduit, boxes, wiring, and determining minimum installation requirements of the National Electrical Code, hand bending and mechanical bending of various conduit sizes and materials.

Prerequisite: BST1000 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ECT 1130 - Residential Wiring **6.0 Quarter Credit Hours**

One of the more common jobs for an electrician is the installation or repair of the electrical system in a dwelling. This course familiarizes the student with the materials and methods used for installing a complete 120V electrical system for a typical residence. Students will learn and practice techniques for installing non-metallic sheathed cables, device boxes, receptacles, switches, lighting fixtures, circuit breaker panels, and service entrance equipment.

Prerequisite: BST1000 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ECT 1140 – Residential and Commercial Lighting **6.0 Quarter Credit Hours**

Electrical lighting is essential in residential, commercial and industrial settings. This course prepares students to understand the basic fundamentals of lighting, successfully install residential and commercial lighting, and properly identify commonly used materials in commercial and industrial facilities.

Prerequisites: BST1000 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ECT 1210 - Electrical Motors **6.0 Quarter Credit Hours**

One of the main uses for electricity is to make something move and this is what electric motors are used for. Motors are unique in that the amount of electrical current required to operate them changes with the load that is placed on the motor. This course explores the basic construction, operation, and maintenance of various direct-current (DC) motors, single-phase and three-phase alternating-current (AC) motors, and the minimum National Electrical Code requirements for circuits supplying motors. Students also learn to install basic control circuits to stop, start, and reverse motors.

Prerequisites: BST1000 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

IET 1220 – Industrial Control Systems	**6.0 Quarter Credit Hours**
Industrial electricians install and maintain the wide array of sensors, switches, and components needed to keep machines and process equipment running properly. This course is designed to familiarize students with the operation and maintenance of industrial control devices including hydraulic, pneumatic, and motor-operated valves. Students learn to interpret electrical and instrumentation diagrams for troubleshooting circuits.	
Prerequisites: ECT1110, ECT1120, ECT1130, ECT1140	Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20
IET 1230 – Basic PLCs Operations and Maintenance	**6.0 Quarter Credit Hours**
State-of-the-art production equipment is electronically controlled through highly specialized computers called programmable logic controllers (PLC). Industrial electricians routinely install, maintain, and troubleshoot PLC circuits and must be familiar with their operation. This course provides students with the opportunity to install basic PLC hardware, input-output wiring, writing basic control programs, and uploading programs to test on a PLC. Additional topic include requirements for industrial network wiring and distributed control systems.	
Prerequisites: ECT1110, ECT1120, ECT1130, ECT1140	Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20
IET 1240 - Process Control and Automated Systems	**6.0 Quarter Credit Hours**
Modern industrial facilities require accurate data from electronic sensors and associated equipment to maintain safe and efficient operation. This course introduces basic concepts related to process control and measurement related to temperature, flow, and pressure. Students learn basic techniques to install sensors and control devices, cables and wiring, and proper wire terminations. Additional topics include proportional, integral, and derivative (PID) control loops, and loop tuning.	
Prerequisites: ECT1110, ECT1120, ECT1130, ECT1140	Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

Note: Students that cannot demonstrate academic readiness will be registered to take additional coursework. There is no additional charge any academic readiness coursework. Please refer to the **Academic Advising and Readiness** section for more information.

MEDICAL ASSISTANT – *Revision to information on Pages 50-52 of the Catalog – Effective March 2022*
Diploma Program
41 Weeks – 920 Hours - 60 Quarter Credit Hours
Modality: Blended

PROGRAM DESCRIPTION: The Medical Assistant Program (diploma) is designed to prepare students for entry-level positions as medical assistants in a variety of health care settings. Students study the structure and function of the major body systems in conjunction with medical terminology, diagnostic and therapeutic procedures, computer skills, administrative processes, bookkeeping and accounting practices, and the processing of medical insurance forms and claims.

OBJECTIVE: The goal of the Medical Assistant diploma program is to prepare competent entry-level medical assistants in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains required and necessary to prepare them for entry level positions.

