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**IWRC Program of Study Available**

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Health Science Cluster

Cluster Description:
The West Virginia Health Science Education Pathways are based on the National Healthcare Foundation Standards and Accountability Criteria which are cross walked with the Common Career Technical Core Career Ready Practices. Through health science courses students can gain an important foundation of knowledge and skills necessary for continued education, training and obtain certification in health science occupations. Healthcare is one of the largest and fastest growing industries in West Virginia. The integration of technology in healthcare and an increased in aging population contributes to West Virginia’s healthcare workforce shortage.

Biomedical Science (PLTW) Pathway

Pathway Description:
The challenging and relevant four-course PLTW Biomedical Science sequence allows students to investigate the roles of biomedical professionals as they study the concepts of human medicine, physiology, genetics, microbiology, and public health.

Program of Study: HE0780 Biomedical Science (PLTW)
Courses:
- 0727 Principles of Biomedical Science
- 0766 Human Body Systems*
- 0780 Medical interventions
- 0795 Biomedical Innovation (Capstone)

Program of Study Description:
Students engage in activities like investigating the death of a fictional person to learn content in the context of real-world cases. They examine the structures and interactions of human body systems and explore the prevention, diagnosis, and treatment of disease, all while working collaboratively to understand and design solutions to the most pressing health challenges of today and the future. Each course in the Biomedical Science sequence builds on the skills and knowledge students gain in the preceding courses.

Course Descriptions:

0727 Principles of Biomedical Science
In the introductory course of the PLTW Biomedical Science program, students explore concepts of biology and medicine to determine factors that led to the death of a fictional person. While investigating the case, students examine autopsy reports, investigate medical history, and explore medical treatments that might have prolonged the person’s life. The activities and projects introduce students to human physiology, basic biology, medicine, and research processes while allowing them to design their own experiments to solve problems.

0766 Human Body Systems*
Students examine the interactions of human body systems as they explore identity, power, movement, protection, and homeostasis. Exploring science in action, students build organs and
tissues on a skeletal Maniken®; use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration; and take on the roles of biomedical professionals to solve real-world medical cases.

*This course will fulfill the requirement for a third science course graduation requirement.

**0780 Medical Interventions**
Students follow the life of a fictitious family as they investigate how to prevent, diagnose, and treat disease. Students explore how to detect and fight infection; screen and evaluate the code in human DNA; evaluate cancer treatment options; and prevail when the organs of the body begin to fail. Through real-world cases, students are exposed to a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics.

**0795 Biomedical Innovation**
In the final course of the PLTW Biomedical Science sequence, students build on the knowledge and skills gained from previous courses to design innovative solutions for the most pressing health challenges of the 21st century. Students address topics ranging from public health and biomedical engineering to clinical medicine and physiology. They have the opportunity to work on an independent design project with a mentor or advisor from a university, medical facility, or research institution.
Diagnostic Services Pathway

Pathway Description:
The Diagnostic Services pathway prepares students for occupations or functions primarily involved in creating a picture of the health status of patients and other clients at a single point in time.

Program of Study: HE0718 Diagnostic Services
Courses:
- 0711 Foundations of Health Science
- 0715 Advanced Principles of Health Science
Choose Medical Specialization A or B
Medical Specialization A
- Medical Laboratory Technician
  - 0755 Medical Laboratory and Diagnostic Procedures
  - 0756 Medical Laboratory Diagnostic Procedures and Applications
Medical Specialization B
- Clinical Diagnostics
  - 0810 Electrocardiograph Technician
  - 0825 Phlebotomy Skills

Program of Study Description:
The Diagnostic Services Program of Study prepares students for careers in health care that perform tests and evaluations to aid in the detection, diagnosis and treatment of diseases, injuries or other physical conditions. This Program of Study is designed to prepare students for entry level positions in medical diagnostics and continuing in postsecondary education.

Course Descriptions:
0711 Foundations of Health Science
This course is designed to allow instructional content to focus on basic medical terminology, growth and development, nutrition, health maintenance practices and healthcare delivery systems. It is designed to provide the student with knowledge and technical skills required for infection control and the prevention of disease transmission, CPR and First Aid. Students will be provided with the opportunity to acquire certification in these areas. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.
0715 Advanced Principles of Health Science
Instructional content will focus on healthcare safety, environmental safety processes and procedures, ethical and legal responsibilities and mathematical computations. Medical terminology and the reinforcement, expansion and enhancement of biology content specific to diseases and disorders are an integral part of the course. Instruction will incorporate project and problem based healthcare practices and procedures to demonstrate the importance of these skills. Students will develop basic technical skills required for all health career specialties including patient privacy, communication, teamwork and occupational safety and be provided with opportunities to obtain certifications in HIPPA/Data Privacy and healthcare safety. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

Select One Course to Complete Program of Study:
Medical Specialization (A)
Medical Laboratory Technician
0755 Medical Laboratory and Diagnostic Procedures
In this course, the Point of Care Technician and the laboratory student will be introduced to procedures in the hematology, coagulation and microbiology departments of the laboratory. Additional content within this course includes measurement and assessment, metrics and measurements, communication skills, legal and ethical issues, medical and surgical asepsis, microbiology techniques, as well as body structure and function. Students utilize problem solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

0756 Medical Laboratory Diagnostic Procedures and Applications
The instructional content will focus on advanced procedures necessary for entry-level employment in the physician’s office and the medical laboratory. Course content will include blood bank and serology procedures, basic chemistry procedures, fecal testing and electrocardiography. Additional instruction will provide students with key employability skills for job seeking and keeping. Eligible students will participate in a clinical internship and upon successful completion will prepare for credentialing, postsecondary education, and/or employment opportunities. A review of guidelines for test taking and an exploration of the college requirements for the laboratory occupation and other healthcare careers will be provided. All standards and objectives must be mastered before the student is approved to pursue credentialing and/or industry validation. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are
encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

