Career and Technical Education

AGRIBUSINESS SYSTEMS*

Agribusiness Systems is a semester-length high school course that introduces the business, management, marketing, and financial skills needed to successfully produce food, fiber, and fuel for domestic and global markets. Students learn about the components of the agribusiness system and how they interact to deliver food to our tables. They also learn about the key elements of a successful agribusiness enterprise: economics, financial management, marketing and sales, and government policies and regulations.

ANIMAL SYSTEMS* NOV

Animal Systems is a semester-long high school course that provides students with a wealth of information on livestock-management practices, animal husbandry, physiological systems, the latest scientific trends, veterinary practice, and innovations in food production. Changes in practices, regulations, and legislation for animal welfare continue as new research provides solutions to medical, ethical, and practical concerns. The course reviews current topics, such as advancements in technology and research, and defines areas of discussion while maintaining focus on best-management practices. A student might use the knowledge gained from the course to further an interest in becoming a chef, researcher, doctor, wildlife-management professional, or any number of applicable careers.

BANKING SERVICES CAREERS* NOV

Banking Services Careers is a semester-long high school course that provides an overview of how the banking system works, what the Federal Reserve is, and the technical and social skills needed to work in banking and related services. Students explore career paths and the required training or higher education necessary and gain an understanding of the basic functions of customer transactions (e.g., setting up an account, processing a loan, establishing a business), cash drawer activity, check collection processes, and other customer service–related transactions. This course also discusses how technology has changed banking in the 21st century. The banking industry is responsible for many of the products that we use on a daily basis, from checking and savings accounts to debit cards, credit cards, and loans.

BUSINESS COMPUTER INFORMATION SYSTEMS

Business Computer Information Systems is a year-long course that explores the use of technology applications in both business and personal situations. The course provides key knowledge and skills in the following areas: communication, business technology, word processing, spreadsheet, and database applications, telecommunications, desktop publishing, and presentation technology, computer networks, and computer operating systems.

BUSINESS LAW*

This semester-long high school course is designed to provide students with the knowledge of some of the vital legal concepts that affect commerce and trade, after first gaining some familiarity with how laws are created and interpreted. Students are then introduced to the types of businesses that can be created as well as the contractual and liability considerations that can impact a business. Laws that affect how a business is regulated are reviewed, particularly the impact of administrative rules and regulations on a business. Global commerce and international agreements, treaties, organizations, and courts are discussed to get a better sense of what it means to "go global" with a business. Dispute resolution strategies are also addressed.

CAREER EXPLORATIONS

This course prepares middle school students to make informed decisions about their future academic and occupational goals. Through direct instruction, interactive skill demonstrations, and practice assignments, students learn how to assess their own skills and interests, explore industry clusters and pathways, and develop plans for career and academic development. This course is designed to provide flexibility for students; any number of units can be selected to comprise a course that meets the specific needs of students.

CAREER EXPLORATIONS I* NOV

Career Explorations I is a semester-long course designed to give middle school students an opportunity to explore various CTE subjects. Specifically, students learn about careers involving human-related services. Each of the five units introduce one particular field and explains its past, present, and future. These units include: Career Management, Introduction to Careers in Health Sciences, Hospitality and Tourism Systems, Human Services, and Consumer Services. The goal is to whet students' appetites for these careers. Students can then explore that career in more detail as a high school student.

CAREER EXPLORATIONS II* NOV

Career Explorations II is a semester-long course designed to give middle school students an opportunity to explore various CTE subjects. Specifically, students learn about careers involving various technical fields from computers to agriculture. Each of the five units introduces one particular field and explains its past, present, and future. These

units include: Information Technology, Introduction to Information Support and Services, Introduction to Network Systems, Introduction to Agriculture, Food, and Natural Resources, and Introduction to STEM (Science, Technology, Engineering, and Mathematics). The goal is to whet students' appetites for these careers. Students can then explore that career in more detail as a high school student.

CAREER EXPLORATIONS III* NOV

Career Explorations III is a semester-long course designed to give middle school students an opportunity to explore various CTE subjects. Specifically, students learn about careers from business to hands-on career paths. Each of the five unit introduces one particular field and explains its past, present, and future. These units include: Introduction to Business and Finance, Introduction to Manufacturing, Introduction to Transportation, Distribution, and Logistics, Introduction to Architecture and Construction, and Introduction to Marketing. The goal is to whet students' appetites for these careers. Students can then explore that career in more detail as a high school student.

CAREERS IN ALLIED HEALTH*

Careers in Allied Health is a semester-long course that focuses on select allied health careers, studying a variety of different levels, responsibilities, settings, education needs and amounts of patient contact. The course includes an overview of the degree or training needed for each job, the environment one would work in, how much money the position could make, and the facts of the actual working day. Within each job type, students explore important aspects applicable to the entire field of allied health, such as behaving ethically, working as a team, keeping patients safe and free from infections and germs, honoring diverse needs of diverse patients, and following laws and policies.

