ESSEX COUNTY SCHOOLS OF TECHNOLOGY

2022-23 Career Readiness, Life Literacies, & Key Skills

Dicxiana Carbonell
OFFICE OF CURRICULUM & INSTRUCTION | WWW.ESSEXTECH.ORG

Joseph N. DiVincenzo, Jr.,
Essex County Executive
And Essex County Board
of County Commissioners

"Our Schools of Technology offer our students a dynamic, first-class education that will provide them with the foundation for a successful future."

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Individuals with questions about any form of discrimination, or who wish to report a violation, are encouraged to contact any of the persons or agencies listed below. In addition, inquiries about the application of Title IX may be referred to the Title IX Coordinator, to the U.S. Department of Education Office for Civil Rights, or both.

Mr. Michael Venezia
Title IX/Affirmative Action Coordinator
60 Nelson Place 1 North, Newark NJ 07102
(973) 412-2072/ mvenezia@essextech.org

Dr. Patricia Clark-Jeter
504 Coordinator
498-544 West Market Street, Newark NJ 07107
(973) 412-2233/ pjeter@essextech.org

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BUSINESS ORGANIZATION & MANAGEMENT

INTRO TO BUSINESS TECH

Introduction to Business Technology is designed specifically to lay the foundation that will equip the 21st century learner with specific computer and business literacy skills needed to succeed in their personal and professional lives. Students will be introduced to the role of business in the American/global economic system, management and leadership, ethics and social responsibility, entrepreneurial concepts, career development and self-awareness, financial concepts, and crucial computer/Internet skills. Work-based learning strategies for this course include simulations, projects, teamwork, as well as conferences, which provide opportunities for application of instructional competencies.

BUS ORGANIZATION & MANAGEMENT

Business Organization & Management course acquaints students with management opportunities and effective human relations. This course provides students with the skills to perform planning, staffing, financing, and controlling functions within a business. In addition, they provide a macro-level study of the business world, including business structure and finance, and the interconnections among industry, government, and the global economy. Students will gain in-depth knowledge of organizations and their environments, including their relationships with society. With the additional focus on entrepreneurship, students will learn how to manage innovation, and develop their own entrepreneurial skills. In addition, students will gain an understanding of managing people, business operations and logistics, marketing and communications, finance and accounting, corporate strategies and business ethics. Students will also learn how businesses can operate effectively in a culturally diverse environment. (NCES)

GLOBAL LOGISTICS I & II

The Global Banking courses engage students in solving contextual problems related to the concepts of supply chains, warehouse location, contingency planning, in-sourcing and outsourcing decisions, and expanding existing supply chains. These concepts form the basis of global logistics and supply chain management and help students understand how professionals examine options to maximize the use of resources across distribution networks.

Project-Based Learning This course is designed around project-based units featuring essential questions, project description, authentic roles and task that require students to utilize an industry-recognized decision-making process. Students collaborate and work in teams and develop important 21st- century skills. The projects teach students to resolve workplace problems, fostering the development of the essential problem-solving skills needed for the workplace. (SREB)

ACCOUNTING & FINANCE

This course introduces students to the full accounting cycle, payroll, taxes, debts, depreciation, ledger and journal techniques, and periodic adjustments. Students learn how to apply standard auditing principles and to prepare budgets and final reports. Calculators, electronic spreadsheets, or other automated tools are used. Additionally, this course focuses on finance, addressing how businesses raise, distribute, and use financial resources while managing risk. Course content involves modeling financial decisions (such as borrowing, selling equity or stock, lending or investing) typically undertaken by businesses. (NCES)

DATA ANALYTICS

The courses provide students with the basic tools of analysis and reasoning and teach them to use those tools to explain or interpret economic problems. Course content includes resource allocation under various

systems, national income analysis, international economics, resource allocations, and economic development and growth. (NCES)

MICROSOFT OFFICE SPECIALIST (MOS)
The MOS course will focus on the following Microsoft Office applications: Word, Excel, and PowerPoint. Students taking this course will prepare through Certiport for the licensing exam in any and/or all of these apps. Students the hold these certifications will stand out in office level jobs/careers.

QUICKBOOKS
The QuickBooks course will prepare students for the licensing exam. Major accounting areas of study include managing payroll functioning, sales, payment of bills, expenses, inventory, and business payments. Also, QuickBooks can be used for making tax files, accounting reports and send an invoice to customers. It is an accounting software used by either small or medium business companies. QuickBooks help them keep a clear track on all the transactions taking place.