**Medical Specialization (B)**

**Clinical Diagnostics**

**0810 Electrocardiograph Technician**

Instructional content will focus on the operation of a 12-lead electrocardiograph machine, explanation of the Einthoven triangle related to the cardiac system. Students will identify the anatomic position of each of the chest leads, prepare a patient for a 12-Lead EKG, maintain the EKG machine and maintain EKG tracings in the patient’s chart. The student will interpret and evaluate electrocardiogram tracing. Students participate in clinical practicum for the EKG Technician. Clinical experiences may occur in a variety of settings that utilize EKG monitors. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

**0825 Phlebotomy Skills**

Instructional content will focus on performing laboratory duties requiring accuracy, timeliness and documentation. The student will be able to function in the laboratory setting utilizing these skills. This course will enhance the student's knowledge of safety procedures as they relate to phlebotomy. They will be provided with the knowledge and skills necessary in maintaining the standard procedures required for a laboratory. Legal and ethical issues to consider in the profession are an integral part of this course. The phlebotomist must be able to recognize appropriate methods for analyzing specimens. In this course the student will learn these methods in collecting and processing the specimen to be analyzed. This externship is designed to provide students with hands-on experience in a clinical, physician’s office or laboratory setting. They are required to complete certification requirements which could require not less than 50 hours and up to 120 hours in the externship in order to receive credit for the course. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.
Health Informatics Pathway

Pathway Description:
The Health Informatics Pathway prepares the student for occupations or functions that document client care, analyze data and improve healthcare. Included is competency-based applied learning that contributes to the academic knowledge need for all aspects of Health Science occupations and to continue in post-secondary programs.

Program of Study: HE0742 Health Informatics
Courses:
- 0711 Foundations of Health Science
- 0715 Advanced Principals of Health Science
- 1443 Medical Office Management
+1 Health Informatics specialization course

Program of Study Description:
This Health Informatics Program of Study prepares the student for occupations in many different levels of health care related employment. The Program is designed to prepare students for employment as entry level medical office personnel, employment as entry level health record personnel, and/or to continue their education in the postsecondary educational environment. The content is a combination of Career Technical Education courses with Mountwest Community and Technical College (MWCTC) college level courses.

Course Descriptions:
0711 Foundations of Health Science
This course is designed to allow instructional content to focus on basic medical terminology, growth and development, nutrition, health maintenance practices and healthcare delivery systems. It is designed to provide the student with knowledge and technical skills required for infection control and the prevention of disease transmission, CPR and First Aid. Students will be provided with the opportunity to acquire certification in these areas. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and content skill sets.

0715 Advanced Principles of Health Science
Instructional content will focus on healthcare safety, environmental safety processes and procedures, ethical and legal responsibilities and mathematical computations. Medical terminology and the reinforcement, expansion and enhancement of biology content specific to diseases and disorders are an integral part of the course. Instruction will incorporate project and problem based healthcare practices and procedures to demonstrate the importance of these skills. Students will develop basic technical skills required for all health career specialties including
patient privacy, communication, teamwork and occupational safety and be provided with opportunities to obtain certifications in HIPPA/Data Privacy, and health care safety. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and content skill sets.

**1443 Medical Office Management**
This course is designed to develop student understanding and skills in such areas as the elements of medical office management knowledge and skills necessary in the business and marketing field. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

**Health Informatics Specialization: Choose One**

**0777 Electronic Health Record Specialty**
This area of study is designed to provide high school students with the knowledge of procedures and job skills needed to work in a hospital or clinic setting with knowledge of requirements related to the electronic health record. Instructional content will focus on policies and procedures necessary for maintaining the integrity, privacy and protection of patient information. Studies will include the following: patient records in terms of compliance with legal and regulatory requirements, basic coding, HIPAA regulations pertaining to medical records and collection of patient demographic and insurance information. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and content skill sets.

**0789 Clinical Specialty I**
This course is designed to allow the student to choose a career work-based experience from the following specializations: Medical Office Management.
Upon successful completion of the prerequisite courses in the Health Science Education Program of Study, students will be provided the opportunity in Clinical Specialty I to participate in a work-based clinical experience. Students choose a health career specialty for in-depth study and must complete a minimum of 25-55 hours in an applicable clinical rotation. Instruction is guided by career-specific Content skill sets that must be mastered before students are eligible to attain established credentials and/or industry validation. Within this course, students focus upon employability skills and career development, and apply healthcare information technology and
technical skills. Instruction will incorporate project and problem-based healthcare practices and procedures to demonstrate the criticality of these skills. Due to healthcare industry standards, exemplary attendance is mandatory. Students utilize problem solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and Content skill sets.

0769 Introduction to Health Informatics**
This course is designed for the student to explore the study of Healthcare Informatics a field of information science concerned with the management of all aspects of health data and information through the application of computers and computer technologies. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

0768 Healthcare Statistics **
This course is designed to develop student understanding and skills related to clinical data. This course prepares students for collection, maintenance and reporting of data for the clinical indices/databased/registries to meet specific organizational needs such as medical research and disease registries. Students will collect, organize and present data for quality management, utilization management, risk management and other related studies. Students will be able to comprehend basic descriptive, institutional and healthcare vital statistics.

