DEPCO
ENTERPRISES LLC

Health Science

Health Education Products for:

9 - 12 Grades

Post-Secondary

Workforce Training


science

technology

engineering

math

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Computer Specifications

Minimum System Requirements:

1 GHZ or Faster x86 or 64-bit Processor with SSE2 Instruction Set, 1 GB RAM, CD-ROM Drive, 10 GB of Free Hard Disk Space, 4 MB Video Card, Sound Card with 3.5mm Headphone Jack, 2-USB Ports, Monitor Port, Mouse, 100 Base-T Ethernet Network Port, Windows® 7 32-bit (some software requires Windows® 8.1 and the use of a DVD-ROM drive), Adobe® Flash® Player 10, Microsoft Internet Explorer 7.0.

Recommended System Requirements for Advanced Software:

Intel i7 or AMD 64-bit Processor with SSE2 Instruction Set, 16 GB or more RAM, 40 GB of Free Hard Disk Space, 512 MB Video Card, Sound Card with 3.5mm Headphone Jack, Speakers, 2-USB Ports, Monitor Port, Mouse, 100 Base-T Ethernet Network Port, Windows® 10, 64-bit Operating System, Adobe® Flash® Player 10, Microsoft Internet Explorer 7.0, and DVD Burner.

DEPCO Product Index

Career Explorations

Interactive Learning Labs and Curriculum for Middle Schools and High Schools

Family and Consumer Sciences

Interactive Learning Labs and Curriculum for Middle Schools and High Schools

Industrial Automation and Pre-Engineering

Industrial Training Centers with an Engineering and Manufacturing Focus

Gears EdS™

Mobile Robotics Platform Focussing on Engineering Concepts and Design as well as Programming

Furniture

Lab: Series 300 and 900 | CAD/Drafting Workstation: Series 200

DEPCO Studio™

Online and Content Delivery System

Professional Development

Science; Business, Marketing, and IT; Careers and Technology; Family and Consumer Sciences; IAP Instructor In-Services

Standards Information

The courseware featured in this publication supports the Career Pathways portion of the National Health Standards. DEPCO also offers a package that directly addresses the Health Science Foundation Standards. For any questions regarding the Career Pathways Units or the Health Science Foundations courseware package, call 800.767.1062.

hosa future health professionals

NCHSE National Consortium for Health Science Education

DEPCO Vision

Differentiation

Times have changed and the market for educational materials has entered into a new phase. DEPCO exists to present educational opportunities within and outside the realm of the general-education model. We pride ourselves in establishing relationships with educators in order to create the most effective approach for students to achieve basic skills and career exploration and training.

Commitment to Students

DEPCO is passionate about education and that enthusiasm is projected through the development of exclusive products. The company's mission is to enhance the learning environment by offering curriculum that takes the intimidation and confusion out of learning for both students and instructors. DEPCO maintains an innovative, student-driven focus utilizing an interactive approach to learning activities. Learning retention is maximized through the use of hands-on activities, rather than relying solely on textbook exclusive memorization.

Commitment to Instructors

DEPCO's success is directly related to the success of the instructors utilizing our curriculum. Our unparalleled training, service, support, and flexible learning environments ensure that instructors have all the resources required to help students reach their maximum potential.

Commitment to the Future

DEPCO is a unique company in the aspect that we constantly evolve around the latest technological advancements. A thorough understanding of this technology is critical in providing students with an education that may be applied in the real-world careers of tomorrow.

Company Summary

For more than two decades, DEPCO has been successfully furnishing Interactive Career labs to schools, community centers, and organizations all over the United States, Mexico, Puerto Rico, and Canada. DEPCO's Interactive Career labs allow students to identify, explore, and discover specific career areas that are compatible with individual capabilities and preferences. All interactive learning units within DEPCO's labs cover basic technological fundamentals while building a dependable foundation of acquired and target-specific skills that can be implemented in today's job market. This makes the student more employable by utilizing technologies, software, and equipment that is actually used in industry, universities, colleges, and technical schools. DEPCO provides students with the tools they need to succeed.

Located in Pittsburg, Kansas, DEPCO writes and develops curriculum correlating professional staff and market-specific professionals. The curriculum incorporates multimedia content, which is filmed, recorded, and edited at the Pittsburg facility. Manufacturing capabilities are housed in a 50,000 sq. foot facility on the same property as the corporate headquarters and technology facility. All of DEPCO's educational furniture and hands-on curriculum trainers are manufactured in this facility and then warehoused for shipment to the end customer.

History

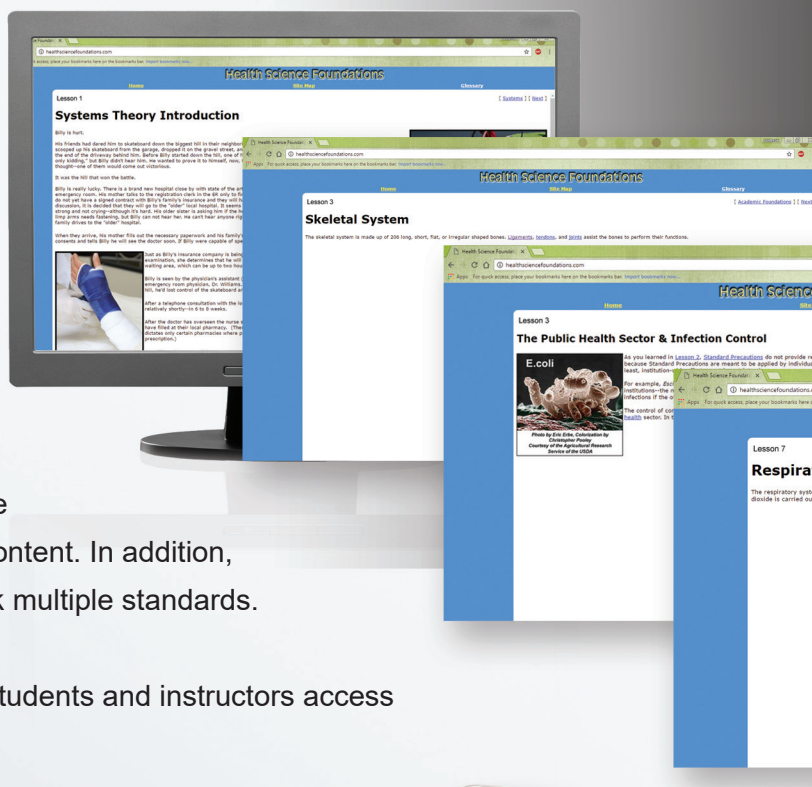
Started in 1982, DEPCO (Dependable Education Products Company) was introduced as a manufacturers' representative organization, which represented manufacturers of vocational education products. Seeing that there were gaps in the technology education market, DEPCO introduced its own curriculum in 1991 blending careers and technology. Through the years, DEPCO has introduced new curriculum centered around science; business, marketing, and information technology (IT); career explorations; family and consumer sciences (FACS); manufacturing; and pre-engineering. In keeping with this tradition, DEPCO began offering a curriculum in the Health Science Education field in 2010, and will develop the program further to meet the needs of the medical industry.

DEPCO

PO Box 178 | Pittsburg, KS 66762
www.healthscienceeducation.com
sales@depcollc.com | 800.767.1062

Health Science Foundations

The *Health Science Foundations* courseware package is designed to address the *National Health Science Standards* as defined by the *National Consortium for Health Science Education.* Each of the courseware's eleven units is directly correlated to one of the health science standards.



Classroom activities such as instructor-directed role playing scenarios, group discussions, and skill-building projects provide students with concrete reinforcement of the content. In addition, classroom activities are designed to cross-link multiple standards.

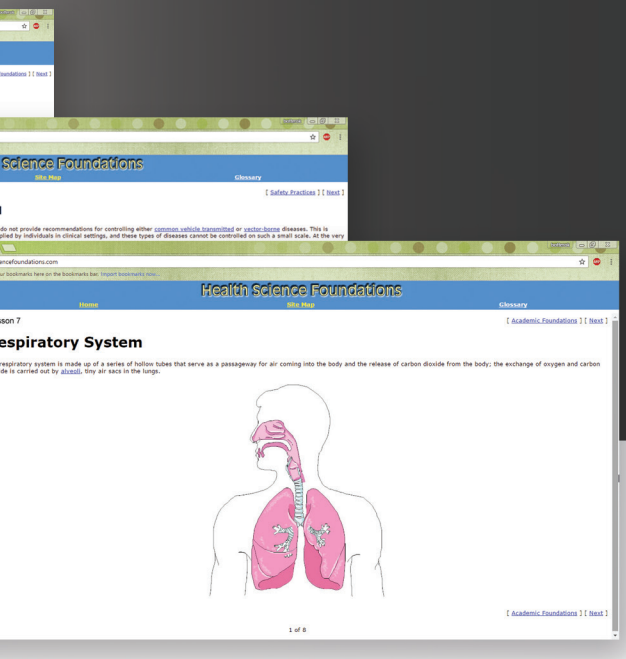
A site license allows an unlimited number of students and instructors access to online content and lessons.

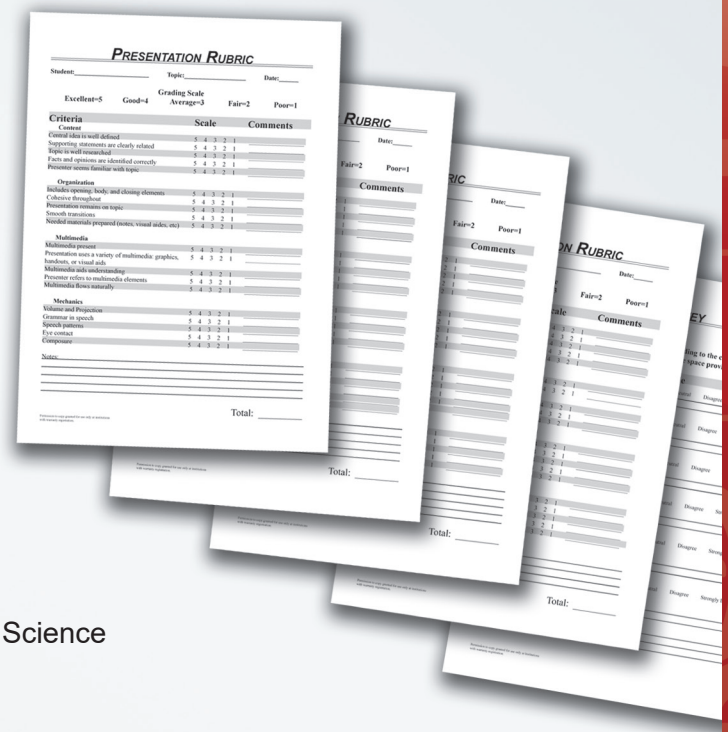
Foundation Unit Titles:

- Academic Foundations
- Communications
- Systems
- Employability Skills
- Legal Responsibilities
- Ethics
- Safety Practices
- Teamwork
- Health Maintenance Practices
- Technical Skills
- Information Technology Skills

The Health Science Foundations Package:

- Addresses all National Health Science Standards.
- Contains dynamic online content.
- Requires no textbook.
- Is accessible anywhere internet is available.
- Includes engaging classroom activities.
- Includes dozens of quizzes and assessment rubrics.
- Contains an instructor's lesson guide.
- Has affordable school, district, and state licenses.
- Is endorsed by the States' Career Clusters Foundation Board.