PROGRAM OUTCOMES: The Medical Assistant program provides the student with the theory and hands-on applications required to perform the following tasks:

- Prepare patients for examinations
- Schedule appointments
- Update patient medical records
- Perform basic laboratory tests
- Code and fill out insurance forms

Program Notes: Graduates of this Medical Assistant program are immediately eligible to sit for the RMA Exam (Registered Medical Assistant), NCMA Exam (National Certified Medical Assistant) and CCMA Exam (Certified Clinical Medical Assistant) exams. The progarm is not programmatically accredited by ABHES (Accrediting Bureau of Health Education Schools) or CAAHEP/MAERB (Commission on Accreditation of Allied Health Education Programs/Medical Assisting Education Review Board) but due to a pilot program offered by the American Association of Medical Assistants (AAMA), graduates from this program may be eligible to to sit for the CMA (Certified Medical Assistant) Exam after submitting appropriate documentation.

Course Code	Course Title	Lecture Hours	Lab Hours	Other Hours (Externship)	Total Contact Hours	Quarter Credit Hours
Prerequisite Course						

IHC1000	Introduction to the Healthcare Profession	40	40	0	80	6.0
Core Courses						
MAD1010	Dermatology and Immunology	40	40	0	80	6.0
MAD1020	Orthopedics and Emergency Medicine	40	40	0	80	6.0
MAD1030	Family Practice	40	40	0	80	6.0
MAD1040	Cardiology	40	40	0	80	6.0
MAD1050	Urology and Gastroenterology	40	40	0	80	6.0
MAD1060	Obstetrics and Gynecology	40	40	0	80	6.0
MAD1070	Neurology and Psychology	40	40	0	80	6.0
MAD1080	Pediatrics	40	40	0	80	6.0
MAD1090	Medical Assistant Externship	0	0	200	200	6.0
	Program Totals:	**360**	**360**	**200**	**920**	**60.0**

COURSE DESCRIPTIONS

IHC1000 - Introduction to the Healthcare Profession **6.0 Quarter Credit Hours**

This course is designed to provide an introduction to the healthcare profession for new students starting an allied health diploma program. Students will learn the basics of medical terminology, anatomy and physiology, infection control, HIPAA, OSHA and HIV/AIDS. Additional topics covered include professional codes of ethics, medical insurance and billing, keyboarding, computer applications, basic mathematical skills, and critical professionalism skills. Students will have the opportunity to learn program-specific topics throughout the course. CPR Certification is also included in the course. Out-of-class activities will be assigned and assessed as part of this course.

Prerequisite: None Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

MAD1010- Dermatology and Immunology **6.0 Quarter Credit Hours**

This course is designed to provide the student with the theory and hands-on skills involved in working in a dermatology and immunology medical office setting. Students will learn the medical terminology, anatomy and physiology related to the integumentary and lymphatic systems. Students will learn about common diseases and disorders that might be seen with these specialties as well as common medications that might be prescribed. Students will perform administrative skills such as financial management and bookkeeping procedures. Students will perform clinical procedures such as venipuncture, administration of medication, measuring vital signs, and collection of specimens for CLIA-waived testing. Students will learn about professional attire in a medical office setting and what to wear to an interview. Out-of-class activities will be assigned and assessed as part of this course.

Prerequisite: IHC1000 Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

MAD1020- Orthopedics and Emergency Medicine **6.0 Quarter Credit Hours**

This course is designed to provide the student with the theory and hands-on skills involved in working in an orthopedic or emergency medical office setting. Students will learn the medical terminology, anatomy, and physiology related to the musculoskeletal systems. Students will learn about common diseases and disorders that might be seen with these specialties as well as common medications that might be prescribed. Students will perform administrative procedures such as creating professional correspondence and utilizing computer applications. Students will perform clinical procedures such as venipuncture, administration of medication, measuring vital signs, and collection of specimens for CLIA-waived testing. Students will learn the importance of medical and surgical asepsis and the procedures for disinfecting and sterilizing medical office equipment. Students will understand how to assist with minor surgical procedures, the infection cycle, and wound care. The student will learn about office safety procedures and participate in a mock environmental exposure event. Students will learn the importance and the requirements of gaining a medical assistant credential. Out-of-class activities will be assigned and assessed as part of this course.