CAREERS IN LOGISTICS PLANNING AND MANAGEMENT SERVICES* NOV

Careers in Logistics Planning and Management Services is a semester-long course that provides high school students with the history of logistics and recent advances in the field. Units include supply chain management, inventory and transportation management, and safety in the workplace. Logistics is a high-growth industry and stable career choice. There is something for every career-seeker, ability, and experience level. The objectives of this course are to introduce the student to the field of logistics planning and management and to explain the career opportunities that are available in this field.

CAREERS IN MARKETING RESEARCH* NOV

Marketing research is the foundation of all marketing activities because it provides the data needed to make key strategic decisions about products, promotions, pricing, and other key organizational decisions. Careers in Marketing Research is a semester-long high school course that provides information about the process of investigation and problem analysis by using research to produce key marketing statistics that are communicated to management and used throughout the organization. This course concludes with the execution, interpretation, and presentation of marketing research.

CAREER MANAGEMENT*

Career Management is a semester-length high school course that assists students in their preparation for career selection. The course is designed to improve workforce skills needed in all careers including communication, leadership, teamwork, decision making, problem solving, goal setting and time management. Students complete activities that help identify personal interests, aptitudes, and learning styles. Students use results of self-assessments to determine careers that may prove personally satisfying.

CAREER PLANNING & DEVELOPMENT*

Introducing high school students to the working world, this course provides the knowledge and insight necessary to compete in today's challenging job market. This relevant and timely course helps students investigate careers as they apply to personal interests and abilities, develop the skills and job search documents needed to enter the workforce, explore the rights of workers and traits of effective employees, and address the importance of professionalism and responsibility as careers change and evolve. This one-semester course includes lessons in which students create a self-assessment profile, a cover letter, and a résumé that can be used in their educational or career portfolio.

CONSTRUCTION CAREERS* NOV

Construction Careers is a semester-long course that introduces high school students to the basics of construction, building systems, engineering principles, urban planning, and sustainability. Students learn the key techniques in building all types of buildings, as well as the key individuals involved in each step of the process. Many lessons present information on green building techniques and concepts that are becoming a standard part of the construction industry. Safety practices are emphasized in several lessons because construction is one of the most dangerous industries; students learn that there is no way to be successful in construction without taking such issues seriously. Lessons in this course also explore regulatory agencies and guidelines established for protecting not only construction workers but also the occupants of a building.

CORRECTIONS: POLICIES AND PROCEDURES* NOV

Corrections is one of the three branches of the Criminal Justice System (CJS) in the United States. All three branches employ personnel who are authorized to uphold and enforce the law and are required to operate under the rule of law. Each branch works as part of the entire system to maintain the public safety and well-being and bring criminals to justice. Corrections facilities and programs are run by a complex system of policies and procedures, which uphold local, state, and federal laws. Corrections: Policies

and Procedures gives high school students an introductory, yet thorough view of many aspects of corrections operations. Students receive historical and legal background information as they study how prisons and prisoners have evolved into correctional facilities and programs for offenders. In this semester-long course duties, responsibilities, conduct, training, and special certification possibilities for corrections staff are explored. Many aspects of procedures in corrections are reviewed, giving students an in-depth look at what a variety of careers in this growing field encompass and require.

ENGINEERING AND DESIGN*

This semester-long course focuses on building real-world problem-solving and critical thinking skills as students learn how to innovate and design new products and improve existing products. Students are introduced to the engineering design process to build new products and to the reverse engineering process, which enables engineers to adjust any existing product. Students identify how engineering and design have a direct impact on the sustainability of our environment and the greening of our economy. Finally, students incorporate the engineering design process, environmental life cycle, and green engineering principles to create a decision matrix to learn how to solve environmental issues.

ENGINEERING AND PRODUCT DEVELOPMENT*

This semester-long course provides an overview of the concepts of product engineering and development. Students analyze the life cycle of a product to prepare a product for distribution and for target markets. The course begins with building an understanding of the product life cycle, from the initial idea to drafting requirements to using 3-D modeling tools and other design tools. The final unit focuses on assembling the pieces within a project plan to achieve a product and evaluating the plans for a successful product launch. In addition, the course provides information about the different careers available to students interested in engineering, product development, and project management.

FAMILY AND COMMUNITY SERVICES* NOV

Family and Community Services is a high school semester-long course that introduces applications within professions related to family and community services. Students identify degree and credential requirements for occupations in this pathway and identify individual, social, historical, economic, and cultural context to increase awareness of family and community services. Students develop the abilities necessary to evaluate and identify a range of effective communication strategies and skills for establishing a collaborative relationship with others. Students also complete a variety of projects to apply their skills and knowledge. Units are divided among career fields: Social Workers, Emergency Management and Planners, Therapists and Treatment Specialists, Education and Childcare.