The Instructor's Guide includes a series of worksheets and rubrics. These tools provide a method of measuring progress through performance, knowledge, and higher order thinking assessment.

The online assessments can be printed and distributed.

To arrange an online demonstration of Health Science Foundations, call 800.767.1062.

Health Science Career Pathways

The Program

The *Health Science Career Pathways* Program is a series of 14 units of study designed to specifically address the *National Health Science Standards* and the *States' Career Clusters Initiative*.

Each *Career Pathway Unit (CPU)* offers over 20 hours of content and hands-on, skill-building activities. Lessons and computer-based assessments are presented with a simple multimedia interface. All necessary equipment, published materials, consumable supplies, software, and tools are included.

The courseware is designed to be delivered any number of ways. A single student or group of students can study the material and perform hands-on activities independently, or the lessons can be presented to an entire class. Hands-on experiments can be demonstrated by the instructor, or additional equipment and supplies can be purchased for use by the entire class.

Career Pathway Units:

- Complementary & Alternative Medicine
- Biomedical Applications
- Cardiac Diagnostics
- Clinical Laboratory Science
- Dental Diagnostics
- First Aid/CPR
- Forensic Science
- Imaging Diagnostics
- Medical Office Technology
- Optical Diagnostics
- Pathogens and Disease
- Pharmacology
- Sports Medicine
- Veterinary Science

For more detailed information, including learner outcomes and package contents, visit www.healthscienceeducation.com.

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NCHSE National Consortium for Health Science Education

The Interface

Each unit's content is presented in a comprehensive format provided by DEPCO Studio™, a multimedia authoring and delivery tool developed exclusively by DEPCO Enterprises, LLC. DEPCO Studio™ dynamically presents text, audio, video, animation, and assessment exams.

DEPCO Studio's™ powerful content is easily edited using the included DEPCO Studio™ authoring package. With this powerful tool, instructors can edit existing content or add more information specific to their regional health care system.

DEPCO Studio™ facilitates assessment creation and editing, student records and scheduling, and an automated gradebook that can narrate generated test results with the optional Text-to-Speech option.

The Cart

Most Health Science *CPUs* include a Skills Cart™ that provides a portable workspace and storage for all of the tools, equipment, and supplies required to complete the courseware's hands-on activities. These rugged units can be stored until needed or placed in dedicated stations within a health science lab.

DEPCO Studio

What is DEPCO Studio™?

DEPCO Studio is an all-encompassing, online education tool that delivers enriched media content and assessments. DEPCO Studio also aids instructors with lab management needs, such as scheduling, test creation, record keeping, and messaging, which helps to organize the classroom and keep communication with the students simple.

DEPCO Studio delivers all of DEPCO's curriculum, and it can also deliver customized content and new courses created by instructors.

Minimum Specifications

Browser:

Adobe® Flash® Player 10.1 compatible browser

Windows PC:

Intel Pentium 4 2.33 GHz, AMD Athlon™ 64 2800+ processor (or equivalent); 512 MB RAM

Macintosh:

PowerPC G5 1.8 GHz; Intel Core Duo 1.33 GHz or faster; 256 MB RAM

Linux:

Intel Pentium 4 2.33 GHz, AMD Athlon™ 64 2800+ processor (or equivalent); 512 MB RAM

Bandwidth Usage:

Minimum of 1 MB/sec, recommend at least 3 MB/sec

Managing a Lab

Scheduling, grading, and communicating with students is no longer a complicated process. DEPCO Studio assists instructors by simplifying the classroom management experience. Creating a student, class, or course is accomplished with only a few clicks of the mouse. Sending a message to a student or class and announcing new curriculum schedules can easily be accomplished using DEPCO Studio.

Features

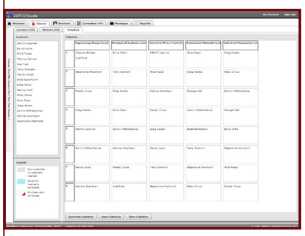
Member Information:

Create/Modify instructors and learners includes:

- Personal information
- Contacts
- Comments

Scheduling:

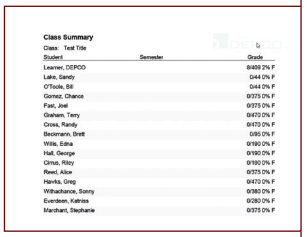
- Automatic scheduler handles scheduling conflicts and student groupings
- Simple click and drag assigning
- Student schedule highlighting for quick reference



Reports:

Grade report options include:

- Class summary grades
- Student detail grades
- Student summary grades



- Schedule Report options include:
  - Class schedule by rotation
  - Individual student schedule
- Competency and standards correlations

Communication:

- Welcome announcement screen
- Built-in messaging system
- DEPCO announcement screen for instructors

Content Delivery & Curriculum Building

DEPCO Studio incorporates many instructor friendly features that allow students to learn what instructors want emphasized. DEPCO Studio enables instructors to modify current DEPCO curriculum or create their own curriculum for students to view. Instructors completely control the content, tests, and grading scale in DEPCO Studio.

The content delivery system tracks students' progress and logins while guiding them through multimedia curriculum. Instructors can also attach documents, such as manuals and supporting files, to the curriculum for the students to view and download. Because DEPCO Studio is an online platform, multiple students can log in to view the same curriculum independently or simultaneously, and their progress is still tracked independently.

Features

Test Development:

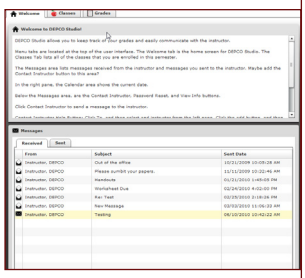
- Student tests are delivered electronically, graded & recorded automatically
- Four different test question types:
  - Multiple choice
  - True/False
  - Free form
  - Matching
- Randomized questions and answers

Curriculum Development:

- Modify DEPCO, LLC curriculum
- Upload audio, video, graphics, and text
- Create a variety of examinations
- Preview curriculum
- View available modules
- Add/Remove curriculum in classes

Student Portfolio:

- Student grade viewer allows students to track their own progress
- Student profile editor allows students to enter & update personal information



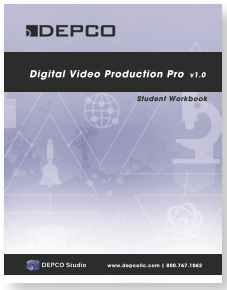
Content Delivery:

- View seamless multimedia curriculum
- Multiple student login
- Track students' progress with linear tracking
- Complete exams & quizzes with individual logins
- Attach workbooks & support materials
- View grades with secured logins

DEPCO Studio Media Player™: Interactive Learning

Interactive Curriculum

- Effective, hybrid multimedia curriculum delivery system
- Uses computers and DEPCO Student Workbooks
- Digital videos, animations, and narrated text
- Database-driven, allowing immediate content updates



The Student Workbook

- Concise, hands-on procedures
- Illustrations, screen captures, and photographs
- Available via PDF
- Open access to print copies of guide

GIVE YOUR STUDENTS THE ADVANTAGE

DEPCO Studio & Health Science

Career Pathways Index

Career Pathways Index

Other Products & Services

Biomedical Applications HS952

In the *Biomedical Applications CPU*, students begin with the most fundamental aspects of biomedicine and build toward the more complex ideas and related applications. Students will explore the major branches of biomedical applications and conduct research to develop an understanding of the ethical and practical implications associated with each of the fields studied. The major branches covered in the course are molecular biology, genetics, biomedical research, biofarming and pharmaceuticals, and biomedical engineering.

Areas Covered

- Overview of biomedical applications
- Ethical and legal considerations
- Proper lab procedure and safety
- Study of diseases at the molecular level
- DNA
  - Human Genome Project
  - Human development
  - DNA manipulation
- Biomedicine
  - Recent advances
  - Organ replacement and transplants
  - Transgenics
  - Regenerative medicine
  - Cloning
- Biomedical engineering
- Skills and knowledge to aid students in various HOSA competitions

Career Pathway Unit Includes:

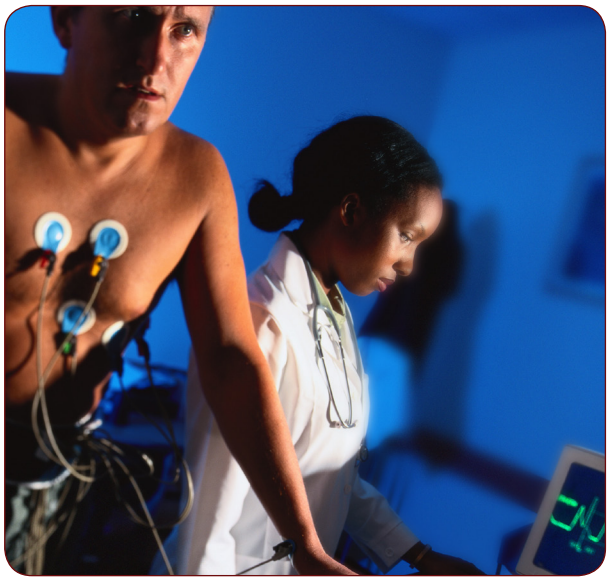
Biomedical Applications CD with a Digital Instructor's Overview Booklet, Biomedical Applications Video CD, Biomedicine and Biotechnology DVD, Cells CD, Click and Clone CD, DNA Interactive DVD, DNA Model Kit, Genes in a Bottle Kit, Genetics CD, Skills Cart™, Patient Profiles for Cancer Antibody Test, Size Exclusion Chromatography Kit, Strawberry DNA Extraction Kit

Cardiac Diagnostics HS927

In the *Cardiac Diagnostics CPU*, students examine the anatomy and physiology of the cardiovascular system. Students practice aseptic procedures while taking basic vital signs such as blood pressure, pulse, and respiration. Students will also explore how various diagnostic procedures are performed. Students will also learn basic interpretation of abnormal anatomy in CT scans using simulation software, and ECGs using interactive material in DEPCO Studio™.