GLOBAL BUSINESS & BANKING
This course provides students with an overview of the global monetary and banking systems as well as types of financial institutions and the services and products that they offer. Course content includes government regulations; checking, savings, and money market accounts; loans; investments; and negotiable instruments. This course also examines and applies the methods used for measuring the financial performance of banks in addition to examining specialized brokerage products, current issues, and future trends in banking. (NCES)

STEM: ENGINEERING

COMPUTER SCIENCE AND DESIGN THINKING
Computer Programming courses provide students with the knowledge and skills necessary to construct computer programs in one or more languages. Computer coding and program structure are often introduced with the BASIC language, but other computer languages, such as Visual Basic (VB), Java, Pascal, C++, and COBOL, may be used instead. Initially, students learn to structure, create, document, and debug computer programs, and as they progress, more emphasis is placed on design, style, clarity, and efficiency. Students may apply the skills they learn to relevant applications such as modeling, data management, graphics, and text-processing. (NJDOE) To promote a unified vision of the NJSLS-SS, an abbreviated form of the disciplinary concepts is included in the alphanumeric code. The disciplinary concepts were abbreviated as follows:

- Computing Systems (CS)
- Networks and the Internet (NI)
- Impacts of Computing (IC)
- Data & Analysis (DA)
- Algorithms & Programming (AP)
- Engineering Design (ED)
- Interaction of Technology and Humans (ITH)
- Nature of Technology NT)
- Effects of Technology on the Natural World (ETA)
- Ethics and Culture (EC)

FOUNDATIONS OF TECHNOLOGY ITEEA
This course prepares students to understand and apply technological concepts and processes that are the cornerstone for the high school technology program. Group and individual activities engage students in creating ideas, developing innovations, and engineering practical solutions. Technology content, resources, and laboratory/classroom activities apply student applications of science, mathematics, and other school subjects in authentic situations. (ITEEA)

TECHNOLOGICAL DESIGN ITEEA
In Technological Design, engineering scope, content, and professional practices are presented through practical applications. Students, in engineering teams, apply technology, science, and mathematics concepts and skills to solve engineering design problems and innovate designs. Students research, develop, test, and analyze engineering designs using criteria such as design effectiveness, public safety, human factors, and ethics. This course is an essential experience for students who are interested in technology, innovation, design, and engineering. (ITEEA)

INTRO TO ROBOTICS & ADVANCED ROBOTICS
Robotics engages students in hands on activities that require the application of Engineering tools and processes. These courses provide students with an overview of the practical uses of a variety of engineering applications. Topics covered usually include hydraulics, pneumatics, computer interfacing, robotics, computer-aided design, computer numerical control, and electronics. This course helps students understand the field of engineering/engineering technology. Exploring various technology systems and manufacturing processes help students learn how engineers and technicians use math, science and technology in an engineering problem solving process to benefit people. This course also introduces students to electrical circuits and passive electrical components. The use of electronics test equipment is emphasized so student can develop critical thinking skills of system analysis. The mathematics, physics and science related to mechanical and electrical engineering are taught by hands-on laboratory experiments and activities.

3D DESIGN AND PRODUCTION
This course offers students experience in solving problems by applying the design development process to create three dimensional models. Often using solid modeling computer design software, students develop, analyze, and test product solutions models as well as communicate the features of those models. Additionally, this course provides students with the opportunity to apply engineering research principles as they design and construct a solution to an engineering problem. Students typically develop and test solutions using computer simulations or models but eventually create a working prototype as part of the design solution. (NCES)

ENGINEERING DESIGN
Engineering Design courses offer students experience in solving problems by applying a design development process. Often using solid modeling computer design software, students develop, analyze, and test product solutions models as well as communicate the features of those models.

ENGINEERING CAPSTONE
In this course, students work in small teams or independently. Often conducted with instructors as mentors, projects/tasks enable students to explore topics of interest related to engineering. This course serves as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills. (NCES)

AUDIO AND VIDEO TECHNOLOGY AND FILM: TV & FILM PRODUCTION & MUSIC TECHNOLOGY

INTRO TO BROADCASTING
Broadcasting Technology courses provide students with the knowledge and skills to produce television broadcast programs. Typically, students prepare and produce short programs, learning the technical aspects of the operation and how to evaluate programming and assess audience reaction and impact. (NCES)

EXPLORATORY THEATRE ARTS

Exploratory Theater provides an overview of the art, conventions, and history of the theater. Although the courses sometimes include experiential exercises, they emphasize learning about the theater rather than performance. Students learn about one or more of the following topics: basic techniques in acting, major developments in dramatic literature, major playwrights, the formation of theater as a cultural tradition, and critical appreciation of the art. (NCES)

MUSIC ENGINEERING & PRODUCTION

These courses introduce students to the production of performing arts with computer technology, while introducing and building skills in related career areas. Students develop familiarity with music theory, the basics of piano keyboarding and voice training, as well as beginning to participate in the creative processes of basic writing and composing. Experience in performance, both traditional and technologically enhanced, is the centerpiece of skill building and motivational processes, leading to growth in self- confidence and proficiency. Students are also provided with instruction in the unique structure of this dynamic business and given the opportunity to develop the self-management skills that will be essential for their success as independent entrepreneurs.