**Mountwest Community and Technical College Course
Therapeutic Services Pathway

Program of Study: HE1095 Personal Fitness and Wellness

Courses: 1051 Foundations of Wellness
1052 Models of Wellness Training
1053 Wellness Coaching Skills
1054 Practical Applications of Wellness Training

Program of Study Description:
The Personal Fitness and Wellness Training Program of Study focuses on knowledge, skills, attitudes and practices required for careers relating to the field of coaching wellness for optimal living including: wellness concepts integrating mind, body and spirit; foundations of physical and emotional wellness; common conditions requiring wellness strategies; scope of practice; the differences between fitness and wellness; wellness assessments; motivational theories, principles and techniques; working with medical and allied professionals; and the development of a personal wellness foundation.

Course Descriptions:
1051 Foundations of Wellness
This course is designed to present the fundamentals of coaching wellness for optimal living including: wellness concepts integrating mind, body and spirit; foundations of physical and emotional wellness; common conditions requiring wellness strategies; scope of practice; the differences between fitness and wellness; wellness assessments; motivational theories, principles and techniques; working with medical and allied professionals; and the development of a personal wellness foundation. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

1052 Models of Wellness Training
This course is designed to present components of various wellness models and theories for the application of wellness coaching with different populations and settings including: the history of evidence-based wellness strategies; stages of change and readiness; how to motivate clients and create lasting change; applications of wellness for clients of different ages and with different needs; dimensions of the wellness industry; and how to start a wellness business. Students are encouraged to become active members of the student organization, HOSA Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.
1053 Wellness Coaching Skills
This course is designed to present the fundamentals of wellness coaching skills including: an overview of wellness coaching interventions for specific wellness issues such as weight/physical fitness, smoking cessation, sleep/energy management, aging, etc. Emphasis will be placed on wellness assessment and development of evidence-based personalized wellness plans. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

1054 Practical Applications of Wellness Training
This course is designed to give students the opportunity to connect theory and practice by interacting with Wellness and Fitness professionals. Students will study various requirements for employability in the Wellness and Fitness field including ethics, teamwork, and professionalism. Students may participate in activities within the wellness industry for hands-on or work-based experiences. Preparation includes construction of a portfolio that can be utilized in obtaining employment upon completion of the student’s program. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.
Pathway Description:
The Therapeutic Services Pathway allows the student to explore occupations or skills primarily involved in changing the health status of the patient and other clients over time.

Program of Study: HE0715 Allied Health Sciences
Courses:
- 0711 Foundations of Health Science
- 0715 Advanced Principles of Health Science
Select one of the following (A, B, C, D, or E):
- Dental Assisting (A)
  - 0746 Dental Science
  - 0743 Dental Assisting Clinical Science
- Medical Assisting (B)
  - 0737 Medical Assistant Laboratory and Diagnostic Procedures
  - 0733 Medical Assistant Clinical Procedures
- PTCB Prep (C)
  - 0771 PTCB Preparation
  - 0772 PTCB Clinical Applications
- Emergency Services (D)
  - 0792 Emergency Services I
  - 0732 Emergency Services II
- Pre-Nursing (E)
  - 0771 PTCB Prep
  - 0615 Certified Nursing Assistant

Program of Study Description:
The Allied Health Program of Study allows the student to explore occupations focused primarily on changing the health status of the patient over time. Health professionals in this Program of Study work directly with patients; they may provide care, treatment and health education information. Skill sets taught can lead to an entry level certification and preparation for continuing in a postsecondary learning environment.

Course Descriptions:
0711 Foundations of Health Science
This course is designed to allow instructional content to focus on basic medical terminology, growth and development, nutrition, health maintenance practices and healthcare delivery systems. It is designed to provide the student with knowledge and technical skills required for infection control and the prevention of disease transmission, CPR and First Aid. Students will be provided with the opportunity to acquire certification in these areas. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and Content skill sets.
**0715 Advanced Principles of Health Science**
Instructional content will focus on healthcare safety, environmental safety processes and procedures, ethical and legal responsibilities and mathematical computations. Medical terminology and the reinforcement, expansion and enhancement of biology content specific to diseases and disorders are an integral part of the course. Instruction will incorporate project and problem-based healthcare practices and procedures to demonstrate the importance of these skills. Students will develop basic technical skills required for all health career specialties including patient privacy, communication, teamwork and occupational safety and be provided with opportunities to obtain certifications in HIPPA/Data Privacy and health care safety. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and Content skill sets.

**Dental Assisting (A)**
This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Dental Science field; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills. The program is designed to prepare students for employment as dental assistants and to take the Dental Assisting National Board Examination.

**0746 Dental Science**
This course provides an introduction to dental laboratory techniques and procedures while preparing the student for entry-level employment as a dental laboratory assistant. Students will obtain the knowledge and skills necessary to assist and/or perform basic laboratory and diagnostic procedures. With participation and input of therapeutic services professionals, instructional content will incorporate project and problem-based therapeutic practices and procedures to demonstrate the criticality of these skills. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and Content skill sets.

**0743 Dental Assisting Clinical Science**
The student completing this course will be able to use knowledge from previously required courses to perform and practice all aspects of Dental Laboratory Assisting in a clinical setting. Students will obtain the knowledge and skills necessary to assist and/or perform basic laboratory and diagnostic procedures. With participation and input of therapeutic services professionals, instructional content will incorporate project and problem-based therapeutic practices and procedures to demonstrate the criticality of these skills. Students utilize problem solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and content skill sets.

*0730 Health Science Clinical Experience may be scheduled with 0743 (Dental Assisting Clinical Science) to create a 2-credit block.*

**Medical Assisting (B)**
This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills. The program is designed to prepare students for employment as medical assistant and to take an examination for certification in Medical Assisting.