Areas Covered

- Anatomy and physiology of the heart
- Lung physiology
- Taking vital signs such as:
  - Blood pressure
  - Pulse
  - Respiration
- Proper aseptic procedures
- Diseases of the heart
- Diagnostic tools necessary for intervention and prevention
- The heart's electrical conduction
- How an ECG is performed
- Performing a simulated ECG
- Diagnostic procedures used in cardiac situations, including:
  - MRI
  - Angiography
  - CAT Scan
  - Echocardiogram
  - ABG
- Skills and knowledge to aid students in various HOSA competitions



Career Pathway Unit Includes:

Cardiac Diagnostics CD with a Digital Instructor's Overview Booklet, Anatomical Heart, Cardiac CT Atlas, Cardiovascular System Textbook, Dictionary for Health Professionals, EKG Caliper, EKG Ruler, Skills Cart™, Microphone, Multi-Skilling ECG Textbook, Sphygmomanometer, Stethoscope

Clinical Laboratory Science HS1053

In the *Clinical Laboratory Science CPU*, students perform classroom laboratory activities and apply knowledge and skills in a health care diagnostic setting. Collection, labeling, and processing of artificial samples of body fluids and tissues for laboratory assessment are performed by the students. All activities guide students through safe and appropriate use of equipment and supplies, as outlined by the standards of the health care profession.

Areas Covered

- Anatomy and physiology
- Laboratory safety concepts
  - Mathematical principles
  - Conversions
  - Averaging
  - Statistics
- Determine proper phlebotomy procedures
- Blood typing using simulated blood samples
- Genetic engineering principles and procedures
- Genetics
- Biology
- Record keeping
- Legal and ethical scenarios
- Biology
- Skills and knowledge to aid students in various HOSA competitions

Career Pathway Unit Includes:

Clinical Lab CD with a Digital Instructor's Overview Booklet, Beaker, Blood Typing Kit, Skills Cart™, Clinical Laboratory Assistant/Phlebotomist Textbook, Comprehensive Microscope, DNA Replication and Transcription Set, Genetics CD, IV Trainer, Medical Dictionary, Medical Laboratory Procedures Text, Viruses CD

Complementary & Alternative Medicine HS1020

The *Complementary and Alternative Medicine CPU* introduces students to some of the most widely used nontraditional medical therapies. Students examine the beliefs and scientific evidence relevant to nontraditional therapies such as massage, chiropractic, acupuncture, and recreational therapy. Students explore and practice alternative therapeutic methods and discover the importance of integrating alternative methods into traditional medical care. Activities include soft tissue manipulation, proper body mechanics, acupressure, patient assessment, role plays, and more.

Areas Covered

- Overview of the relevant body systems
- Exploration and practice of the five basic strokes used in Swedish massage
- Therapeutic stimulation of various body points in acupuncture, acupressure, and reflexology
- Ethical, financial, and legal responsibilities of alternative care providers
- Procedures used in the chiropractic office, including:
  - Physical exam
  - Imaging
  - Instrumentation
- Development of appropriate recreational therapy activities for various patients
- Discovery of the history of homeopathy and its influence on allopathic medicine
- Skills and knowledge to aid students in various HOSA competitions

Career Pathway Unit Includes:

Complementary and Alternative Medicine CD with a Digital Instructor's Overview Booklet, Acupuncture Model, Alternative Medicine Courseware DVD, Chinese Healing DVD, FactoR-R Manual and Score Sheet, Homeopathic Remedies Booklet, Skills Cart™, Intro to Simple Machines: Gears, Portable Massage Chair, Recreational Therapy Activity Kit/Assembly, Simulated Chiropractic Folder

Dental Diagnostics HS759

In the *Dental Diagnostics CPU*, students are guided through many dental diagnostic procedures. Students study dental anatomy and physiology, follow universal precautions employed in the dental field, and implement communication and subjective evaluation techniques while addressing clients. Lessons include dental charting, dental hygiene assessment, plaque assessments, dental radiography, creating dental impressions, and performing dental bacteria cultures.

Areas Covered

- Overview of dentistry as a health care field
- Identification of the four types of teeth and their functions
- Examination of different tooth surfaces
- Differences between types of tooth notation systems
- Plaque detection experiment evaluating plaque removal
- Development of a presentation on oral hygiene
- Radiographs used in the field of dentistry
- Mixing alginate, loading alginate trays, and taking alginate impressions
- Exploration of forensic odontology
- Skills and knowledge to aid students in various HOSA competitions

Career Pathway Unit Includes:

Dental Diagnostics CD with a Digital Instructor's Overview Booklet, Alginate Powder, Bitewing Viewer, Dental Assistant Textbook, Dental Charting Textbook, Dental Manikin with Compact Bench Mount, Dental Radiology Flash Cards, Dental X-Rays, DEN-Test Bacteria Culture Test Kit, Disclosing Tablets, Impression Trays, Skills Cart™

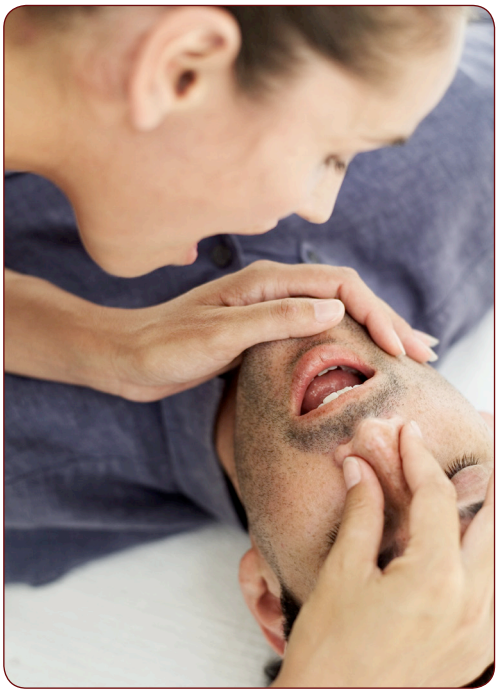
First Aid/CPR HS1037

The *First Aid/CPR CPU* offers students intensive computer-based training and hands-on skill practice of basic first aid and CPR procedures. This unit prepares students to effectively deal with emergency scene management and render aid for a wide spectrum of injuries.

Students also cover infant, child, and adult CPR techniques. Training to treat cardiac emergencies using an automated external defibrillator (AED) is combined with the industry standard audio CPR coach to ensure students will be using the most current recommended procedures. The intensive computer-based training offers real-life scenarios of actual emergencies and allows students to test their response to an injury scene. The First Aid/CPR CPU is not intended as a CPR certification course.

Areas Covered

- Treatment procedures for:
  - Wound care
  - Sprains and fractures
  - Severe bleeding
  - Burns
  - Shock
  - Various cardiac conditions requiring CPR and/or treatment with an AED
- Legal, ethical, and emotional issues of being a rescuer and rendering aid
- Universal safety precautions including dealing with bloodborne pathogens and other risks
- Emergency scene management—primary and secondary casualty survey techniques to manage a victim's care until help arrives
- Skills and knowledge to aid students in various HOSA competitions



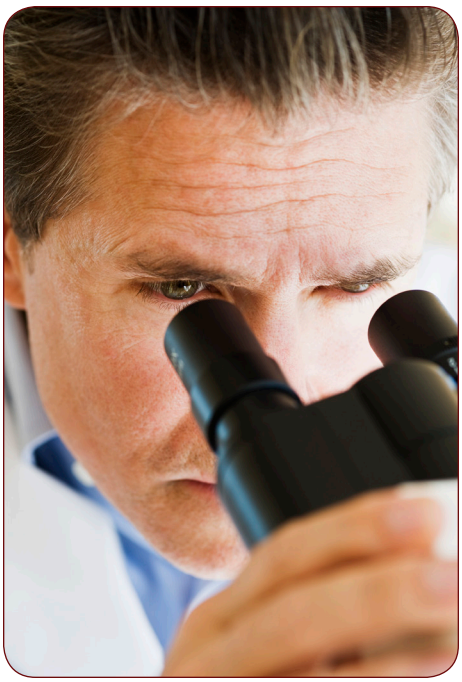
Career Pathway Unit Includes:

First Aid/CPR CD with a Digital Instructor's Overview Booklet, AED Trainer, Basic Buddy Mannequin Fast Pack, Cold Pack, CPR Prompt Rescue Aid, Skills Cart™, RESQR First Voice Software, First Aid/CPR Skill Sheets

Forensic Science HS1040

In the *Forensic Science CPU*, students complete in-depth explorations of forensic science and many of its sub-fields, including forensic medicine, odontology, pathology, chemistry, and toxicology.

Students discover the usefulness of DNA evidence and electrophoresis through an easy to understand simulation. Students are also exposed to common forensic laboratory procedures, such as blood type determination, blood type matching, drug identification, and urinalysis. Although students practice proper safety precautions during the procedures, these experiments use harmless simulated chemicals to protect students while giving them a real-world, hands-on experience.



Areas Covered

- Career opportunities in the field of forensics
- The history of forensic science
- Body systems
- Pathology slides studied under a microscope
- Blood types
- The building blocks of DNA and electrophoresis
- Cause, mechanism, and manner of death
- The various fields of forensic science
- Case studies of forensic science
- Common forensic procedures, including:
  - Autopsy
  - Dental ID and bite marks
  - Identifying drugs and poisons
  - Determining time of death
- Skills and knowledge to aid students in various HOSA competitions

Career Pathway Unit Includes:

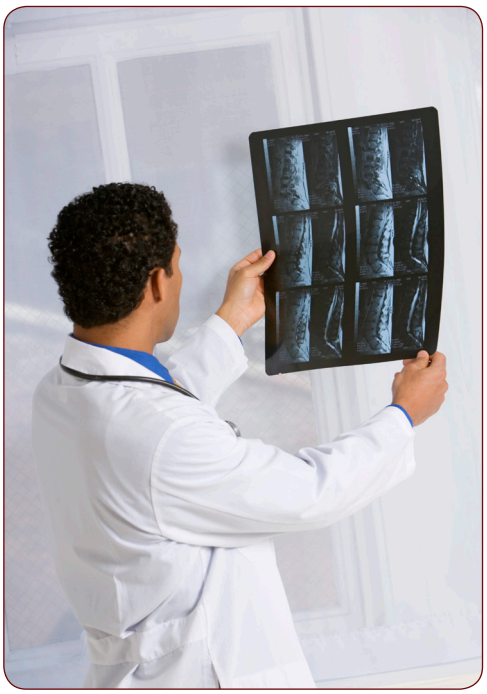
Forensic Science CD with a Digital Instructor's Overview Booklet, Clues in Crime CD, DNA Fingerprinting Simulation Gel, Drug Bust! Kit, Forensic Investigation Blood Typing Kit, Forensics CD, Skills Cart™, Medical Dictionary, Microscope, Pathology Slides with Booklet, World of the Microscope Textbook

Imaging Diagnostics HS987

In the *Imaging Diagnostics CPU*, students explore areas such as x-ray technology, fluroscopy, nuclear medicine, tomography, CT, MRI, mammography, ultrasound, and PET. Students also examine actual radiographs, MRIs, and an ultrasound. Students develop proper safety and communication skills while conducting a simulated x-ray. Careers specifically addressed in the *Imaging Diagnostics CPU* include radiologist, radiologic technician, radiation therapy technologist, nuclear medicine technologist, CT technologist, and sonographer.