Prerequisite: IHC1000 Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

MAD1030 – Family Practice **6.0 Quarter Credit Hours**

This course is designed to provide the student with the theory and hands-on skills involved in working in a family practice office setting. Students will learn the medical terminology, anatomy, and physiology related to the endocrine system. Students will learn about common diseases and disorders that might be seen in a family practice medical office as well as common medications that might be prescribed. Students will perform administrative skills such as identifying community resources for patients' healthcare needs. Students will perform clinical skills such as venipuncture, administration of medication, measuring vital signs, capillary puncture, and collection of specimens for CLIA-waived testing. Students will learn to assist providers with patient examinations, how to conduct quality assurance measures in a medical office, and disease management, Students will learn the parts of a prescription, appropriate abbreviations for prescription writing, and compliance with legal aspects associated with prescriptions. Students will be introduced to the current outlook for medical assisting and will be able to compare and contrast allied health professionals. Out-of-class activities will be assigned and assessed as part of this course

Prerequisite: IHC1000 Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

MAD1040 – Cardiology **6.0 Quarter Credit Hours**

This course is designed to provide the student with the theory and hands-on skills involved in working in a cardiology or pulmonology office setting. Students will learn the medical terminology, anatomy, and physiology related to the cardiovascular and respiratory systems. Students will learn about common diseases and disorders that might be seen in a cardiology office setting as well as common medication that might be prescribed. Students will perform administrative skills such as telephone techniques, electronic correspondence, and diagnostic and procedural coding. Students will perform clinical skills such as venipuncture, administration of medication, measuring vital signs, recording a 12-lead electrocardiogram, pulmonary function testing, and pulse oximetry. Students will learn what continued education is and how it is acquired. Out-of-class activities will be assigned and assessed as part of this course. Prerequisite: IHC1000 Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

MAD1050 – Urology and Gastroenterology **6.0 Quarter Credit Hours**

This course is designed to provide the student with the theory and hands-on skills involved in working in a urology or gastroenterology office setting. Students will learn the medical terminology, anatomy, and physiology related to the urinary, male reproductive, and digestive systems. Students will learn about common diseases and disorders associated with these specialties as well as common medication that might be prescribed. Students will perform administrative skills such as records management, utilizing an electronic medical record and processing mail. Students will perform clinical skills such as venipuncture, administration of medication, measuring vital signs, urinalysis, and assisting with gastroenterology procedures. Students will be introduced to interviewing techniques. Out-of-class activities will be assigned and assessed as part of this course.

Prerequisite: IHC1000 Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

MAD1060 – Obstetrics and Gynecology **6.0 Quarter Credit Hours**

This course is designed to provide the student with the theory and hands-on skills involved in working in an obstetrics and gynecology office setting. Students will learn the medical terminology, anatomy, and physiology related to the female reproductive system. Students will learn about common diseases and disorders associated with this specialty as well as common medication that might be prescribed. Students will perform administrative skills such as scheduling appointments, insurance and billing procedures and processing documents. Students will perform clinical skills such as venipuncture, administration of medication, measuring vital signs, and how to assist with prenatal and gynecologic examination. Students will learn how to create a professional resume and a cover letter. Out-of-class activities will be assigned and assessed as part of this course.

Prerequisite: IHC1000 Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

MAD1070 – Neurology and Psychology **6.0 Quarter Credit Hours**

This course is designed to provide the student with the theory and hands-on skills involved in working in a neurology office setting. Students will learn the medical terminology, anatomy, and physiology related to the nervous system. Students will learn about common diseases and disorders associated with these specialties as well as common medication that might be prescribed. It also focuses on basic principles of psychology, cultural awareness, communication skills, and coping mechanisms. Students will explore medical law and ethics as it relates to a health care setting. Students will perform administrative skills such as medical practice marketing and providing excellent customer service. Students will perform clinical skills such as venipuncture, administration of medication, assisting with neurological procedures, and measuring vital signs. Students will learn job searching strategies. Out-of-class activities will be assigned and assessed as part of this course.

Prerequisite: IHC1000 Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

MAD1080 – Pediatrics **6.0 Quarter Credit Hours**

This course is designed to provide the student with the theory and hands-on skills involved in working in a pediatric office setting. Students will learn the medical terminology, anatomy, and physiology related to the sensory organs. Students will perform administrative skills such as supervision of a medical office, inventory management, and human resource procedures. Students will perform clinical skills such as venipuncture, administration of medication, measuring vital signs in infants and children, creating and analyzing growth charts, assisting with pediatric examinations, administration of vaccinations, eye and ear assessments, and dosage calculations. Students will learn about time management and effective teamwork. Out-of-class activities will be assigned and assessed as part of this course.