MUSIC THEORY & COMPOSITION

Music Theory and Composition courses help students develop techniques for playing brass, woodwind, percussion, and string instruments, as well as guitars and keyboards, focusing primarily on contemporary stage band literature styles, such as traditional jazz, jazz improvisation, and rock. In these courses, students also acquire an understanding of the fundamentals of music: composition, arrangement, analysis, aural development, and sight reading. (NCES)

AP MUSIC THEORY

AP Music Theory courses are designed to be the equivalent of a first-year music theory college course as specified by the College Board. AP Music Theory develops students' understanding of musical structure and compositional procedures. Usually intended for students who already possess performance-level skills, AP Music Theory courses extend and build upon students' knowledge of intervals, scales, chords, metric/rhythmic patterns, and the ways they interact in a composition. Musical notation, analysis, composition, and aural skills are important components of the course. (NCES)

TV PRODUCTION I, II, III

Television and Broadcast Production courses offer an orientation to television production for inexperienced students. Basic training on TV studio equipment and portable equipment is provided, and students gain an understanding of the production process. Hands-on training is obtained by producing studio projects in class and working as crew members for productions outside of class. Written tests and performance tests are used to evaluate student progress, as well as assessments of individual contributions and group projects. This course provides students with the knowledge and skills necessary for television, video, and film production. Writing scripts, camera operation, use of graphics and other visuals, lighting, audio techniques, editing, production principles, and career opportunities are typical topics covered within production courses. Students are usually required to produce their own program or segment. Additional topics such as broadcast industry regulations, TV operation, power of the medium, transmission technology, and so on may be included. (NCES)

TELEVISION & BROADCAST

Television & Broadcast Courses expose students to the materials, processes, and artistic techniques involved in film, television, or videotape. Students learn about the operation of a camera, lighting techniques, camera angles, depth of field, composition, storyboarding, sound capture, and editing techniques. Course topics may also include production values and various styles of filmmaking (documentary, storytelling, news magazines,

animation, and so on). As students advance, the instruction becomes more refined, and students are encouraged to develop their own artistic style. Students may also study major filmmakers, cinematographers, and their films and learn about film, television, and video and their relationships to drama and theater.

DIGITAL FILMMAKING I, II, & III

Digital Filmmaking courses expose students to the materials, processes, and artistic techniques involved in film, television, or videotape. Students learn about the operation of a camera, lighting techniques, camera angles, depth of field, composition, storyboarding, sound capture, and editing techniques. Course topics may also include production values and various styles of filmmaking (documentary, storytelling, news magazines, animation, and so on). As students advance, the instruction becomes more refined, and students are encouraged to develop their own artistic style. Students may also study major filmmakers, cinematographers, and their films and learn about film, television, and video and their relationships to drama and theater. (NCES)

HUMAN SERVICES- PERSONAL CARE SERVICES: COSMETOLOGY

COSMETOLOGY I, II, & III

Cosmetology—Licensing courses provide students with the knowledge and skills applicable to the care of hair, skin, and nails, and prepare students for the state's Board of Cosmetology examinations. Almost always a series of courses with a specified number of instructional hours, Cosmetology— Licensing courses also require applied experience. Course content covers such topics as human anatomy and skin conditions, chemistry and bacteriology, sanitation and sterilization, state laws and regulations, and shop management. These courses provide students with experiences in shampooing, cutting, styling, bleaching, coloring, tinting, waving, and relaxing hair and providing facials and manicures. (NCES)

CONSTRUCTION TRADES

PLUMBING I, II, & III

NCCER's four-level curriculum covers topics such as Plumbing Tools, Types of Valves, and Potable Water Treatment. Most people are familiar with plumbers who come to their home to unclog a drain or install an appliance. In addition to these activities, however, students learn to install, maintain, and repair many different types of pipe systems. For example, some systems move water to a municipal water treatment plant and then to residential, commercial, and public buildings. Other systems dispose of waste, provide gas to stoves and furnaces, or supply air conditioning. Pipe systems in power plants carry the steam that powers huge turbines. Pipes also are used in manufacturing plants, such as wineries, to move material through production processes. (NCCER)

CARPENTRY I, II, & III

This four-level curriculum covers content such as Building Materials, Cabinet Fabrication, and Advanced Wall Systems. Carpenters make up the largest building trades occupation in the industry and those with all-around skills are in high demand. Carpenters are involved in many different kinds of construction activities, from building highways and bridges to installing kitchen cabinets. Carpenters construct, erect, install, and repair structures and fixtures made from wood and other materials. (NCCER)

MASONRY I, II, & III

NCCER's three-level curriculum in Masonry teaches trainees one of the world's oldest and most respected crafts. This curriculum encompasses modules such as Mortar, Metalwork in Masonry and Estimating. Masonry courses enable students to learn to construct interior and exterior walls, columns, doorways, window openings, fireplaces, chimneys, and foundations from brick and concrete block. Along with other activities, students may mix and spread cement and mortar, read blueprints and plans, and estimate materials needed

for a project. Other topics may also include how to layout buildings on footings and how to establish grades using a surveying transit. (NCCER)