Areas Covered

- Overview of the anatomy and physiology of many systems in the human body as they relate to a particular imaging procedure
- Use of a light box to view authentic x-rays pertaining to specific case scenerios
- Proper techniques associated with performing an x-ray and demonstration of this knowledge through use of a simulated x-ray machine
- Exploration of many imaging procedures, including detailed descriptions of the procedures
- Skills and knowledge to aid students in various HOSA competitions



Career Pathway Unit Includes:

Imaging Diagnostics CD with a Digital Instructor's Overview Booklet, History of Medical Imaging DVD, Human X-Ray Print Set and Textbook, Illuminator, Imaging Diagnostics Video CDs, Skills Cart™, Lead Apron, Nuclear Energy CD, Principles of Radiographic Imaging Textbook, Principles of Radiographic Positioning Textbook, Thermo-Luminescent Dosimeter Monitoring Clip, X-Ray Simulator Assembly, X-Ray Samples

Medical Office Technology HS978

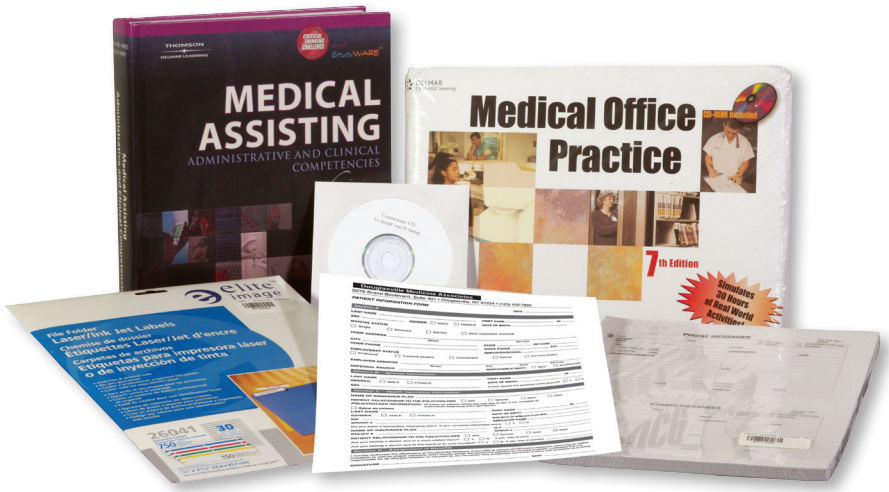
In the *Medical Office Technology CPU*, students explore administrative medical office career opportunities and develop essential skills while focusing on the medical office environment.

Students learn how to deal with patients and information in an efficient and effective manner. Activities involve handling telephone calls, health insurance claims, and financial records. Students also practice scheduling appointments, preparing medical records, and much more.

Areas Covered

- Telephone procedures and etiquette
- Computerized appointment scheduling
- Creating written communication documents
- Preparing medical records
- Various aspects of health care billing
- Transcription of messages and medical dictation
- Essentials for completing claims forms such as the HCFA-1500
- Exploration of procedural and diagnostic codes necessary for claim submittal
- Proper maintenance of patient records and handling
- Skills and knowledge to aid students in various HOSA competitions

* Skills Cart™ optional



Career Pathway Unit Includes (This CPU requires Microsoft Office®):

Medical Office Technology CD with a Digital Instructor's Overview Booklet, Assorted Labels, Acrylic Display Stand, Medical Office Practice Textbook, Phone Message Worksheet Pad, Printer, Worksheets

Optical Diagnostics HS944

In the *Optical Diagnostics CPU*, students examine the anatomy and physiology of the eye, and differentiate between normal and abnormal anatomy of the eye. Students determine visual acuity and calculate actual diameter using visual mapping. Other optical diagnostic procedures such as field of vision, astigmatism, and color vision tests are performed.

Areas Covered

- Career opportunities in the field of optical health
- Anatomy of the eye and related bodily structures
- Examination of disorders, deficiencies, and diseases of the eye
- Proper patient interaction, management, and testing
- Discovery of how light refraction can correct various vision problems
- Examination of ophthalmic instruments and techniques
- The creation of corrective lenses
- Asepsis techniques in ophthalmic surgery
- How and why optical illusions occur
- Skills and knowledge to aid students in various HOSA competitions

Career Pathway Unit Includes:

Optical Diagnostics CD with a Digital Instructor's Overview Booklet, Anatomy of the Eye Chart, Color Blindness Chart, Cow Eye, Dissection Kit, Eye Model, Fundamentals for Ophthalmic Technical Personnel Textbook, Skills Cart™, Optician Bench, Visual Perception Kit

Pathogens & Disease HS1052

The *Pathogens and Disease CPU* introduces students to disease-causing agents and epidemiology. Students culture bacteria and fungi and use a microscope to examine and classify the microorganisms they grow. Students explore diseases such as smallpox, rabies, and AIDS to better understand the effect of pathogens and disease on the population at large.

Through a simulated disease outbreak, students perform the necessary procedures to identify and contain an epidemic. Activities include culturing and identifying bacteria and fungi, analyzing data such as patient interviews and questionnaires, creating an epidemic curve, and calculating attack rate and relative risk for various exposures.

Areas Covered

- Germ theory
- Overview of the immune system
- Collection and examination of contaminated water
- Bacteria, viruses, and fungi
- Bioterrorism and the CDC category A agents
- Descriptive epidemiology, including:
  - Graphing and interpreting an epidemic curve
  - Creating and analyzing a spot map
  - Analyzing populations affected
- Analytic epidemiology, including:
  - Performing cohort studies and calculating attack rates
  - Performing case-control studies and calculating relative risk
- Disease prevention techniques, including:
  - Quarantine
  - Variolation, inoculation, and vaccination
  - Aseptic technique
  - Skills and knowledge to aid students in various HOSA competitions

Career Pathway Unit Includes:

Pathogens and Disease CD with a Digital Instructor's Overview Booklet, Bacteria CD, Butane Burner, Incubating Microorganisms Textbook, Skills Cart™, Microbe Scavenger Hunt Lab, Microscope, Pathophysiology for the Health Profession Textbook, Protista and Fungi, Viruses CD

Pharmacology

HS965

The *Pharmacology CPU* introduces students to both the therapeutic and research and design aspects of pharmacology. Students explore proper drug administration, common adverse effects, and various types of drugs. Students discover the history of pharmacology and drug regulations.

Students also practice methods to reduce drug errors such as proper reading and writing of prescriptions and drug labels. Through the completion of this curriculum, students gain insight into principles, techniques, and practices related to Pharmacology.

Areas Covered

- The processes of drug development and FDA approval
- Calculating dosages and other formulas common in pharmacology
- Administration routes and dosage forms for each
- Factors that affect drug action
- Roles and responsibilities of a pharmacist and a pharmacy technician
- Counseling procedures for over-the-counter products
- Proper dispensing techniques
- Skills and knowledge to aid students in various HOSA competitions

Career Pathway Unit Includes:

Student Workbook, Instructor's Manual, Installation CD, Bowl, Cake Pan, Chemical Splash Goggles, Chemplates, Cooking Thermometer, Ethanol, Flatware Set, Funnel, Glass Liquid Measuring Cup, Headphones, Hot Pad, Hydrochloric Acid, Iron Chloride, Mini Storage, Mixing Bowl, Mortar and Pestle, pH Strips, Pill Counting Tray and Spatula, Pipettes, Sauce Pan, Pharmacy Simulation Software, Single Burner Hot Plate, Skills Cart, Slotted Spoon, Surgical Gloves, Surgical Gown, Teaspoon, Tray, 20 Dram Amber Vial, 13 Dram Green Vial, 6 Dram Blue Vial, 2 Liter Soda Bottle, White Stock Bottle, miscellaneous materials and consumables. Computer is required and sold separately. OPTIONAL: Mini Fridge

Sports Medicine HS1062

The *Sports Medicine CPU* introduces students to a growing field in the health care industry that is creating many exciting job opportunities for properly trained personnel. Sports medicine is a circle of care that begins on the playing field, advances to treatment, progresses to rehabilitation, and returns to the playing field.

Students use hands-on activities that introduce them to proper stretching techniques, athletic taping, on-the-spot treatment of athletic injuries, rehabilitation, nutrition, and much more.

Areas Covered

- Exploration of the sports medicine team
- Examination of anatomy and physiology of the cardiovascular, muscular, and skeletal systems
- Basic kinesiology and biomechanics
- Physical fitness assessment
- Athletic taping and strapping procedures, including:
  - Basic non-injury ankle taping
  - Taping of simple thumb and finger injuries
  - Restriction of thumb flexion, extension, and abduction
- Assembling sport-specific first aid kits
- Sport-specific injury diagnosis
- Sport-specific injury rehabilitation techniques
- Importance of nutrition in athletics
- Testing the effects of drugs and other substances on athletic performance
- Skills and knowledge to aid students in various HOSA competitions

Career Pathway Unit Includes:

Sports Medicine CD with a Digital Instructor's Overview Booklet, Ankle Exercise Board, Daphnia Magna Culture Kit, Effects of Drugs Kit, Exercise Mat, Facilitated Stretching Textbook, Goniometer Skills Cart™, Microscope, Muscle Shoulder Model, Portable Taping Block, Skinfold Caliper Set, Sports Medicine Essentials Textbook, Stretching Textbook, Therapeutic Exercises Using Resistive Bands

Veterinary Science HS2041

The *Veterinary Science CPU* explores the variety of careers available in the animal health care field. Students discover a wide range of skills and procedures from basic animal care and first aid to surgical procedures, suturing, and CPR.

By using realistic trainers, students practice and explore many of the common skills used in the veterinary environment. These models provide hands-on experience in veterinary skills such as restraining for venipuncture and muzzling.