Prerequisite: IHC1000 Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

MATD1090 - Medical Assistant Externship **6.0 Quarter Credit Hours**

Upon successful completion of all modules, medical assisting students participate in a 200-hour externship at an approved facility. The externship provides the student an opportunity to apply principles and practices learned in the program and utilize entry-level medical assisting skills in working with patients. Medical Assisting Diploma Program externs work under the direct supervision of qualified personnel at the participating externship sites, and under general supervision of the school staff. Supervisory personnel at the site evaluate externs at 100- and 200-hour intervals. Completed evaluation forms are placed in the students' permanent records. Students must successfully complete all hours in their externship experience in order to fulfill requirements for graduation.

Prerequisite: MAD1010, MAD1020, MAD1030, MAD1040, MAD1050, MAD1060, MAD1070, MAD1080

Lecture Hours: 0 Lab Hours: 0 Other (Externship) Hours: 200

Note: Students that cannot demonstrate academic readiness will be registered to take additional coursework. There is no additional charge any academic readiness coursework. Please refer to the **Academic Advising and Readiness** section for more information.

MEDICAL BILLING & CODING – *Revision to information on Pages 53-55 of the Catalog – Effective March 2022*

Diploma Program
33 Weeks – 760 Hours - 48 Quarter Credit Hours
Modality: Blended

PROGRAM DESCRIPTION: Medical Billing and Coding professionals perform a variety of administrative functions as they pertain to the anatomy and physiology of the human body. These include functions associated with organizing, analyzing, and technically evaluating health insurance claim forms. These professionals will also perform duties in diagnostic and procedural coding and are eligible for CPC certification through AAPC.

The Medical Billing and Coding Program is a 760-clock hour/48.0-credit unit course of study, consisting of seven individual learning units, called modules. Students are required to complete all modules. Students must first complete the Module IMB1000 and then continue in any sequence for the remaining six modules. If students do not complete any portion of one of these modules, the entire module must be repeated. Upon successful completion of all modules, students participate in an externship. This consists of 200 required clock hours of hands-on experience in an outside facility in the field of medical insurance billing and coding.

OBJECTIVES: The objective of the Medical Billing and Coding program is to provide the student with the appropriate didactic theory and hands-on skills necessary to prepare them for entry-level positions as medical insurance billers and coders in today's health care offices, clinics, and facilities. Students will study diagnostic and procedural terminology as it relates to the accurate completion of medical insurance claims. Utilizing a format of medical specialties, relevant terms will also be introduced and studied.

PROGRAM OUTCOMES: The Medical Billing and Coding program provides the student with the theory and hands-on applications required to perform the following tasks within the medical billing and coding environment:

- Identify the components of a given body system.
- Correctly use medical terminology of a given body system.
- Utilize proper ICD-10-CM/CPT/HCPCS coding.
- Determine the correct application of health insurance forms/documents.
- Demonstrate proficiency of medical office technology.

Course Code	Course Title	Lecture Hours	Lab Hours	Other Hours (Externship)	Total Contact Hours	Quarter Credit Hours
IMB1000	Introduction to the Healthcare Profession	40	40	0	80	6.0
MBC1010	Anatomy & Physiology, Medical Terminology, Diagnostic and Procedural Coding of the Cardiovascular and Lymphatic Systems	40	40	0	80	6.0
MBC1020	Anatomy & Physiology, Medical Terminology, Diagnostic and Procedural Coding of the Genitourinary System	40	40	0	80	6.0
MBC1030	Anatomy & Physiology, Medical Terminology, Diagnostic and Procedural Coding of the Integumentary and Endocrine Systems, and Pathology	40	40	0	80	6.0
MBC1040	Anatomy & Physiology, Medical Terminology, Diagnostic and Procedural Coding of the Musculoskeletal System	40	40	0	80	6.0
MBC1050	Anatomy & Physiology, Medical Terminology, Diagnostic and Procedural Coding of the Respiratory and Gastrointestinal Systems	40	40	0	80	6.0
MBC1060	Anatomy & Physiology, Medical Terminology, Diagnostic and Procedural Coding of the Sensory and Nervous Systems, and Psychology	40	40	0	80	6.0
MBC1070	Medical Billing and Coding Externship	0	0	200	200	6.0
	Program Totals	**280**	**280**	**200**	**760**	**48.0**

COURSE DESCRIPTIONS

IMB1000 – Introduction to Medical Billing and Coding **6.0 Quarter Credit Hours**
This course is designed to provide an introduction to the healthcare profession for new students starting in the medical billing and coding program. Students will learn the basics of medical terminology, anatomy and physiology, HIPAA, and billing and coding. Additional topics covered include professional codes of ethics, medical insurance, computer applications, and professional skills.
Prerequisite: None Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