ELECTRICAL I, II, & III
Electricians install electrical systems in structures; they install wiring and other electrical components, such as circuit breaker panels, switches, and light fixtures, and they follow blueprints, the National Electrical Code® and state and local codes. To prepare trainees a career in the electrical field, NCCER offers a comprehensive, 4-level Electrical curriculum that complies with DOL time-based standards for apprenticeship. (NCCER)

AutoCAD
Architectural courses introduce students to and help them refine the technical craft of drawing illustrations to represent and/or analyze design specifications, using examples drawn from architectural applications. These courses are intended to help students develop general drafting skills, but place a emphasis on interior and exterior residential (and light commercial) design, site orientation, floor plans, electrical plans, design sketches, and presentation drawings. In addition, students may prepare scale and 3D models.

INFORMATION TECHNOLOGY: WEB & DIGITAL COMMUNICATIONS

WEB DESIGN
Web Page Design courses teach students how to design web sites by introducing them to and refining their knowledge of site planning, page layout, graphic design, and the use of markup languages—such as Extensible Hypertext Markup, JavaScript, Dynamic HTML, and Document Object Model—to develop and maintain a web page. These courses may also cover security and privacy issues, copyright infringement, trademarks, and other legal issues relating to the use of the Internet. Advanced topics may include the use of forms and scripts for database access, transfer methods, and networking fundamentals. Students develop more complex XHTML skills, mastering a text editor, while adhering to web standards and being able to recognize and design for browser compatibility. Students also use various graphic programs to enhance their design skills, while also becoming familiar with style sheets allowing for design layout. The final step in the course will have the students able to validate their XHTML code, using critical thinking skills to debug and remedy code errors. Students will be prepared to complete a certification exam as the first step in being entry-level ready in the workplace. (NCES)

GAME/APP DESIGN
The Digital Media Techniques & Animation for Games courses provide education in the design and production aspects of interactive media, including areas of digital game, simulation, and virtual reality. Students will be prepared for career paths in information technology and design fields such as game development, simulation design, 3D modeling, and animation. The Digital Media Techniques & Animation for Games builds skills in the fundamentals of digital media files and formats and using professional-level software to edit, enhance, and create text, graphics, animation, audio, and video. These courses introduce the 3D modeling pipeline for digital media and emphasizes methods to navigate, create, and manipulate virtual objects in 3D space. All creative media work focuses on meeting the needs of game design and development projects, while applying industry practices. Throughout the courses, students will save a digital work sample, description, and reflection for each custom media result they produce to prepare for creating an interactive digital portfolio and animated reel in the upper grades.

E-MARKETING
eMarketing covers the principles and functions of marketing from the standpoint of conducting business on the internet. Typically, students develop such skills as using the internet as a marketing tool, conducting a

marketing analysis via the internet, planning marketing support activities, managing an electronic marketing campaign, managing/owning a business via the internet, and analyzing the impact of the internet on global marketing.

INTERACTIVE MEDIA
Interactive Media courses provide students with the knowledge and skills to create, design, and produce interactive media products and services. The courses may emphasize the development of digitally generated and/or computer-enhanced media. Course topics may include 3D animation, graphic media, web development, and virtual reality. Upon completion of these courses, students may be prepared for industry certification. (NCES)

MEDIA DESIGN AND PRODUCTION CAPSTONE
The purpose of the Capstone Project is to gain experience in taking an original game through the entire process: from concept to completion. Each student will work on their Capstone Project throughout the year, culminating in a complete game design for their graduation portfolio. During the first week of class, students should begin generating core ideas for games. These do not need to be fully developed ideas, just "seeds" for their imagination. Later, each student will choose one of these ideas as the basis for their Capstone Project. As the course progresses through the units of study, learners will begin to create the elements that will grow into their Capstone Project. Students may work in 1, 2, or 3- person teams to create their game. If they choose to work in a team, their project will be graded as a team. At the end of the year, each student will document how much each team member contributed, including themselves. Lack of participation will result in a lower grade for that team member. Great teams have great contributors, each contributing equally. Learners should think carefully about their team members. Students will be encouraged to form a heterogeneous team made up of individuals with varying types of skills.

ROBOTICS
Robotics courses develop and expand students' skills and knowledge so that they can design and develop robotic devices. Topics covered in the course may include mechanics, electrical and motor controls, pneumatics, computer basics, and programmable logic controllers

C-SHARP
C-SHARP courses provide students with the knowledge and skills necessary to construct computer programs in C-Sharp. Students learn to structure, create, document, and debug computer programs, and as they progress, more emphasis is placed on design, style, clarity, and efficiency. Students may apply the skills they learn to relevant applications such as modeling, data management, graphics, and text processing.