Areas Covered

- Exploration of the anatomy and physiology of common animal species
- Veterinary asepsis
- Virtual dissection of a cat
- Canine CPR
- Gauze muzzling techniques for dogs
- Canine cephalic venipuncture
- Proper venipuncture technique
- Suturing and wound closure
- Preventative medicine and basic care, including:
  - Nutrition
  - Vaccination
  - Spaying and neutering
- Surgical instrument identification
- Skills and knowledge to aid students in various HOSA competitions

Career Pathway Unit Includes:

Student Workbook, Instructor's Manual, Installation CD, Skills Cart™, Pet Emergency and First Aid DVDs, Stuffed Dog, Suture Tutor Skills Kit, Dog Leg Venipuncture Trainer, CatWorks CD, Canine Jaw Model, Canine Toothbrush and Toothpaste, Surgical Gown, Surgical Gloves, Surgical Scrub, Gauze Anesthetics

Biomedical Applications Goals & Activities

- Research biomedical related career tracks.
- Define biomedical applications.
- Become familiar with the different branches of biomedical applications.
- Explore cell biology and cell division.
- Discover DNA and how it transfers genetic information.
- Construct a model of normal human DNA.
- Research the Human Genome Project.
- Explore genetic mapping.
- Discover the science of genetic inheritance and how DNA can be decoded to predict specific traits.
- Complete a genetic decoding simulation.
- Define molecular diseases such as bacterial and viral infections.
- Define genetic diseases.
- Create a model of abnormal human DNA.
- Compare and contrast bacterial and viral infections.
- Explore aspects of biomedical research.
- Discover scientific method and how research is conducted.
- Explore the history of biomedical research, its failures, and its successes.
- Consider the ethical concerns involved in biomedical research.
- Research the development of vaccinations, prescription drugs, and treatments for illnesses such as cancer.
- Discover how scientists identify antibodies and antigens.
- Explore biomedical applications as they apply to organ transplants.
- Research the ethics related to blood and bone marrow donation.
- Detect antibodies and antigens in fluid samples.
- Explore genetic research.
- Explore stem cell research (both embryonic and adult) and forms of genetic testing.
- Discuss ethics of embryonic stem cell research.
- Create a necklace containing genetic material.
- Define biofarming.
- Conduct an antibiotic sensitivity test.
- Discover how scientists manipulate DNA.
- Define transgenics.
- Discuss the ethics of engineering “transgenic” animals and plants.
- Discover organ replacement options and processes.
- Explore the limitations of organ transplants and other replacement methods.
- Discover gene therapy and its uses in humans.
- Define cloning, its benefits, and limitations.
- Research ethical concerns involving cloning.
- Complete a job shadowing activity.

Cardiac Diagnostics Goals & Activities

- Explore the heart's basic anatomy and physiology.
- Examine the cardiac cycle.
- Identify parts of the heart and vessels that transport blood.
- List common signs and symptoms that individuals with cardiovascular problems may describe.
- Determine proper procedure for taking basic vital signs associated with the cardiovascular system.
- Explore communication techniques and safety standards to consider while taking a patient's basic vital signs.
- Evaluate guidelines for charting health care records.
- Define myocardial infarction.
- Conduct in-depth research on diseases of the heart and procedures used in treatment.
- Create a presentation on a specific heart disease.
- Define ECG and explore its use.
- Conduct an ECG (actual or simulated).
- Identify the various segments of an ECG reading.
- Define P wave, PR segment, QRS complex, ST segment, and T wave.
- Determine normal representations for waves and segments on ECG readouts/tracings.
- Discover abnormalities found in certain waves/ segments of ECG readouts/tracings.
- Differentiate between various sinus rhythms.
- Explore the actual difference between the terms dysrhythmia and arrhythmia.
- Identify and distinguish each atrial arrhythmia.
- Compare and contrast atrial and ventricular arrhythmia.
- Recognize what cardiac enzymes are and how they are used in cardiac diagnostics.
- Define venipuncture and view the proper procedures for performing venipuncture.
- Determine how arterial blood gases are acquired.
- Examine basic lung physiology and anatomy as it pertains to blood gases.
- Recognize what arterial blood gases can tell us about the cardiovascular system and how it is functioning.
- Describe an echocardiogram and how it works.
- Explain what an echocardiogram reveals.
- Examine the necessary preparation for a patient before having an echocardiogram.
- Examine various echocardiogram images.
- Explore various types of echocardiograms and examine case studies of patients and their echocardiograms.
- Describe angiography and what it is used for.
- Explore the necessary preparation for angiography and examine various types of angiographies.
- Explore the definition and use of a CAT scan.
- Explore information about MRI.
- Examine the process and use of positron emission tomography.
- Examine the process and use of a tilt table test.
- Explore cardiac catheterization.
- Investigate various types of stress testing.
- Explore the advantages of using a holter monitor.
- Examine the use of chest x-ray in cardiac diagnostics.

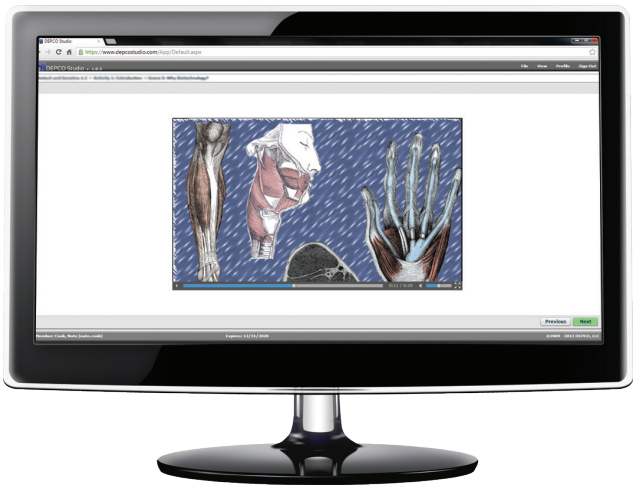
Clinical Laboratory Science Goals & Activities

- Explore careers that use clinical laboratory science.
- Study disease transmission.
- Identify biohazard safety levels and the precautions associated with each.
- Learn the importance of proper hand washing and maintaining medical asepsis.
- Define safety issues in the health care environment.
- Discover proper use of laboratory equipment.
- Use a pipette and pipette aid to transfer fluid into a microcentrifuge tube.
- Learn correct microscope maintenance and usage.
- Examine a slide at different levels of magnification using a microscope.
- Perform oil immersion microscopy.
- Examine the importance of quality control in a clinical laboratory setting.
- Explore standards in record keeping.
- Discuss several legal and ethical scenarios clinical laboratory personnel might face.
- Define urinalysis.
- Review the urinary system's anatomy and physiology.
- Examine methods of urine specimen collection.
- Discuss chemical, physical, and microscopic properties of urine and complete a simulated urinalysis.

- Define hematology and hemacytometer.
- Review the cardiovascular system's anatomy and physiology.
- Discover how red blood cells are formed.
- Review procedures for creating a blood smear.
- Review proper levels of glucose in the blood.
- Identify blood types and how they interact with each other.
- Consider Rh factor and its importance in blood typing and blood compatibility.
- Define platelets and describe the clotting process.
- Perform a blood typing experiment using simulated blood and anti-serums.
- Explore procedures used to diagnose diseases affecting coagulation.
- Review the circulatory system's anatomy and physiology.
- Explore the composition of blood.
- Determine appropriate procedures for collecting blood samples in different situations.
- Examine vacuum tube, syringe, and winged infusion methods of venipuncture.
- Practice venipuncture procedures using a venipuncture trainer.
- Examine viruses and their effect on the body.
- Consider standard virus treatments and why antibiotics are ineffective against viruses.
- Discover what bacteria are and how antibiotics work in curing bacterial infections.
- Review the immune system and the techniques it uses to detect and fight foreign bodies.
- Determine the benefits and potential dangers of genetic engineering.
- Discover Punnett squares as a tool for calculating genetic inheritance probability.
- Explore the processes of DNA transcription and replication.
- Construct a model of a DNA molecule.
- Review transcription and replication using a simulation of both processes.

Complementary & Alternative Medicine Goals & Activities

- Explore major careers associated with alternative medicine and the responsibilities, education, and licensing requirements for each.
- Research laws pertinent to naturopaths, acupuncturists, and homeopaths.
- Write a paper discussing a chosen career field using information gained during research.
- Discover the basic principles of massage therapy.
- Review the anatomy of the muscular, nervous, and lymphatic body systems.
- Learn the importance of professionalism in massage therapy.
- Design a client brochure to help new customers become familiar with the principles, goals, and scope of the practice of massage therapy.
- Explore the importance of sanitation, hygiene, and safety in any health care career and the specific sanitation practices related to massage therapy.
- Define body mechanics and understand its importance in massage therapy.
- Explore the basic principles of body mechanics and how to incorporate these practices into a massage.
- Practice the proper use of body mechanics.
- Discover the history of Swedish massage.
- Explore the five primary strokes used in Swedish massage.
- Demonstrate the principle steps of Swedish massage.
- Define acupuncture, acupressure, and reflexology.
- Explore both the traditional and scientific theories behind acupuncture.
- Discover the relationship between acupuncture, acupressure, and reflexology.
- Observe an acupuncture demonstration video.
- Define chiropractic.
- Review the skeletal system.
- Study current scientific findings concerning chiropractic.
- Discover the dangers associated with chiropractic, including who should not receive chiropractic treatment.
- Explore and practice proper intake procedures for a chiropractic clinic.
- Study the vertebrae and the spine.
- Explore the various components of a chiropractic exam.
- Discover the procedures and instruments that may be used by a chiropractor.
- Define recreational therapy.
- Discover where a recreational therapist works.
- Explore how a patient is evaluated to determine if recreational therapy is appropriate.
- Conduct a patient evaluation.
- Discover the tools and methods used by recreational therapists.
- Examine animal assisted therapy.
- Discover how recreational therapy is adapted for individual patients.
- Develop recreational activities for patients.
- Discover how to read homeopathic labels.
- Select the most appropriate homeopathic remedy for several hypothetical patients.
- Create a presentation on an alternative treatment or method that is not covered in this unit.
- Conduct research regarding recent developments in alternative therapy.



Dental Diagnostics Goals & Activities

- Explore three major careers associated with the dental field and the responsibilities, education, and licensing requirements for each.
- Examine the eight dental specialties and licensing requirements for the general dentist.
- Research laws pertinent to dental assistants, hygienists, dental laboratory techs, and dentists.
- Explore the oral cavity and its components.
- Define dentition, deciduous dentition, secondary dentition, and mixed dentition.
- Identify the four types of teeth and their functions.
- Examine different tooth surfaces.
- Differentiate between the various types of tooth notation systems.
- Explore the basics of dental charting.
- Record information obtained during an oral examination on a tooth diagram chart.
- Discuss charting tooth information.
- Explore how assessment of dental hygiene is necessary to diagnose and treat a patient.
- Record information on a new client profile sheet.
- Define asepsis, antiseptic, and sterilization.
- Conduct a dental exam using a dental manikin.
- Determine the three factors considered in the oral hygiene evaluation.
- Conduct a plaque detection experiment to evaluate brushing and plaque elimination.
- Define plaque and calculus.