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**0737 Medical Assistant Laboratory and Diagnostic Procedures**
Instructional content will focus on an introduction to the medical laboratory, safety, principles of disease transmission and prevention, as well as medical and surgical asepsis. Students will obtain the knowledge and skills necessary to assist and/or perform basic laboratory and diagnostic procedures. With participation and input of therapeutic services professionals, instructional content will incorporate project and problem-based therapeutic practices and procedures to demonstrate the criticality of these skills. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and content skill sets.

**0733 Medical Assistant Clinical**
Instructional content in this will focus on clinical procedures utilized within medical offices. Major components include emergency medical care, physical exam, basic pharmacology and administration of medication. Students will focus upon employability strategies and career development necessary for successful employment. Students will participate in a work-based
clinical externship within a medical office or equivalent health care facility. Due to health care industry standards, exemplary attendance is mandatory. All content skill sets must be mastered before students are eligible to attain established credentials and/or industry validation. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and content skill sets.

*0730 Health Science Clinical Experience may be scheduled with 0733 (Medical Assistant Clinical) to create a 2-credit block.

PTCB Prep (C)
This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science education pathway; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills. The program is designed to prepare students for employment as pharmacy technicians.

0771 PTCB Preparation
The PTCB Preparation class prepares the student to participate in a clinical internship in PTCB Clinical Applications. Instructional focus is on a self-paced curriculum provided by PassAssured’s Pharmacy Technician Training Program, Pass Assured, LLC. This curriculum is supported by teacher instruction and a variety of textbook and online resources. Using a modular format, this system allows the student to gain the knowledge and skills required for certification and entry-level employment as a Pharmacy Technician. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and content skill sets.

0772 PTCB Clinical Applications
Students will be provided an opportunity to participate in a clinical internship, applying the knowledge and skills mastered during the PTCB Preparation course. The clinical internship will allow hands-on practice under the direction of a pharmacist. Students participate in 100-130 hours of activities that reflect current and future entry-level pharmacy technician functions and responsibilities, utilizing both the institutional and retail settings. Students utilize problem solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization,
HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and content skill sets.

*0730 Health Science Clinical Experience may be scheduled with 0772 (PTCB Applications) to create a 2-credit block.

Emergency Services (D)
This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science Education Pathway; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills. This is an instructional program that prepares students for employment as emergency medical technicians.

0792 Emergency Services 1
EMT-B is recognized by the United States Department of Transportation. Instructional content will focus upon expanded and enhanced biology content specific to human structure, function and diseases/disorders common to medical and traumatic emergencies. In addition, course content will include treatment and care of the sick or injured, methods and techniques of patient assessment and of gaining access to the patient, stabilization and transport. Skills necessary for proper documentation are integrated throughout the course. According to national criteria, students must successfully complete a mid-course exam, with a minimum core of 80%, in order to continue in the course and maintain eligibility to take the national EMT-B exam. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and content skill sets.

0732 Emergency Services II
This course is designed to be used in conjunction with EMT-B to include the necessary clinical experience for the EMT-B certification. Instructional content is focused on extending career preparation and technical skills associated with a previously selected clinical specialization. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

*0730 Health Science Clinical Experience may be scheduled with 0732 (Emergency Services 2) to create a 2-credit block.
Pre-Nursing (E)  
0771 PTCB Preparation  
The PTCB Preparation class prepares the student to participate in a clinical internship in PTCB Clinical Applications. Instructional focus is on a self-paced curriculum provided by PassAssured’s Pharmacy Technician Training Program, Pass Assured, LLC. This curriculum is supported by teacher instruction and a variety of textbook and online resources. Using a modular format, this system allows the student to gain the knowledge and skills required for certification and entry-level employment as a Pharmacy Technician. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and content skill sets.

0615 Certified Nursing Assistant  
This course provides the knowledge and skills necessary to become certified to perform personal care skills for patients/residents in the nursing home, assisted-living center and the hospital under the direct supervision of a licensed nurse. The course includes subject matter and experiences in the classroom and clinical setting that lead to a recognized credential as a certified nursing assistant. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and content skill sets.

*The course must meet regulations of the Nursing Home Reform provisions of the Omnibus Budget Reconciliation Act of 1987 (OBRA) and the West Virginia Nurse Aide Training and Competency Evaluation guidelines. Curriculum rules and regulations, including the skills check off list, are provided by WV OHFLAC at the following web sites:  
http://www.wvdhhr.org/ohflac/NA/Education.aspx  

*OHFLAC curriculum rules and regulations are specific and comprehensive. All Certified Nursing Assistant programs will be held responsible for the OHFLAC criteria when programs are visited.

*0730 Health Science Clinical Experience may be scheduled with 0615 (Certified Nursing Assistant) to create a 2-credit block.
Program of Study: HE0723 Therapeutic Services

Courses:
- 0711 Foundations of Health Science
- 0715 Advanced Principles of Health Science
- 0789 Clinical Specialty I (Choose one from the following list)
- 0790 Clinical Specialty II (Choose one from the following list)
  - Advanced Health Seminar
  - Certified Nursing Assistant
  - Certified ECG Technician
  - Certified Health Unit Coordinator
  - Certified Patient Care Technician
  - Certified Phlebotomy Technician
  - Community Emergency Response Team
  - Dental Aide
  - Dietary Aide
  - Direct Care Worker
  - Electronic Health Record Specialist
  - Environmental Services
  - Orientation to Practical Nursing
  - Laundry Aide
  - Physical Therapy Aide
  - Pre-Pharmacy Technician
  - Imagery Aide
  - Veterinary Science Aide

Program of Study Description:
The Therapeutic Services Program of Study allows the student to explore careers focused primarily on changing the health status of the patient over time. Health professionals in this Program of Study work directly with patients; they may provide care, treatment, counseling and health education information.