ARTS, AUDIO/VIDEO TECHNOLOGY AND COMMUNICATIONS: VISUAL ARTS

FASHION DESIGN
Clothing and Textiles courses introduce students to and expand upon the various aspects of apparel, garment construction, and the textile industry, conveying the commercial application of design principles, production processes, and maintenance techniques. These courses usually address the selection, characteristics, care, and repair of various textiles; operation and care of commercial sewing machines; design, construction, and production of fabrics and/or garments; and career opportunities in the garment or textile industry. (NCES)

GRAPHIC ARTS AND DESIGN
Graphic Design is a creative process that combines art and technology to communicate ideas. The designer works with a variety of communications tools in order to visually convey a message for a client's product or

service to a particular target audience. This course will give students a foundation in Graphic Design by introducing them to the various aspects of the Graphic Design field. Students will work on projects utilizing industry standard software and hardware in a classroom environment that simulates a real-world design studio. They will be introduced to the basic design principles and processes that must be followed in order to successfully complete projects that meet specific criteria. Students will also become familiar with production techniques with industry standard software such as Adobe Photoshop, Illustrator and InDesign and postproduction techniques for finishing, mounting and the creation of mock-ups. In addition to the computer and software, students will properly handle and use drawing tablets, digital cameras, scanners, and other various output devices such as printers and backup storage disks applicable to projects.

AP STUDIO ART 2D DESIGN

This advanced class will enable students to achieve an understanding and appreciation of artistic expression and understand the role of the artist as creative problem solver. Students will be able to visually communicate their ideas in solving design issues for expressive responses as well as demonstrate learning thru the arts in other content areas. Students will explore, plan and develop their unique ideas using drawing techniques, traditional art methods, multimedia, historic relevance, critique and inquiry. Professional industry tools, traditional and non-traditional techniques and art language are employed in order for students to create original designs, works of art in order to communicate their ideas and portfolio development in order to demonstrate 21st Century Skills relevant to today's expressive artist. The Art Studio program integrates both the New Jersey State Visual Arts Standards and the Career Tech standards for Graphic Design, Commercial Advertising Art framework. AP 2D Studio Art is available on portfolio review for any students wanting to go above and beyond the course work with teacher mentoring and/or enrolled in the class offering. (NCES)

COMMERCIAL ARTS

Students will be introduced to the field of commercial arts and advertising design, focusing on graphic design and illustration. Topics to be covered in this course include safety, color and design, traditional studio art techniques (drawing and painting), computer technology (Adobe InDesign, Illustrator, and Photoshop), post-secondary education options, career exploration, entrepreneurship, and customer service.

HOSPITALITY & TOURISM: RESTAURANTS & FOOD/BEVERAGE SERVICE

CULINARY ARTS

To earn the ProStart National COA, a student must pass the National Restaurant Association's Year 1 and Year 2 exams, and complete 400 hours of mentored work experience. From how to hold a knife properly to ensuring your restaurant makes money, Foundations of Restaurant Management & Culinary Arts teaches you what you need to start a career in restaurants. In this program, students get an insider's look at working in restaurant and exciting labs to practice their skills. The curriculum blends front-of-the-house and back-of-the-house content in two textbooks. Starting with an overview of the industry, students will move into kitchen essentials – including equipment and culinary techniques – and management essentials like communication and customer service. Students will spend time in the kitchen honing their ability to cook restaurant quality meals and learn how to keep your guests coming back. They'll become immersed in hot topics within the industry, such as sustainability and global cuisines. Just as important, they'll become armed with the skills to find and keep a job within the restaurant industry. Courses offered include farm to table, entrepreneurship, international cuisine, baking & pastry, greenhouse management, and so forth. (NRAEF)

MANUFACTURING: CABINETMAKING & WELDING

CABINETMAKING I, II, & III

Cabinetmaking courses provide students with experience in constructing cases, cabinets, counters, and other interior woodwork. Students learn to distinguish between various types of furniture construction and their appropriate applications, and how to use various woodworking machines and power tools for cutting and shaping wood. Cabinetmaking courses cover the different methods of joining pieces of wood, how to use mechanical fasteners, and how to attach hardware. Initial topics may resemble those taught in Woodworking courses; more advanced topics may include how to install plastic laminates on surfaces and how to apply spray finishes. (NCCER)

WELDING I, II, & III

Welding is a high-tech industry that can take you places all over the world. From ladders to aircraft carriers, from NASCAR to national defense, and from the laboratory to sales and repair, the varied welding industry impacts virtually every industry. Technology is creating more uses for welding in the workplace. For example, new ways are being developed to bond dissimilar materials and non-metallic materials, such as plastics, composites, and new alloys. Also, advances in laser beam and electron beam welding, new fluxes, and other new technologies and techniques all point to an increasing need for highly trained and skilled workers. NCCER's four-level curriculum covers topics such as Oxyfuel Cutting, Welding Symbols, and Stainless-Steel Groove Welds. NCCER's curriculum also correlates to the AWS SENSE (Schools Excelling through national Skills Education) standards and guidelines for Entry Welder. An AWS SENSE correlation chart is provided with the curriculum to assist instructors in complying with the AWS guidelines. (NCCER)

LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY: LAW ENFORCEMENT & LEGAL SERVICES

INTERNATIONAL RELATIONS

Designed as an introductory survey course to the field of International Relations, this course explores the causes, character, and consequences of conflict and cooperation in world politics. The course brings together history, theory, and current events to help students understand the main drivers and patterns of behavior in the international system. Core questions that will be tackled include: What are the causes of war and peace? Is international cooperation attainable? Is globalization good or bad? Is the U.S. a declining great power? What are the most dangerous threats facing states today?