- Contrast intrinsic and extrinsic tooth stains.
- Define x-ray and radiograph.
- Determine how radiographs are used in dentistry.
- Examine different types of radiographs and why each particular type is used.
- View actual bitewing x-rays using an x-ray viewer.
- Develop an understanding of safety issues surrounding radiation exposure.
- Distinguish between radiolucent and radiopaque and give an example of each.
- Conduct a bacteria culture test.
- Explore three factors that influence the density on a radiograph.
- Identify inadequacies in radiographic images.
- Explain how penumbra or umbra can be diminished in a dental radiograph.
- Explore the relationship between bacterial growth in the mouth and the development of dental caries.
- Examine microbiology and microorganisms and determine the roles they play.
- Determine different classifications of bacteria.
- Discuss why controlling viral infections has traditionally been difficult.
- Explore physical and chemical properties of alginate.
- Examine factors that influence the stability of alginate.
- Recognize what dental impressions are and what they are used for in the dental field.
- Practice mixing alginate, loading alginate trays, and taking alginate impressions using a typodont.
- Complete upper and lower dental impressions.
- Define forensics and striations.
- Explore forensic odontology.
- Explore how dental impressions are used to develop study models.
- Develop a conclusion on the effects of brushing on bacteria.

First Aid/CPR Goals & Activities

- Explore various career opportunities in first aid.
- Apply the knowledge of terms used in first aid.
- Study the legal implications of giving first aid.
- Use safety principles when giving first aid.
- Perform steps of emergency scene management.
- Recognize the symptoms of shock, unconsciousness, and fainting.
- Outline the necessary steps to treat shock, unconsciousness, and fainting.
- Identify measures to prevent choking.
- Recognize and demonstrate treatment for choking.
- Demonstrate ongoing casualty care for a victim whose airway has been cleared.
- Identify dressings and bandages used in first aid procedures.
- Recognize severe external and internal bleeding and demonstrate appropriate first aid.
- Recognize amputation and demonstrate appropriate first aid.
- Apply basic knowledge of the respiratory system to recognize breathing emergencies.
- Demonstrate artificial respiration (AR) on adult, child, and infant casualties.
- Recognize and manage two complications that may occur when giving AR.
- Apply basic knowledge of the respiratory system to recognize breathing emergencies.
- Identify risk factors of cardiovascular disease.
- Identify and demonstrate first aid for cardiovascular emergencies.
- Recognize and demonstrate first aid for angina and cardiac arrest.
- Demonstrate one-person CPR on an adult victim.
- Recognize and provide first aid for stroke.
- Explain the relationship between sudden cardiac arrest and ventricular fibrillation.
- Describe the components of an automated external defibrillation program.
- Explain the role of CPR when delivering emergency care with an AED.
- Demonstrate preparation of the chest and proper electrode pad placement.
- List the four steps for operating an AED.
- Demonstrate the application/operation of the AED.
- Demonstrate assessing vital signs.
- Perform a head-to-toe examination.
- Apply principles of safety when moving a casualty.
- Move a casualty from a life-threatening situation.
- Recognize and demonstrate first aid for a variety of situations.
- Demonstrate techniques for controlling bleeding from the scalp and ear.
- Demonstrate first aid for chest injuries including penetration, flail, rib fracture, and blast.
- Take measures to prevent further contamination and infection of wounds.
- Control external bleeding from a wound with an embedded object.
- Control bleeding from nose, gums, tongue, and cheek.
- Recognize an abdominal wound.
- Provide first aid for an abdominal wound.
- Demonstrate first aid for foreign objects in the eye.
- Demonstrate first aid for wounds in and around the eye.
- Conduct research regarding recent developments in first aid/CPR.

Forensic Science Goals & Activities

- Discover the field of forensic science.
- Explore various careers within the forensic science field.
- Research the origin of forensic science.
- Explore a timeline of forensic science.
- Define various techniques of forensic science.
- Examine hair under a microscope.
- Explore crime investigation.
- Define forensic medicine.
- Discover autopsy procedures.
- Examine a death certificate and see what is included in this document.
- Explore how forensic science aids in solving crimes.
- Examine how blood and genetics play a role in solving crimes.
- Explore safety precautions and equipment used in the forensic science lab.
- Explain blood and study the various blood types.
- View a video clip of blood under a microscope.
- Complete the simulated blood typing experiment.
- Define DNA.
- Explore the building blocks of DNA.
- Discover the collecting and preserving process for DNA evidence.
- Examine common sources of DNA.
- Explore electrophoresis.

- Explore forensic odontology including dental identification and bite marks.
- Examine forensic chemistry and toxicology.
- Discuss chromotography.
- Complete a drug identification experiment.
- Explore the roles required in forensic pathology.
- Examine cause, mechanism, and manner of death.
- Discover changes that occur to the body after it dies.
- Define forensic psychology/psychiatry.
- Examine the history of profiling.
- Explore the requirements of forensic anthropology.
- Discover what is in an anthropologist's lab.
- Examine clues the dead leave behind.
- Explore mummies.
- Explore various types of forensic entomology.
- Discover the history of forensic entomology.
- Examine how forensic entomologists determine the time of death.
- Complete an entomology data form from an entomology case.
- Examine the technique and theory of fingerprinting.
- Explore the various layers of a person's skin.
- Discover latent fingerprints.
- Complete a fingerprint investigation.
- Explore forgery and how the field of forensic science aids in this area.
- Discover how forensic science assists in solving crimes dealing with arson.
- Complete various forensic teaser questions and forensic investigations.

Imaging Diagnostics Goals & Activities

- Explore and contrast the jobs of a radiographer and a radiologist.
- Explain why the selected career areas are important to the imaging diagnostics field.
- Review the digestive system and its function.
- Review the skeletal system and its function.
- Examine one of the most common radiographs.
- Define “R,” rad, and rem.
- Conduct research on and describe the x-ray tube and how it works.
- Explore uses of the x-ray.
- Describe how a simple x-ray is taken.
- Discover the challenges associated with mobile x-ray.
- View actual x-rays using a light box.
- Define radiation, its many sources, and how to prevent unnecessary exposure.
- Learn ways to limit radiation exposure and monitor dose limits.
- Discover how to perform an x-ray.
- Learn the importance of effective communication as it relates to both stationary and mobile imaging.
- Learn aseptic technique and its importance.
- Identify the steps in performing an x-ray.
- View a simulated x-ray including aseptic technique and effective communication.
- Perform a simulated x-ray.
- Define fluoroscopy.
- Describe an image intensifier and how it works.
- Explore nuclear medicine and the responsibilities of those who work in this area.
- Describe intravenous pyelogram.
- Identify three tests that use barium: barium swallow, barium small bowel enema, and barium enema.
- Define tomography.
- Explore computed tomography and its history.
- Define ECT and SPECT and describe how radiopharmaceuticals appear on these tests.
- Explain PET, how it works, and the clinical implications regarding Parkinson’s disease.
- Explore how PET has been useful in other neurological diseases and in psychiatry.
- Identify MRI advantages and disadvantages.
- Explore how an MRI can be helpful in diagnosing sports injuries.
- Discuss the history of the MRI and learn about its inventors.
- Define mammography.
- Discuss mammography’s history.
- Explain when to have a mammogram, what the risk factors are, and list signs of problems.
- Define two types of mammogram.
- Explain what a lump in the breast is and what it could mean.
- Define ultrasound and learn its uses.
- Explore the ultrasound’s history.
- Discuss occupations relating to ultrasound, certification, and areas of expertise.
- Determine various uses for ultrasound in obstetrics and pregnancy.
- Discover the therapeutic uses of radiation.
- Discuss the two types of radiation therapy.
- Identify side effects of both internal and external radiation therapy.
- Discover the radiation therapy treatment team and their responsibilities.

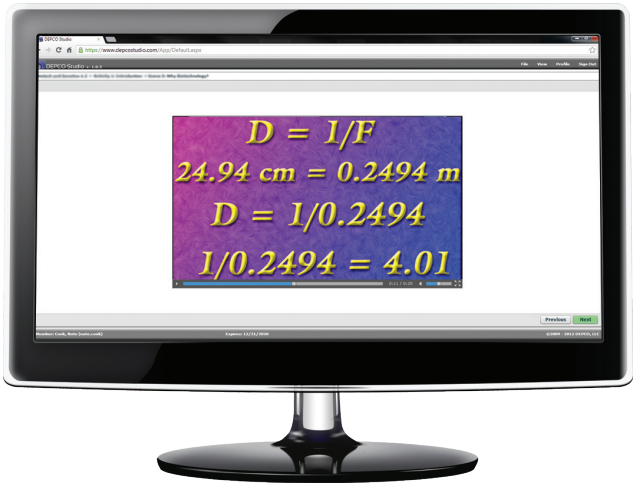
Medical Office Technology Goals & Activities

- Define terms associated with the medical office.
- Develop an understanding of different types of medical office careers.
- Determine some qualifications that are necessary for success in the medical office.
- Identify basic telephone procedures used in a medical office.
- Practice proper telephone etiquette.
- Develop an understanding of call screening and how it is used in medical office scenarios.
- Practice screening several calls and situations in the medical office.
- Determine methods for handling a complaint.
- Take a prescription refill using proper terminology and procedures.
- Understand how appointment scheduling is important to the medical office.
- Define phone triage and discover how it is used.
- Identify different types of scheduling.
- Practice triage as it pertains to office appointment scheduling.
- Roleplay situations following proper scheduling procedures.
- Explore the different kinds of written communication found in medical offices.
- Create a professionally formatted referral letter.
- Discover the importance of patient history records.
- Explore why medical records are so important and how they're classified.

- Explain what progress notes are.
- Prepare, label, and arrange patient file folders.
- Simulate filling out receipts, writing in a checkbook, and filling out daily log sheets.
- Enter hours worked for employees at a simulated medical office and compute the FICA tax to be withheld.
- Discover how computer billing is used in a medical office.
- Identify forms of office communication.
- Identify various forms required for employment and recognize benefits offered by employers.
- Recognize the responsibility medical assistants have in maintaining administrative and clinical inventory, as well as verifying that equipment is in working order.
- Prepare a purchase order and calculate the total amount of purchases.
- Discover the role a medical assistant plays in filling out and calling in prescriptions.
- Label parts of a prescription pad.
- Identify what HMOs are and how they're categorized.
- Explore differences between Medicare and Medicaid as well as other government health plans.
- Determine how insurance claims are filled out.
- Review codes of ethics for both physicians and medical assistants.
- Define malpractice.
- Discover how the Good Samaritan Act aids people who give emergency care.
- Illustrate the importantance of maintaining proper medical records.
- Examine ways to keep personnel and the medical environment as free of pathogens as possible.
- Identify the regulatory bodies that provide standards for all who are employed with managed care of the public.