Course Descriptions:

0711 Foundations of Health Science
This course is designed to allow instructional content to focus on basic medical terminology, growth and development, nutrition, health maintenance practices and healthcare delivery systems. It is designed to provide the student with knowledge and technical skills required for infection control and the prevention of disease transmission, CPR and First Aid. Students will be provided with the opportunity to acquire certification in these areas. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and Content skill sets.

0715 Advanced Principles of Health Science
Instructional content will focus on healthcare safety, environmental safety processes and procedures, ethical and legal responsibilities and mathematical computations. Medical terminology and the reinforcement, expansion and enhancement of biology content specific to diseases and disorders are an integral part of the course. Instruction will incorporate project and problem based healthcare practices and procedures to demonstrate the importance of these skills. Students will develop basic technical skills required for all health career specialties including patient privacy, communication, teamwork and occupational safety and be provided with opportunities to obtain certifications in HIPPA/Data Privacy and health care safety. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and Content skill sets.

0789 Clinical Specialty I
This course is designed to allow the student to choose a career work-based experience from the following specializations:
**Select 1:** Advanced Health Seminar, Certified Nursing Assistant, Certified ECG Technician, Certified Health Unit Coordinator, Certified Patient Care Technician, Certified Phlebotomy Technician, Community Emergency Response Team, Dental Aide, Dietary Aide, Direct Care Worker, Electronic Health Record Specialist, Environmental Services, Orientation to Practical Nursing, Laundry Aide, Physical Therapy Aide, Pre-Pharmacy Technician, Imagery Aide, Veterinary Science Aide.

Upon successful completion of the prerequisite courses in the Health Science Education Program of Study, students will be provided the opportunity in Clinical Specialty I to participate in a work-based clinical experience. Students choose a health career specialty for in-depth study and must complete a minimum of 25-55 hours in an applicable clinical rotation. Instruction is guided by career-specific Content skill sets that must be mastered before students are eligible to attain established credentials and/or industry validation. Within this course, students focus upon employability skills and career development, and apply healthcare information technology and technical skills. Instruction will incorporate project and problem-based healthcare practices and procedures to demonstrate the criticality of these skills. Due to healthcare industry standards, exemplary attendance is mandatory. Students utilize problem solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and Content skill sets.
*0730 Health Science Clinical Experience may be scheduled with 0789 (Clinical Specialty I) to create a 2-credit block.

0790 Clinical Specialty II
This course is designed to allow the student to choose a career work-based experience from the following specializations:

Select 1: Advanced Health Seminar, Certified Nursing Assistant, Certified ECG Technician, Certified Health Unit Coordinator, Certified Patient Care Technician, Certified Phlebotomy Technician, Community Emergency Response Team, Dental Aide, Dietary Aide, Direct Care Worker, Electronic Health Record Specialist, Environmental Services, Orientation to Practical Nursing, Laundry Aide, Physical Therapy Aide, Pre-Pharmacy Technician, Imagery Aide, Veterinary Science Aide.

Upon successful completion of the prerequisite courses in the Health Science Education Program of Study, students will be provided the opportunity in Clinical Specialty II to participate in a work-based clinical experience. Students choose a health career specialty for in-depth study and must complete a minimum of 25-55 hours in an applicable clinical rotation. Instruction is guided by career-specific Content skill sets that must be mastered before students are eligible to attain established credentials and/or industry validation. Within this course, students focus upon employability skills and career development, and apply healthcare information technology and technical skills. Instruction will incorporate project and problem-based healthcare practices and procedures to demonstrate the criticality of these skills. Due to healthcare industry standards, exemplary attendance is mandatory. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

*0730 Health Science Clinical Experience may be scheduled with 0790 (Clinical Specialty II) to create a 2-credit block.
Health Science Education Cluster Electives

Biotechnology Research and Development Pathway

Program of Study: HE0780 Biotechnology Research and Development

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<th>WVEIS CODE</th>
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<td>1060</td>
<td>Essentials of Addiction and Prevention</td>
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Course Descriptions:

0721 Medical Terminology
Through the study of medical terminology, the student will be introduced 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 human body utilizing a systems approach. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

0725 Understanding Human Behavior
Within this course, students will learn basic principles of human behavior. As a result of this knowledge, students should gain an improved sense of self and build interpersonal relationship skills. The end goal will be the delivery of conscientious, personalized care which conveys respect and sincerity. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

0739 Nutrition and Wellness
Students will examine nutrition in relation to the maintenance and/or restoration of wellness. Topics include food composition, nutritional guidelines, therapeutic diets, eating disorders, menu planning and patient teaching. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

1060 Essentials of Addiction and Prevention
Students will examine the essentials of addiction and prevention strategies. This course aligns with domains, tasks and knowledge skills from The WV Certification Board for Addictions Prevention Professionals Certified Prevention Specialist Manual. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.
Health Science Education Cluster Electives

Diagnostic Services Pathway

Program of Study: HE0718 Diagnostic Services/Specialization: Medical Lab Technician

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<tr>
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Course Descriptions:

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This course focuses on the structure and function of each system in the human body. Additional instructional components include concepts that pertain to the body as a whole, applicable medical terminology and the pathophysiology common to each system. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

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Health Science Education Cluster Electives

Diagnostic Services Pathway

Program of Study: HE0718 Diagnostic Services/Specialization: Clinical Diagnostics

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Course Descriptions:

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Health Science Education Cluster Electives

Health Informatics Pathway

Program of Study: HE0742 Health Informatics

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<td>Work-Based Integration &amp; Transition</td>
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</tbody>
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Course Descriptions:

0716 Body Structures and Functions
This course focuses on the structure and function of each system in the human body. Additional instructional components include concepts that pertain to the body as a whole, applicable medical terminology and the pathophysiology common to each system. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