MODEL UN- HUMAN RIGHTS, LAW, & POLICY INSIDE THE UN

Model UN provides students with an engaging deeper learning activity that is academic, authentic, and affective (i.e., having affinity and intrinsic motivation). It also advances an appreciation for critical issues such as terrorism, weapons proliferation, child soldiers/workers, women's rights, AIDS and other health issues, etc. The curriculum includes geography; the host country's history, politics, economics, culture, language, and society; international politics; diplomacy and negotiation; research; creative problem solving; and persuasive writing and speaking. Our Model UN should be competitively oriented, with various students taking on roles as actors, representing their country's interests much as a lawyer represents a client's interests, independent of the actor's/lawyer's personal beliefs, because the country's/client's views are paramount.

INTERNATIONAL CONFLICT & SECURITY

This course explores central issues regarding the use of military force in international politics. Why do states turn to military force and for what purposes? What are the causes of war and peace? What renders the threat to use force credible? Can intervention in civil wars stall bloodshed and bring stability? How can states cope with the threat posed by would-be terrorists? What is the nature of counterinsurgency doctrine? What is the future of military force in global politics? Through theoretical readings, concrete historical cases, and contemporary policy debates, this course examines these questions and others.

CRIMINAL LAW

The goal of these courses are to prepare the foundation for mastery of basic law enforcement skills and theory, while applying prior learned operants within the Criminal Justice System and prepare them for the senior year exit assessment NOCTI: Criminal Justice Examination, as well as the Capstone Project. Skills will include identification of a crime scene, preserving the crime scene and forensic evidence, classification and preservation of evidence, search and handcuffing techniques. Observation/witness statements and investigative report writing skills will be emphasized throughout. Learners will apply research methodology skills utilizing ethical professionally accepted practices. Concepts of crime, law and the role of the law enforcement officer will be evaluated at the local, state, federal and global levels, associating such concepts to applicable case review and recognizing its effect on victims and victimization. Learners will apply criminal justice triad concepts of Law Enforcement, Corrections, Parole/Probation, and the utilization of Geospatial Information Systems Technology in Law Enforcement with a whole approach toward sociological issues in criminal justice. Incorporation of communication and safety skills, math, science, and related writing skills will be the through-lines incorporated within the course. Emphasis on college and career preparation will be developed and formulated throughout, facilitating the learner to construct short- and long-term professional and post-secondary educational career goals.

PRINCIPLES OF FIREFIGHTING

Principles of Firefighting offer students the opportunity to learn fire prevention and control under controlled conditions. Typically, students learn about the organization, rules, requirements, and regulations of fire departments; study and practice the tools and techniques used by firefighters to control or extinguish fires; and examine the behavior of fires. These courses also usually include emergency medical procedures and present fire investigation techniques.

EMERGENCY MANAGEMENT & THE FIRE SERVICE

This course provides an overview of the principles and practices of emergency management at the local, state, national and international levels; discusses intergovernmental and intragovernmental relationships important to emergency operations; provides an overview of the US emergency management system, including related laws, policies, and programs; presents the concepts of preparedness, mitigation, response and recovery; and, provides students with the resources necessary to critically assess research, media reports, popular culture, and political rhetoric related to disasters. This course will discuss best practices and proper methodologies for emergency managers as well as ways that students can develop skills and capabilities important to future employers as they seek individuals in this rapidly expanding and multi-faceted professional arena. Topics covered typically include civil defense and disaster preparedness; crime prevention; pollution control; fire prevention and control; legal and social systems and principles; and public health. These topics are explored from the viewpoint of a community resident and citizen using these services and of that of one interested in pursuing a public service career.

LAW AND PUBLIC SAFETY: INTRO TO CRIMINAL JUSTICE & POLICE CONCEPTS AND SKILLS

The Introduction to Law and Public Safety course will provide students with an overview of the history, organization, and functions of local, state, and federal law enforcement. In this course, students will gain an understanding and appreciation for the various careers that encompass Law and Public Safety; will explore and discuss employability skills, professional standards, and ethical responsibilities in the field of law enforcement; will analyze the effective use of force and arrest techniques; will demonstrate a working knowledge of constitutional law as it applies to various law enforcement scenarios; will analyze the importance of ethical behavior for law enforcement personnel; will evaluate and demonstrate effective use of communication skills by completing police reports, accident reports, and crime scene investigations; will analyze and demonstrate how to safely engage in tactical scenarios; and evaluate how topics such as

Homeland Security, terrorism, cyber-security, immigration, the media, and technology have impacted law enforcement in the 21st century.