Optical Diagnostics Goals & Activities

- Acquire an understanding of optical diagnostics as a health care field.
- Explore major careers associated with the optical field and the responsibilities, education, and licensing requirements for each.
- Research laws pertinent to opticians, optometrists, and physician extension staff.
- Write a short paper discussing a career field, using information gained through research.
- Explore the structure of the orbital, muscular, and support elements of the eye.
- Discover how the brain interprets messages received by the eye.
- Dissect a cow eye and explore its structure and function.
- Describe and practice safety procedures related to dissection.
- Understand the structural differences and similarities between cow eyes and human eyes.
- Explore the internal elements of the human eye and the roles they perform.
- Examine common refractive errors and their causes.
- Discover and define visual acuity, astigmatism, and color deficiencies.
- Identify the importance of proper test administration in subjective data testing.
- Administer and perform subjective data vision tests.
- Discover the causes, symptoms, and treatments for common ophthalmic diseases.
- Explore the types of information included in a patient history, essential information obtained through interview, and how to obtain such information tactfully.
- Practice patient management procedure by completing paperwork and conducting a roleplay patient interview.
- Examine universal guidelines and ophthalmic guidelines to prevent disease transmission.
- Explore the various components of an eye exam, including standard ophthalmic equipment.
- Examine several fundi, both healthy and diseased.
- Create an optical presentation.
- Discover the fundamentals of light refraction.
- Explore the field of opticianry, including commonly used terms and concepts.
- Discuss the use of lenses to correct astigmatism and weakened eye muscles.
- Discover the history and meaning of terms and abbreviations represented on lens prescriptions.
- Interpret lens prescriptions.
- Examine edging and mounting techniques.
- Experiment with lenses and refraction.
- Observe the characteristics of convex plano-sphero, and spherical lenses.
- Produce inverted images from near and far objects.
- Discover the mathematical equations used to determine focal point.
- Determine an average focal point using experimental results and various mathematical methods.
- Explore the development of ophthalmologic surgical techniques.
- Examine several types of common refractive surgeries.
- Discover proper asepsis methods.
- Conduct a short surgical scrub.
- Conduct research regarding a recent advance in ophthalmic technology.



Pathogens & Disease Goals & Activities

- Investigate the evolution of germ theory.
- Explore careers related to pathogens and disease.
- Define terms related to epidemiology.
- Determine the initial steps of an epidemic investigation.
- Conduct research on *E. coli* bacteria in preparation for a simulated epidemic.
- Determine whether an actual outbreak is occurring in an epidemic scenario by creating a graph to track cases.
- Determine appropriate surveillance methods for tracking a simulated *E. coli* epidemic and when each is appropriate to use.
- Create an epidemic curve for a simulated *E. coli* epidemic.
- Create a spot map for a simulated *E. coli* epidemic.
- Create a personal characteristics summary for the patients involved in the simulated *E. coli* epidemic.
- Create a hypothesis for the origin of the simulated *E. coli* epidemic.
- Analyze data obtained for cohort and case-control studies conducted for the simulated *E. coli* epidemic to determine attack rates and relative risk.
- Review basic microbiology.
- Prepare slides for examination.
- Use the microscope to examine microbes in the untreated water samples.

- Create a report describing the type and number of microbes in each water sample and contrasting the samples.
- Culture bacteria and fungi from multiple areas.
- Review patient questionnaires for information pertinent to a simulated *E. coli* outbreak.
- Analyze data to identify which patients require further testing or other follow-up in a simulated outbreak scenario.
- Explore fungi and mycoses.
- Observe a multimedia presentation on mold.
- Collect and examine bacterial and fungal cultures for growth.
- Examine the common cold and determine why a cure for the common cold is unlikely.
- Explore both human viruses and bacteriophages.
- Identify several of the diseases for which vaccinations are available.
- Discover the history of AIDS both in this country and worldwide.
- Observe presentations on the causes, prevention, and effects of HIV/AIDS.
- Examine AIDS as an example of immunodeficiency.
- Examine diseases caused by protists.
- Determine how descriptive epidemiology is used during an outbreak.
- Examine the general shape, color, and structure of the bacterial colonies.
- Stain slides of the bacteria grown in the cultures.
- Examine the general shape, color, and structure of the fungal colonies.
- Create, examine, and identify fungal slides.
- Determine how analytic epidemiology is used in an epidemic scenario.
- Determine how to calculate attack rates for exposed and unexposed individuals in a cohort study.
- Determine how to calculate relative risk for a given exposure in a case-control study.
- Examine the CDC Category A disease agents.

Pharmacology Goals & Activities

- Define pharmacy.
- Identify the roles and responsibilities of a pharmacist and a pharmacy technician.
- Discuss pharmacology and other related fields.
- Discuss a brief history of pharmacology.
- Identify careers and education/training requirements in pharmacy.
- Research three schools that offer pharmacy technician programs.
- Review pathogens and disease.
- Discuss how germs invade the body.
- Identify kinds of disease
- Discuss combating infection and disease.
- Define immunity.
- Discuss antibody production.
- Discuss how drugs fight disease and infection.
- Discuss infectious and contagious disease.
- Identify medicines that endure.
- Examine an Aspirin tablet to determine whether or not it has begun to break down due to age.
- Define homeostasis.
- Discuss how drugs work.
- Discuss disposition.
- Identify factors that affect drug action.
- Discuss administration routes and dosage forms.
- Identify common drug types.
- Discuss controlled substances.
- Identify brand and generic drugs.
- Perform an experiment explaining why all drugs are not pills.
- Identify characteristics of OTC drugs.
- Compare and contrast prescription and non-prescription drugs.
- Identify parts of a Drug Facts label.
- Discuss FDA regulation of prescription and non-prescription drugs.
- Complete an experiment to determine how antacids relieve heartburn.
- Identify pharmacy technician responsibilities.
- Discuss education and training requirements for pharmacy technicians.
- Identify desired skills and characteristics of pharmacy technicians.
- Discuss the process or inventory management.
- Identify steps for ordering, receiving, packaging, and storing medications.
- Use a pharmacy simulation application to practice taking inventory.
- Define prescription.
- Discuss steps in the dispensing process.
- Identify components of prescription labels.
- Identify SIG and DAW codes.
- Read and interpret prescriptions for labeling.
- Practice proper dispensing techniques.
- Discuss the Arabic and Roman number systems.
- Review fractions, decimal numbers, ratios, etc.
- Discuss systems of measurement.
- Identify Young's Rule.
- Identify Clark's Rule.
- Discuss the Body Surface Area formula.
- Practice alligation.
- Demonstrate proper steps for completing mathematical equations related to pharmacology.
- Discuss third party programs.
- Discuss pharmacy benefit managers.
- Identify types of managed care programs.
- Identify types of public health insurance.
- Discuss the 340B Drug Pricing Program.
- Discuss workers' compensation.

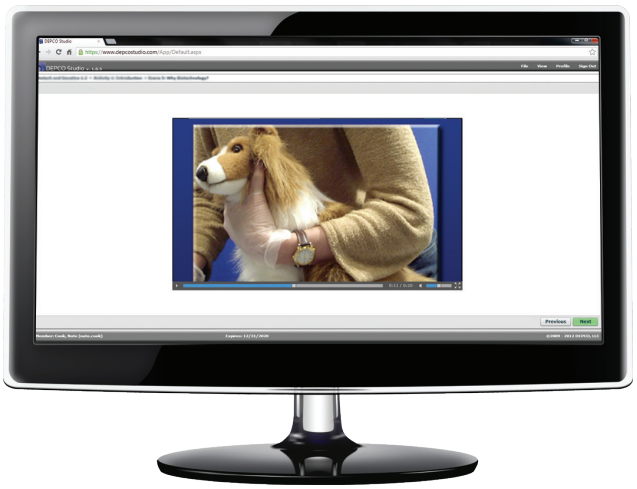
Sports Medicine Goals & Activities

- Research the field of sports medicine.
- Explore career opportunities in sports medicine.
- Define various terms associated with anatomy, physiology, and body positions.
- Explore the components and terminology of the cardiovascular system, the muscular system, and the skeletal system.
- Discover the basics of kinesiology and body mechanics.
- Explore the terminology and various measuring techniques for studying range-of-motion.
- Perform range-of-motion measurements using a 360 degree goniometer.
- Explore the basic concepts of health, wellness, and fitness.
- Perform body fat measurements and calculations using skin fold calipers.
- Understand and calculate the differences between resting heart rate, recovery heart rate, and target heart rate zone.
- Discover the importance of stretching and flexibility.
- Examine the basics of facilitated stretching.
- Perform facilitated stretching.
- Explore basic injuries to the wrist and hand.
- Demonstrate an understanding of the basics of athletic taping for the treatment and prevention of injuries.

- Complete two basic tapings of injured fingers.
- Perform a taping that restricts thumb flexion, extension, and abduction.
- Examine the terminology, equipment, and techniques associated with basic non-injury ankle taping.
- Perform two basic ankle tapings.
- Examine the components of a basic first aid kit.
- Compare a general first aid kit to a sport-specific first aid kit.
- Discover the proper safety and aseptic techniques to use when working with patients.
- Discover how to check for vital signs.
- Practice dealing with minor injuries that commonly occur in athletics.
- Discover the basics of physical rehabilitation and sports medicine.
- Perform simulated manual muscle tests and range-of-motions tests to assess injuries.
- Discover how proper stretching can be used in the physical rehabilitation of athletic injuries.
- Understand how to deal with patients involved in physical rehabilitation.
- Discover the many advantages and techniques of using resistive bands as a therapeutic resource.
- Develop and simulate a rehabilitation program using resistive bands and an ankle exercise board.
- Research drug use and ethics in sports medicine.
- Examine the effects of alcohol, nicotine, adrenaline, caffeine, lactic acid, and aspirin on the human body by running tests on daphnia magna.
- Conduct research regarding a recent development in sports medicine.