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This course gives students the opportunity to integrate theory and practice by interacting with industry professionals. Students will study various requirements for employability including ethics, communication, teamwork and professionalism. Students will participate in hands-on, digital or work-based experiences related to industry settings in order to practice skill sets and to transition from student to employee. A supervised project will be developed in one or more of the following categories: Entrepreneurship (ownership or operation of a business); Placement (employment or internship); Research and Experimentation (planning and/or conducting a scientific experiment); Exploration (exploration of related careers through activities such as shadowing employees in various work settings, conducting on-line research, attending professional development activities, etc.). Students will develop materials to supplement their Simulated Workplace portfolios. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.
Health Science Education Cluster Electives

Therapeutic Services Pathway

Program of Study: HE1095 Personal Fitness and Wellness Training

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<th>WVEIS Code</th>
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<tr>
<td>1050</td>
<td>Wellness Issues for Special Populations</td>
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<tr>
<td>6709</td>
<td>Fitness/Conditioning Activities</td>
</tr>
<tr>
<td>0502</td>
<td>Work-Based Integration and Transition</td>
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</table>

Course Descriptions:

**1050 Wellness Issues for Special Populations**
This course is designed to present the contemporary best practices for promoting wellness of Direct Service participants including: applying issues of nutrition, food handling and meal preparation; promoting preventive health, safety and other characteristics of a healthy lifestyle; identifying health resources; examining components of emotional wellness; and implementing effective and appropriate communication skills. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

**6709 Fitness/Conditioning Activities**
This course is designed to give students the opportunity to learn fitness concepts and conditioning techniques used for obtaining optimal physical fitness. Students will benefit from comprehensive weight training and cardiorespiratory endurance activities. Students will learn the basic fundamentals of strength training, aerobic training, and overall fitness training and conditioning. Course includes both lecture and activity sessions. Students will be empowered to make wise choices, meet challenges, and develop positive behaviors in fitness, wellness, and movement activity for a lifetime. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

**0520 Work-Based Integration and Transition**
This course gives students the opportunity to integrate theory and practice by interacting with industry professionals. Students will study various requirements for employability including ethics, communication, teamwork and professionalism. Students will participate in hands-on,
digital or work-based experiences related to industry settings in order to practice skill sets and to transition from student to employee. A supervised project will be developed in one or more of the following categories: Entrepreneurship (ownership or operation of a business); Placement (employment or internship); Research and Experimentation (planning and/or conducting a scientific experiment); Exploration (exploration of related careers through activities such as shadowing employees in various work settings, conducting on-line research, attending professional development activities, etc.). Students will develop materials to supplement their Simulated Workplace portfolios.
Health Science Education Cluster Electives

Therapeutic Services Pathway

Program of Study: HE0715 Allied Health Sciences/Specialization: Dental Assisting

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<td>0747</td>
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<td>Dental Terminology</td>
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<td>0749</td>
<td>Supervised Dental Clinical Experience</td>
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<td>1060</td>
<td>Essentials of Addiction and Prevention</td>
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<td>0520</td>
<td>Work Based Integration and Transition</td>
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Course Description:

0742 Dental Assistant Clinical Practice
The student within the Dental Assistant Clinical Practices course will focus on knowledge and skills required for the Dental Assistant to function within the areas of radiography and emergency medical care. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

0745 Dental Assisting Clinical Mentoring
The student in the Dental Assisting Clinical Mentoring course will participate in a school and community partnership that allows students to participate in practical “hands-on” training under the supervision of a career related professional. The partnership will take place in a clinical facility, whose staff shares insight, knowledge, and skills instruction. In addition to the clinical externship, instructional content will focus on employability skills necessary for job seeking and keeping. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

0747 Dental Specialties
This course contains the beginning concepts and skills students will need for entry-level employment as a dental assistant in a specialty office. Major instructional concepts include orientation to specialty areas, instrumentation and procedures. Students are required to
complete a work-based clinical experience in each of the specialty areas within this course. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

0748 Dental Terminology
This course contains the dental terminology needed for entry-level employment as a Dental Assistant within both clinical and administrative areas. The course includes an overview of the role, function and utilization of dental terminology. Major instructional components include the use of dental terminology in the following areas: odontology and anatomical landmarks, infection control, chair side assisting, radiography, dental laboratory, pharmacology and emergency care, business office procedures and dental specialties. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

0749 Supervised Dental Clinical Experience
The student within the Supervised Dental Assistant Experience course will focus on instructional components that will enable him/her to work as an effective member of the dental team. Students will be introduced to the specialties of dentistry and the requirements necessary to function as an administrative and chair side assistant in a dental office. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

1060 Essentials of Addiction and Prevention
Students will examine the essentials of addiction and prevention strategies. This course aligns with domains, tasks and knowledge skills from The WV Certification Board for Addictions Prevention Professionals Certified Prevention Specialist Manual. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.
0730 Health Science Clinical Experience
This course is designed to be used in conjunction with a Health Science Education course that includes a clinical specialization experience. Instructional content focuses on extending career preparation and technical skills associated with a previously selected clinical specialization. For example, Health Science Clinical Experience Skill Sets may be taught in conjunction with Clinical Specialty I (0789) or Clinical Specialty II (0790), PTCB Applications (0772), Medical Assistance Clinical (0732), Certified Nursing Assistant (0615), and Dental Assisting Clinical Science (0743). Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