MBC1010 – Cardiovascular and Lymphatic Systems **6.0 Quarter Credit Hours**
Throughout this course, students will identify the components of the Cardiovascular and Lymphatic Systems. Focus will also be placed on the correct usage of medical terminology related to these systems. Students will also utilize the proper ICD-10-CM/CPT/HCPCS coding, work through the insurance process, and become proficient using medical office technology in this module.
Prerequisite: IMB1000 Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

MBC1020 – Genitourinary System **6.0 Quarter Credit Hours**
Throughout this course, students will identify the components of the genitourinary system. A focus will also be placed on the correct usage of medical terminology related to this system. Students will also utilize the proper ICD-10CM/CPT/HCPCS coding, work through the insurance process, and become proficient using medical office technology in this module.
Prerequisite: IMB1000 Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

MBC1030 – Integumentary and Endocrine Systems, and Pathology **6.0 Quarter Credit Hours**
Throughout this course, students will identify the components of the integumentary and endocrine systems. A focus will also be placed on the correct usage of medical terminology related to these systems. Students will also utilize the proper ICD-10-CM/CPT/HCPCS coding, work through the insurance process, and become proficient using medical office technology in this module.
Prerequisite: IMB1000 Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

MBC1040 – Musculoskeletal System **6.0 Quarter Credit Hours**
Throughout this course, students will identify the components of the musculoskeletal system. A focus will also be placed on the correct usage of medical terminology related to this system. Students will also utilize the proper ICD10-CM/CPT/HCPCS coding, work through the insurance process, and become proficient using medical office technology in this module. Prerequisite: IMB1000 Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

MBC1050 – Respiratory and Gastrointestinal Systems **6.0 Quarter Credit Hours**
Throughout this course, students will identify the components of the Respiratory and Gastrointestinal Systems. A focus will also be placed on the correct usage of medical terminology related to these systems. Students will also utilize the proper ICD-10-CM/CPT/HCPCS coding, work through the insurance process, and become proficient using medical office technology in this module.
Prerequisite: IMB1000 Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

MBC1060 – Sensory and Nervous Systems, and Psychology **6.0 Quarter Credit Hours**
Throughout this course, students will identify the components of the Sensory and Nervous Systems, and Psychology. A focus will also be placed on the correct usage of medical terminology related to these systems. Students will also utilize the proper ICD-10-CM/CPT/HCPCS coding, work through the insurance process, and become proficient using medical office technology in this module.
Prerequisite: IMB1000 Lecture Hours: 40 Lab Hours: 40 Outside Hours: 20

MBC1070 – Medical Billing and Coding Externship **6.0 Quarter Credit Hours**
Upon successful completion of IMB1000, MBC1010, MBC1020, MBC1030, MBC1040, MBC1050, and MBC1060, medical insurance billing/coding students will participate in this 200-hour externship. Serving in an externship at an approved facility gives externs an opportunity to work with the principles and practices learned in the classroom. Externs work under the direct supervision of qualified personnel in participating institutions and under general supervision of the school staff. Students are expected to work a full-time (40 hours per week) schedule if possible. Supervisory personnel will evaluate externs at 100- and 200-hour intervals. Completed evaluation forms are placed in the students' permanent records. Students must successfully complete their externship training in order to fulfill requirements for graduation. Prerequisites: MBC1010, MBC1020, MBC1030, MBC1040, MBC1050, and MBC1060;
Lecture Hours: 0 Lab Hours: 0 Other Hours (Externship): 200

Note: Students that cannot demonstrate academic readiness will be registered to take additional coursework. There is no additional charge any academic readiness coursework. Please refer to the **Academic Advising and Readiness** section for more information.

REFRIGERATION TECHNICIAN – *Revision to Information on Page 67 of the Catalog – Changed in November 2021*
Diploma Program
36 Weeks – 720 Hours – 54 Quarter Credit Hours
Modality: Blended