Veterinary Science Goals & Activities

- Acquire an overview understanding of veterinary science as a health care field.
- Explore major careers associated with veterinary science and the responsibilities, education, and licensing requirements for each.
- Research laws pertinent to veterinary technicians.
- Write a short paper discussing a career field using information gained through research.
- Select a veterinary science career to shadow.
- Discover basic facts about mammals, reptiles, and amphibians.
- Explore the anatomy of horses, cows, cats, and dogs.
- Examine the classifications of common companion and agricultural animals.
- Discover the basic anatomy of birds.
- Explore basic care and preventative medicine for canines and felines.
- Practice accurate interpretation of nutritional information.
- Discuss safety procedures.
- Perform muzzling procedures for canines.
- Explore mammalian anatomy.
- Perform a virtual cat dissection.
- Define venipuncture.
- Discover common venipuncture locations.
- Practice proper restraint techniques for canine venipuncture locations.
- Recognize various types of injections.
- Identify proper venipuncture technique.
- Perform venipuncture using a venipuncture trainer.
- Explore common surgical procedures such as spaying and neutering.
- Define suture.
- Explore the various types, uses, and techniques of suturing.
- Practice placing interrupted single sutures.
- Practice placing subcuticular sutures.
- Discover the importance of basic first aid.
- Explore the importance of proper emergency procedures.
- Discover the instances in which CPR is required in a veterinary emergency.
- Identify the proper steps to performing canine CPR.
- Explore and identify various companion animal breeds and species.
- Discuss various forms of anesthetics and anesthetic agents.
- Explore pharmacology and pharmacokinetics.
- Solve equations to properly administer medications.
- Discuss why veterinary dentistry is important.
- Practice using the Triadan system.
- Practice preparing for surgery.



About Blended Learning

Today's teachers continuously look for new and exciting teaching methods in order to capture the attention and spirits of students. With DEPCO's Blended Learning Units, many students can learn a multitude of STEM (Science, Technology, Engineering, and Mathematics) concepts in an engaging manner. By using a blended learning approach, teachers can challenge students in a traditional lecture approach as well as a combination of a hands-on approach and an online learning approach. This combination of teaching methods creates a dynamically rich learning experience for students.

Teachers have the flexibility to use the curriculum in an instructor-led course with an entire classroom of students or to use the curriculum in smaller student-driven groups. In some classrooms, teachers encourage students to perform the online sections of the curriculum at home while the students focus on the lecture and hands-on portion during the allotted classroom time. With any blended learning approach, students alternate between online and classroom instruction that keeps the students on pace for successful completion. Teachers also use the blended learning approach for personalization. It allows both advanced and at risk students to learn at their own pace or level – simultaneously. DEPCO's blended learning curriculum is designed to encourage learning through auditory, visual, and kinetic learning experiences.

DEPCO Studio LMS

What is DEPCO Studio™?

DEPCO Studio is an all-encompassing, online education tool that delivers enriched media content and tests. DEPCO Studio also aids instructors with all lab management needs, such as scheduling, test taking, record keeping, and messaging, which helps to organize the classroom and keep communication with the students simple.

DEPCO Studio delivers all of DEPCO's curriculum, and it can also deliver customized content and new courses created by instructors.

Features

Member Information:

- Create/Modify instructors and learners includes:
  - Personal information
  - Contacts
  - Comments

Scheduling:

- Automatic scheduler handles scheduling conflicts and student groupings
- Simple click and drag assigning
- Student schedule highlighting for quick reference

Test Development:

- Student tests are delivered electronically and graded and recorded automatically
- Four different test question types:
  - Multiple choice
  - True/False
  - Free form
  - Matching
- Randomized questions and answers

Student Portfolio:

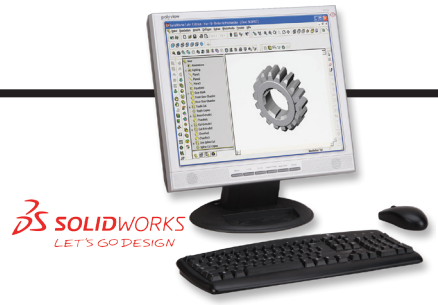
- Student grade viewer allows students to track their own progress
- Student profile editor allows students to enter and update personal information

Reports:

- Grade report options include:
  - Class summary grades
  - Student detail grades
  - Student summary grades
- Schedule Report options include:
  - Class schedule by rotation
  - Individual student schedule
- Competency and standards correlations

And Much More!

DEPCO Blended Learning Units



Engineering Design ITC1161

In DEPCO's Engineering Design BLU, students learn about the basic principles of the engineering design process. Students learn to create and edit three-dimensional and two-dimensional drawings while also learning the ins and outs of the SOLIDWORKS® software. Blueprint reading and designing is also explained in order to expose the students to industrial scenarios.

Engineering Structures MP7502

Engineers must ask many important questions before designing and building a bridge: What type of bridge is best suited for this project? What materials should be used? What safety features will the bridge have? In this extraordinary, hands-on curriculum, students are faced with a similar set of questions, only on a smaller scale.

First Aid & CPR HS1075

First Aid/CPR offers students intensive, computer-based training and hands-on skill practice in basic first aid and CPR procedures. This course prepares students to effectively deal with emergency scene management and render aid for a wide spectrum of injuries.

Graphic Design MP6017

In this popular curriculum, students explore the fundamentals of graphic design and learn how to apply them in order to manufacture real-world projects produced in industry today. A solid foundation in audience analysis, color theory, typography, and design principles are taught to the students as they work on challenging design projects.

Rocketry & Space MP8406

Students draw upon Newton's laws of motion and make a paper rocket in order to obtain specific data to help project flight estimates and distances. As students learn more about rockets, including the role of center of mass, pressure in rocket stability, and the functions of different model rocket parts, they build an actual model rocket and are able to launch it under direct supervision by the instructor.

DEPCO Blended Learning Units

SOLIDWORKS Basics MP2002

The SolidWorks program is used to design and document three-dimensional parts and assemblies. It provides two-dimensional and three-dimensional tools, creates quality products with fewer revisions, and efficiently manages the design process. In this curriculum, students will learn to draw, extrude, cut, fillet, and chamfer parts, and animate an assembly.

Totally Trebuchet MP1722

In this curriculum, students will learn about the properties that affect the operation of a trebuchet. They will learn how energy is transferred from the counterweight to the projectile, and how the release angle and velocity affect the range of the projectile. Then, students will construct a trebuchet and learn how the design parameters and the size of the trebuchet and counterweight affect trebuchet performance.

Vinyl Sign Making MP6607

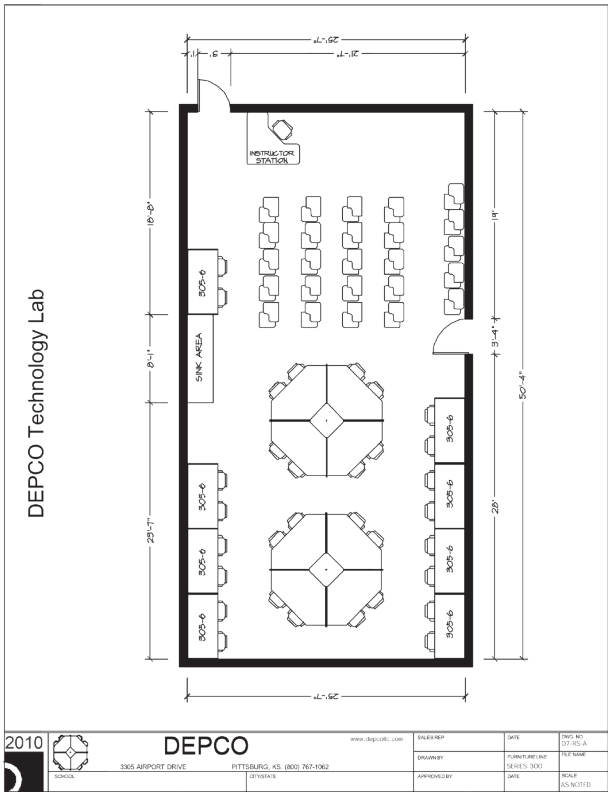
In this creative curriculum, students receive real-world experience by acquiring skills and performing tasks that are comparable to those found in the vinyl sign making industry. First, students become familiar with the sign-making software by exploring sample signs and working with basic text and graphics tools. Next, they are introduced to sign layout concepts such as proportion, balance, harmony, and symmetry.

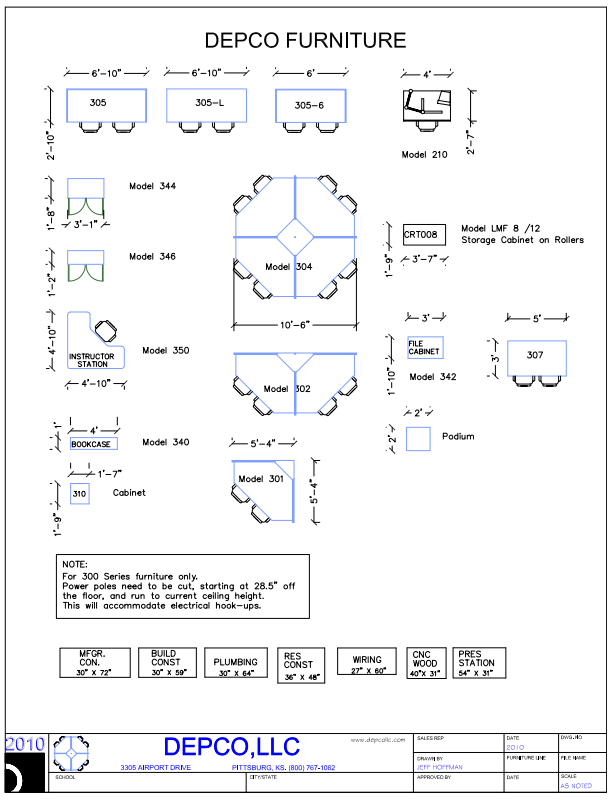
More DEPCO BLUs

- CAD/CAM Level 1 ITC1051
- CAD/CAM Level 2 ITC1052
- Culinary Arts MP3802
- Computer Programming MP3002
- Digital Photography MP6508
- Engineering Design Level 2 ITC1162
- Hospitality & Tourism MP4103
- Landscape Design MP1404LP
- Medical Office Technology HS1071
- Precision Measurement MP9200
- Presentation Technology MP1702

Customized Floor Plan Service

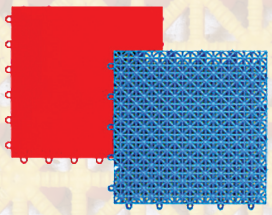
DEPCO is prepared to develop a CAD drawing of a sample lab or one that is detailed for your school. Please contact your DEPCO salesman or DEPCO's home office directly.





VersaCourt Tile

Multifunctional flooring tile designed to provide shock-absorbing impact that protects the knees, ankles, and lower back from trauma. Installs over current flooring and requires no special tools or cleaners for maintenance or repair. VersaCourt carries a full 10-year warranty.



Available in these colors:

Aqua Green	Blue	Burgundy	Graphite	Med. Green
Grey	Rust Red	Purple	Dk. Green	Bright Red

Also available in custom colors.

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