0520 Work-Based Integration and Transition
This course gives students the opportunity to integrate theory and practice by interacting with industry professionals. Students will study various requirements for employability including ethics, communication, teamwork and professionalism. Students will participate in hands-on, digital or work-based experiences related to industry settings in order to practice skill sets and to transition from student to employee. A supervised project will be developed in one or more of the following categories: Entrepreneurship (ownership or operation of a business); Placement (employment or internship); Research and Experimentation (planning and/or conducting a scientific experiment); Exploration (exploration of related careers through activities such as shadowing employees in various work settings, conducting on-line research, attending professional development activities, etc.). Students will develop materials to supplement their Simulated Workplace portfolios. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

Health Science Education Cluster Electives

Therapeutic Services Pathway

Program of Study: HE0715 Allied Health Sciences/Specialization: Medical Assisting

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<tr>
<td>0721</td>
<td>Medical Terminology</td>
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<td>0730</td>
<td>Health Science Clinical Experience</td>
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<tr>
<td>0734</td>
<td>Medical Assistant Advanced Pharmacology</td>
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<tr>
<td>0736</td>
<td>Medical Assistant Administrative Procedures II</td>
</tr>
<tr>
<td>0739</td>
<td>Nutrition and Wellness</td>
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Course Descriptions:

**0721 Medical Terminology**
Through the study of medical terminology, the student will be introduced 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 human body utilizing a systems approach. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

**0730 Health Science Clinical Experience**
This course is designed to be used in conjunction with a Health Science Education course that includes a clinical specialization experience. Instructional content focuses on extending career preparation and technical skills associated with a previously selected clinical specialization. For example, Health Science Clinical Experience Skill Sets may be taught in conjunction with Clinical Specialty I (0789) or Clinical Specialty II (0790), PTCB Applications (0772), Medical Assistance Clinical (0732), Certified Nursing Assistant (0615), and Dental Assisting Clinical Science (0743). Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

**0734 Medical Assistant Advance Pharmacology**
Within this course, instructional content will focus on advanced pharmacology. Course content will include the uses, sources, forms and delivery routes of drugs. Knowledge will be gained in the area of drug classifications and actions, along with legal implications regarding controlled substances and other medications. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

**0736 Medical Assistant Administrative Procedures II**
Within this course, instructional content will focus on advanced pharmacology. Course content will include the uses, sources, forms and delivery routes of drugs. Knowledge will be gained in the area of drug classifications and actions, along with legal implications regarding controlled substances and other medications. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide
each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

0739 Nutrition and Wellness
Students will examine nutrition in relation to the maintenance and/or restoration of wellness. Topics include food composition, nutritional guidelines, therapeutic diets, eating disorders, menu planning and patient teaching. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

1060 Essentials of Addiction and Prevention
Students will examine the essentials of addiction and prevention strategies. This course aligns with domains, tasks and knowledge skills from The WV Certification Board for Addictions Prevention Professionals Certified Prevention Specialist Manual. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.
0520 Work-Based Integration and Transition
This course gives students the opportunity to integrate theory and practice by interacting with industry professionals. Students will study various requirements for employability including ethics, communication, teamwork and professionalism. Students will participate in hands-on, digital or work-based experiences related to industry settings in order to practice skill sets and to transition from student to employee. A supervised project will be developed in one or more of the following categories: Entrepreneurship (ownership or operation of a business); Placement (employment or internship); Research and Experimentation (planning and/or conducting a scientific experiment); Exploration (exploration of related careers through activities such as shadowing employees in various work settings, conducting on-line research, attending professional development activities, etc.). Students will develop materials to supplement their Simulated Workplace portfolios. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.
Health Science Education Cluster Electives

Therapeutic Services Pathway

Program of Study: HE0715 Allied Health Sciences/Specialization: PTCB Prep

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<td>Essentials of Addiction and Prevention</td>
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<td>0520</td>
<td>Work Based Integration and Transition</td>
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</tbody>
</table>

Course Descriptions:

0716 Body Structures and Functions
This course focuses on the structure and function of each system in the human body. Additional instructional components include concepts that pertain to the body as a whole, applicable medical terminology and the pathophysiology common to each system. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

0721 Medical Terminology
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0725 Understanding Human Behavior
Within this course, students will learn basic principles of human behavior. As a result of this knowledge, students should gain an improved sense of self and build interpersonal relationship skills. The end goal will be the delivery of conscientious, personalized care which conveys respect and sincerity. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real
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This course gives students the opportunity to integrate theory and practice by interacting with industry professionals. Students will study various requirements for employability including ethics, communication, teamwork and professionalism. Students will participate in hands-on, digital or work-based experiences related to industry settings in order to practice skill sets and to transition from student to employee. A supervised project will be developed in one or more of the following categories: Entrepreneurship (ownership or operation of a business); Placement (employment or internship); Research and Experimentation (planning and/or conducting a scientific experiment); Exploration (exploration of related careers through activities such as shadowing employees in various work settings, conducting on-line research, attending professional development activities, etc.). Students will develop materials to supplement their Simulated Workplace portfolios. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.
Health Science Education Cluster Electives

Therapeutic Services Pathway

Program of Study: HE0715 Allied Health Sciences/Specialization: Emergency Services

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<tr>
<th>WVEIS CODE</th>
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<tr>
<td>0720</td>
<td>ECG/Phlebotomy</td>
</tr>
<tr>
<td>0721</td>
<td>Medical Terminology</td>
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<tr>
<td>0730</td>
<td>Health Science Clinical Experience</td>
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<td>Nutrition and Wellness</td>
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<tr>
<td>0793</td>
<td>Emergency Response to Terrorism</td>
</tr>
<tr>
<td>1060</td>
<td>Essentials of Addiction and Prevention</td>
</tr>
<tr>
<td>0520</td>
<td>Work Based Integration and Transition</td>
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</tbody>
</table>

Course Descriptions:

0720 ECG/Phlebotomy
Upon successful completion of this course, students will master competencies consistent in the areas of ECG Technician and Phlebotomist. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