POLICE ROLE IN THE COMMUNITY

This course reviews the role of Community Policing from a multi-disciplinary approach. The complex responsibilities of police departments, coupled with changes in technology and society, continually present new challenges to police officers. Community Policing is a philosophy that stresses the importance of having police departments work collaboratively with the community to impact positive change. Its two core concepts are community-police collaboration and partnerships and a problem-solving approach to policing.

HOMELAND SECURITY

This three-year program in Homeland Security focuses on security policy, planning, and operations dedicated to the protection of U.S. territory, assets, infrastructure, institutions, and citizens from external threats. It is intended for students who are considering entering a branch of the military, government, or national security administration. It includes instruction in national security policy, government relations, intelligence, law enforcement, security technology, communications and information technology, homeland security planning and operations, disaster planning, and applications to specific threat scenarios. Project-based units are designed with the flexibility to expand or reduce class time as appropriate. Student discovery is essential, incorporating "just in time" lessons where necessary. (Homeland Security)

AP COMPARATIVE GOVERNMENT & POLITICS

Following the College Board's suggested curriculum designed to parallel college-level Comparative Government and Politics courses, these courses offer students an understanding of the world's diverse political structures and practices. The courses encompass the study of both specific countries and general concepts used to interpret the key political relationships found in virtually all national policies. Course content generally includes sources of public authority and political power, the relationship between states and society, the relationships between the political and institutional frameworks of citizens and states, political change, and comparative methods.

AP US GOVERNMENT & POLITICS

Following the College Board's suggested curriculum designed to parallel college-level U.S. Government and Politics courses, these courses provide students with an analytical perspective on government and politics in the United States, involving both the study of general concepts used to interpret U.S. politics and the analysis of specific case studies. The courses generally cover the constitutional underpinnings of the U.S. government, political beliefs and behaviors, political parties and interest groups, the institutions and policy process of national government, and civil rights and liberties.

HEALTH SCIENCE: SUPPORT SERVICES

ANATOMY & PHYSIOLOGY

The Principles of Anatomy and Physiology I focus on the study of the structure and function of the Human Body based on different organizational levels. This course follows a sequential development of the major body systems in an organized, structured curriculum. The course is designed to give the students a selective overview of human anatomical structure and a brief analysis of human physiological principles.

This course of study will introduce students to the structures and functions of the human body based on various levels of organizations, such as: the chemical level of organization, the cellular level of organization, and the tissue level of organization. Further, it introduces the student to diverse types of body systems, such as: integumentary system, skeletal system, muscular system, and nervous system.

DYNAMICS OF HEALTHCARE IN SOCIETY

This course provides an orientation to health care services and their delivery. It presents an interdisciplinary perspective, focusing on process skills such as critical thinking, ethical reasoning, effective communication, and ways to continue independent learning throughout life. The course shows how all health care providers acquire professional competence in dealing with the issues and problems they face as well as the role they play as informed consumers.

MEDICAL TERMINOLOGY

Medical Terminology is the study of words that pertain to body systems, anatomy, physiology, medical processes and procedures and a variety of diseases. It provides specialized language for the health care team, enabling health care workers to communicate in an accurate, articulate and concise manner. This course is designed to give the students a comprehensive knowledge of word construction, definition and use of terms related to all areas of medical science. The course includes but is not limited to terms related to anatomy of the human body, functions of health and disease, and the use of language in diagnosing and treating conditions related to all of the human body systems. This course replaces the earlier study of Latin and Greek for future healthcare professionals, as it focuses words used in the medical fields. This course serves as an important pre-requisite to Anatomy and Physiology. It is useful in preparing students for every career in allied health.

INTRODUCTION TO HEALTH CAREERS

The course shall provide the beginning students in health occupations with the basic entry-level knowledge and skills required for a variety of health occupations. Although each specific health occupation requires specialized knowledge and skills, some knowledge and skills are applicable to many different health occupations. In short, this course is developed to provide some of the core knowledge and skills that can be used in several different fields.

EXPLORATION OF HEALTH CARE OCCUPATIONS

Exploration of Health Care Occupations courses expose students to the variety of opportunities available within the health care industry (e.g., such as nursing, therapy, dental care, administrative services, and lab technology). These courses provide experiences in several of these occupational clusters, along with information and knowledge related to the health care industry as a whole.