COURSE DESCRIPTIONS

BST 1000 Basic Construction **6.0 Quarter Credit Hours**
This course introduces students to the construction field. The course of instruction will cover basic job safety concepts and regulatory requirements, basic math used in the construction trades, the use of common hand and power tools, and an introduction to blueprint reading. Out-of-class activities will be assigned and assessed as part of this module. Prerequisites: None Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ACR 1111 HVAC/R Craft Skills **6.0 Quarter Credit Hours**
Air-conditioning and Refrigeration technicians use specialized skills to install, repair, and maintain heating and cooling systems. This course provides the opportunity for students to learn the basic skills used in the craft for installing copper, plastic, and steel piping, reading HVAC drawings and schematics, and selecting the correct hardware and fasteners for an installation.
Prerequisite: BST1000 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ACR 1120 Basic Air Conditioning **6.0 Quarter Credit Hours**
The basic principle behind air-conditioning is to move heat from inside a building to the outside leaving the interior space cooler. This course introduces the fundamental concepts and technology at the core of every air-conditioning system. Topics include a survey of the basic types of air-conditioning equipment, a thorough study of the heat transfer process, the refrigeration cycle, components of an air-conditioning system, and modern refrigerants. This course also includes the basics of the manifold gauge set and thermometry.
Prerequisite: BST1000 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ACR 1130 Electricity for HVAC/R Technician **6.0 Quarter Credit Hours**
The machinery used to provide heating, cooling, and refrigeration uses electric motors to turn fans, blowers, and compressors and has complex electrical control systems. Many of the problems encountered by HVAC/R technicians involve electrical systems, so technicians must have a thorough knowledge of electricity to work on the equipment. This course covers basic electrical theory and calculations, using electrical meters, reading schematic diagrams, and basic controls used on HVAC/R systems.
Prerequisite: BST1000 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ACR 1140 HVAC/R System Service and Maintenance **6.0 Quarter Credit Hours**
Most HVAC/R Technicians not only install new systems but also maintain and repair existing ones. This course provides students the opportunity to learn the proper procedures for removing and installing refrigerant in cooling systems, finding leaks, and performing basic maintenance functions. Additional topics include a review of EPA608 certification requirements for handling refrigerant and techniques for ensuring excellent customer service.
Prerequisites: BST1000 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

ACR 1211 Basic Heating Systems **6.0 Quarter Credit Hours**
The installation and maintenance of heating systems requires special care because flame and combustible fuels are involved. This makes the potential for fire or explosion a real threat. This course reviews principles of heat transfer, combustion and the typical fuels and equipment used to heat homes and businesses. These include gas furnaces, electric heating, and heat pumps.
Prerequisites: BST1000 Lecture Hours: 55, Lab Hours: 25 Outside Hours: 20

RFT 1220 Commercial Hydronic Systems **6.0 Quarter Credit Hours**
Water, in both its liquid and gaseous states, is frequently used as a medium of heat exchange especially for large-scale heating and cooling systems. Examples of these types of hydronic systems include chilled water, hot water, and steam systems. This course covers the basic principles of hydronic technology including the physical properties of water and steam; a survey of equipment used in chilled water systems and boilers; basic controls for hydronic systems; water and steam piping arrangements; system maintenance; and procedures for system start-up and shut-down.
Prerequisites: ACR1111, ACR1120, ACR1130, ACR1140 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

RFT 1230 Refrigeration Systems **6.0 Quarter Credit Hours**
Refrigeration equipment is widely used in commercial and retail applications for preserving food quality before consumption in restaurants and other similar establishments; displays cases in grocery and retail food stores; and ice machines. This course covers the basic concepts related to refrigeration in commercial and retail applications including medium and low-temperature systems; commercial refrigeration equipment installation and maintenance; ice machine troubleshooting and maintenance; ammonia refrigeration system components; defrosting equipment and methods; and related control systems.
Prerequisites: ACR1111, ACR1120, ACR1130, ACR1140 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

RFT 1240 Defrost Fundamentals and Controls Troubleshooting **6.0 Quarter Credit Hours**

Refrigeration systems rely on a variety of control devices to maintain proper operation and improve system efficiency. This course covers fundamentals of the defrost cycle, the selection, operation, and maintenance of the typical control components and accessories used in commercial refrigeration systems. Subject matter includes digital control systems, electrical switching devices, relays, and contactors; mechanical accessories such as filters, driers, and separators; compressor motors and protective devices; and strategies and techniques for identifying and correcting faults within the refrigeration system.
Prerequisites: ACR1111, ACR1120, ACR1130, ACR1140 Lecture Hours: 55 Lab Hours: 25 Outside Hours: 20

Note: Students that cannot demonstrate academic readiness will be registered to take additional coursework. There is no additional charge any academic readiness coursework. Please refer to the **Academic Advising and Readiness** section for more information.