0721 Medical Terminology
Through the study of medical terminology, the student will be introduced 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 human body utilizing a systems approach. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

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0793 Emergency Response to Terrorism
Instructional content will focus on the development of knowledge and skills necessary to provide safety, protection and care to the public and other responders upon arrival at a possible terrorist incident. The course is designed in accordance with standards developed by the United States Department of Justice, Federal Emergency Management Agency and the United States Fire Administration. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

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Health Science Education Cluster Electives

Therapeutic Services Pathway

Program of Study: HE0715 Allied Health Sciences/Specialization: Pre-Nursing

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Course Descriptions:

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Health Science Education Cluster Electives

Therapeutic Services Pathway

Program of Study: HE0723 Therapeutic Services

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<td>0710</td>
<td>Employment in Health Occupations</td>
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<tr>
<td>0712</td>
<td>Introduction to Support Services Clinical</td>
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Course Descriptions:

0716 Body Structures and Functions
This course focuses on the structure and function of each system in the human body. Additional instructional components include concepts that pertain to the body as a whole, applicable medical terminology and the pathophysiology common to each system. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

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0616 Orientation to Practical Nursing
The purpose of this course is to assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in nursing. Students will explore personal qualities essential to nurses, perform basic communication and math skills as well as collect patient data.

0520 Work-Based Integration and Transition
This course gives students the opportunity to integrate theory and practice by interacting with industry professionals. Students will study various requirements for employability including ethics, communication, teamwork and professionalism. Students will participate in hands-on, digital or work-based experiences related to industry settings in order to practice skill sets and to transition from student to employee. A supervised project will be developed in one or more of the following categories: Entrepreneurship (ownership or operation of a business); Placement (employment or internship); Research and Experimentation (planning and/or conducting a scientific experiment); Exploration (exploration of related careers through activities such as shadowing employees in various work settings, conducting on-line research, attending professional development activities, etc.). Students will develop materials to supplement their Simulated Workplace portfolios. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

0710 Employment in Health Occupations
Instructional content will focus on healthcare information technology applications, employability skills, career development and technical skill preparation. The knowledge and skills acquired in this course provide guidance for career selection and application for both entry-level employment and postsecondary preparation. Instruction will incorporate project and problem-based healthcare practices and procedures to demonstrate the criticality of these skills. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA. The West Virginia Standards for Global 21 Learning include the following components: Global 21 Content, Literacy and Numeracy, Entrepreneurship and Technology Standards. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and content skill sets.

0712 Introduction to Support Services Clinical
Instructional content will focus on support services career options and opportunities along with their accompanying educational requirements and employment projections, aseptic procedures, resource management and aesthetics. Instructional content will enhance, expand and reinforce ethical and legal responsibilities, quality measurement and improvement as well as compliance, as introduced in Employment in Health Occupations. With participation and input of support services professionals, instructional content will incorporate project- and problem-based support
services practices and procedures to demonstrate the criticality of these skills. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, HOSA. The West Virginia Standards for Global 21 Learning include the following components: Global 21 Content, Literacy and Numeracy, Entrepreneurship and Technology Standards. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and content skill sets.
Middle School Career Technical Education Courses

**Course Description:**

**0700 Exploring Health Professions**

The purpose of this course is to assist students in making informed decisions regarding their future academic and occupational goals, and to provide information regarding careers in the Health Science Career Cluster. Reinforcement of academic skills occurs through classroom instruction and applied laboratory procedures. Instruction and learning activities are provided in a laboratory setting using hands-on experiences with the equipment, materials and technology appropriate to the course content and in accordance with current practices. Laboratory activities are an integral part of this program. These activities include instruction in the use of safety procedures, tools, equipment, materials and processes related to these occupations. Equipment and supplies should be provided to enhance hands-on experiences for students. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

**0800 Introduction to Health Science and Career Planning**

The purpose of this course is to assist students in making informed decisions regarding their future academic and occupational goals, and to provide information regarding careers in the Health Science Career Cluster. Reinforcement of academic skills occurs through classroom instruction and applied laboratory procedures. Instruction and learning activities are provided in a laboratory setting using hands-on experiences with the equipment, materials and technology appropriate to the course content and in accordance with current practices. Laboratory activities are an integral part of this program. These activities include instruction in the use of safety procedures, tools, equipment, materials and processes related to these occupations. Equipment and supplies should be provided to enhance hands-on experiences for students. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

**0805 Orientation to Health Occupations**

The purpose of this course is to assist students in making informed decisions regarding their future academic and occupational goals, and to provide information regarding careers in the Health Science Career Cluster. Reinforcement of academic skills occurs through classroom instruction and applied laboratory procedures. Instruction and learning activities are provided in a laboratory setting using hands-on experiences with the equipment, materials and technology appropriate to the course content and in accordance with current practices. Laboratory activities are an integral part of this program. These activities include instruction in the use of safety procedures, tools, equipment, materials and processes related to these
occupations. Equipment and supplies should be provided to enhance hands-on experiences for students. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.

0812 Orientation to Nursing as a Career
The purpose of this course is to assist students in making informed decisions regarding their future academic and occupational goals, and to provide information regarding careers in the Health Science Career Cluster. Reinforcement of academic skills occurs through classroom instruction and applied laboratory procedures. Instruction and learning activities are provided in a laboratory setting using hands-on experiences with the equipment, materials and technology appropriate to the course content and in accordance with current practices. Laboratory activities are an integral part of this program. These activities include instruction in the use of safety procedures, tools, equipment, materials and processes related to these occupations. Equipment and supplies should be provided to enhance hands-on experiences for students. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization HOSA-Future Health Professionals. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools and skill sets.