NURSING

Nursing courses place a special emphasis on the particular knowledge and skills required of nurses and/or nursing assistants and aides while covering general health care topics (i.e., patient care, anatomy and physiology, medical terminology, hygiene and disease prevention, first aid and CPR, and laboratory procedures). Topics covered typically include normal growth and development; bathing, feeding, dressing, and transporting patients; basic pharmacology; doctor, nurse, and patient relationships and roles; medical and professional ethics; death and dying; and care of various kinds of patients (e.g., chronically ill, children, new mothers, and so on). (NCES)

MEDICAL ASSISTING

Medical Assisting courses enable students to develop knowledge and skills that combine the medical and clerical fields. Students typically develop skills such as patient exam preparation, assessment of vital signs, routine lab procedures, medical transcription, financial accounting, patient and insurance company billing, and record-keeping. (NCES)

EMERGENCY MEDICAL TECHNOLOGY

Emergency Medical Technology courses place a special emphasis on the knowledge and skills needed in medical emergencies. Topics typically include clearing airway obstructions, controlling bleeding, bandaging, methods for lifting and transporting injured persons, simple spinal immobilization, infection control, stabilizing fractures, and responding to cardiac arrest. The courses may also cover the legal and ethical responsibilities involved in dealing with medical emergencies. (NCES)

HEALTH CARE OCCUPATIONS—COMPREHENSIVE

Health Care Occupations—Comprehensive courses provide students with an orientation to the health care industry and help refine their health care-related knowledge and skills. Topics covered usually include (but are not limited to) an overview of health care delivery; patient care, including assessment of vital signs, body mechanics, and diet; anatomy and physiology; identification and use of medical equipment and supplies; medical terminology; hygiene and disease prevention; first aid and CPR procedures; laboratory procedures; and ethical and legal responsibilities. (NCES)

TRANSPORTATION, DISTRIBUTION AND LOGISTICS: FACILITY AND MOBILE EQUIPMENT MAINTENANCE

AUTOMOTIVE TECHNOLOGY I, II, & III

Automotive Technology courses emphasize the diagnosis and repair of automobile engines and support systems such as brakes, cooling, drive trains, electrical/electronic components, emission, fuel, ignition, steering, suspension, and transmissions. Course topics often include the comprehension and use of repair manuals, safety, and employability skills (including shop management and entrepreneurship). Automotive Service courses emphasize preventative auto maintenance and automobile troubleshooting. Course content typically includes tune-up, oil change, and lubrication skills; tire replacement, alignment, and balancing; and basic knowledge of brake, cooling, electrical, emission, fuel, ignition, steering, suspension, and transmission systems. These courses may also include public relations, sales techniques, and service station management. (NCES)

ANIMAL SCIENCE

AGRICULTURE, FOOD & NATURAL RESOURCES: ANIMAL SYSTEMS

Animal Science courses impart information about the care and management of domestic and farm animals. These courses may cover animal nutrition, health, behavior, selection, reproduction, anatomy and physiology, facilities, product processing, and marketing. Students may study a particular species (swine, cattle, horses, fowl, sheep, and so on), or they may learn how to care for and maintain livestock as a more inclusive study. (NCES)

ANIMAL BIOTECHNOLOGY

Animal Biotechnology, a specialization course in the CASE Program of Study, provides students with experiences in industry appropriate applications of biotechnology related to animal agriculture. Students will complete hands-on activities, projects, and problems designed to build content knowledge and technical skills

in the field of biotechnology. Students are expected to become proficient at biotechnological skills involving micro pipetting, bacterial cultures and transformations, electrophoresis, and polymerase chain reaction. Students will maintain a research level Laboratory Notebook throughout the course documenting their experiences in the laboratory. Research and experimental design will be highlighted as students develop and conduct industry appropriate investigations. Students will develop and conduct a research project following the National FFA Agriscience Fair guidelines. From background research through data collection and analysis, students will investigate a problem of their choice and conclude the project by reporting their results in the forms of a research paper and a research poster. (CASE)

PRINCIPLES OF ANIMAL SCIENCE

Principles of Animal Science is a foundation-level course engaging students in hands-on laboratories and activities to explore the world of animal agriculture. During the course, students develop a comprehensive Producer's Management Guide for an animal of their choice. Student experiences will involve the study of animal anatomy, physiology, behavior, nutrition, reproduction, health, selection, and marketing. For example, students will acquire skills in meeting the nutritional needs of animals while developing balanced, economical rations. Throughout the course, students will consider the perceptions and preferences of individuals within local, regional, and world markets. Students will explore hands-on projects and activities to learn the characteristics of animal science and work on major projects and problems similar to those that animal science specialists, such as veterinarians, zoologists, livestock producers, and industry personnel, face in their respective careers. Students will investigate, experiment, and learn about documenting a project, solving problems, and communicating their solutions to their peers and members of the professional community. (CASE)

ANIMAL RESEARCH AND DEVELOPMENT

Animal Research and Development is the capstone course designed to culminate students' experiences in animal science. Woven throughout the course are projects and problems based in practical applications and designed to develop and improve employability skills of students. Students will further enhance critical thinking and teamwork skills as they expand on content knowledge from previous CASE courses. In this course students will learn to: Solve complex real-world problems, conduct research, analyze data, work in teams, develop new products. (CASE)