FIRE AND EMERGENCY SERVICES*

Emergency and fire-management services are essential infrastructure components of a community. Fire and Emergency Services is a semester-long course that provides students with the basic structure of these organizations as well as the rules and guidelines that govern pre-employment education requirements. The vehicles, equipment, and emergency-mitigations strategies that are commonly used in the emergency- and fire-management field are also explored. Students gain an understanding of the goals of an emergency-management service and how they are implemented and managed, including personnel, budget, and labor-management challenges in the organization. Various preparedness plans are discussed as students explore typical characteristics and frameworks of modern emergency- and fire-management organizations.

FOOD PRODUCTS & PROCESSING SYSTEMS*

Agriculture, food, and natural resources are central to human survival and civilization. The development, use, and stewardship of natural resources to create food products have a long and ever-changing timeline. This semester-length high school course that explores the history and evolution of food products, along with the processing methods that have arisen to feed an ever-growing world population. Students study specifics in a wide spectrum of food product topics, from early methods of preservation to technological advancements in packaging, regulations in labeling, and marketing trends. Students learn industry terminology in each area of the overall system, from "farm to fork" to vertical integration to smart packaging.

FOOD SAFETY AND SANITATION*

This comprehensive semester-long course covers the principles and practices of food safety and sanitation that are essential in the hospitality industry for the protection and well-being of staff, guests and customers. The course provides a systems approach to sanitation risk management and the prevention of food contamination by emphasizing the key components of the Hazard Analysis Critical Control Point (HACCP) food safety system. After successful completion of this course, students are prepared to meet the requirements of state and national certification exams.

FORENSICS: USING SCIENCE TO SOLVE A MYSTERY* NOV

Forensics: Using Science to Solve a Mystery is a semester-long high school course that overviews modern-day forensic science careers at work using science concepts to collect and analyze evidence and link evidence to the crime and suspects in order to present admissible evidence in courts of law. Projects in this course include simulated crime-scene investigation, actual DNA separation, development of a cybersecurity plan, and the identification of specific forensic skills used during the course of a very large murder case. The focus of this course is to assist students in making career choices. The overview of careers includes job descriptions and availability, educational and training requirements, licensing and

certification, and typical annual salaries. Students who take this class will become equipped to make more informed career choices regarding the forensic, computer science and medical science fields. At the same time, students will survey the history and scope of present-day forensic science work.

FUNDAMENTALS OF COMPUTER SYSTEMS* NOV

Fundamentals of Computer Systems is a semester-long high school course that provides students with an understanding of computers and how they operate as well as a basic understanding of how to manage and maintain computers and computer systems. These skills provide students with the ability to configure computers and solve computer problems. Students learn details about the different elements of computers and computer systems, how to identify hardware devices and their functions, the role of operating systems as well as how to install and customize Windows operating system. Students also learn about networking and the Internet, security issues, and current software applications, such as Microsoft® Office. In addition, students learn specifics about maintaining and troubleshooting computers, including managing files, backing up systems, and using the administrative tools in Windows operating system. Lastly, students learn the basics of customer service and working as a help desk support technician.

FUNDAMENTALS OF DIGITAL MEDIA* NOV

Fundamentals of Digital Media is a semester-long course that presents high school students an overview of the different types of digital media and how they are used in the world today. This course examines the impact that digital media has on culture and lifestyle. The course reviews the basic concepts for creating effective digital media and introduces several different career paths related to digital media. Students learn about the tools used as well as best practices employed for creating digital media. In the course, students explore topics such as the use of social media, digital media in advertising, digital media on the World Wide Web, digital media in business, gaming and simulations, e-commerce, and digital music and movies. Students also review the ethics and laws that impact digital media use or creation.

FUNDAMENTALS OF PROGRAMMING AND SOFTWARE DEVELOPMENT*

This semester-long course provides students with an understanding of basic software development concepts and practices, issues affecting the software industry, careers within the software industry, and the skills necessary to perform well in these occupations. Students learn details about core concepts in programming using Java, writing and debugging code, proper syntax, flow of control, order of operations, comparison operators, and program logic tools and models. Students learn the function of key program techniques including if statements, looping, and arrays, as well as web development using HTML and drag-and-drop development of user interfaces in an integrated development environment. Students explore the software development life cycle and different variations used to create software.

Required Materials:

- Activities in this course require that the Java Software Development Kit (SDK) and the NetBeans Integrated Development Environment (IDE) is installed on students' computers. Instructions are included in the Unit 1 lesson titled "Introduction to Java Programming."

HEALTH, SAFETY, AND ETHICS IN THE HEALTH ENVIRONMENT* NOV

Health, Safety, and Ethics in the Health Environment is a semester-long high school course that focuses on healthcare safety, health maintenance practices, environmental safety processes and procedures, and ethical and legal responsibilities. It also reinforces, expands, and enhances biology content specific to diseases and disorders. Students participate in project- and problem-based healthcare practices and procedures to demonstrate the criticality of these knowledge and skills. Students develop basic technical skills required for all health career specialties including understanding occupational safety techniques and obtaining their CPR and First Aid certifications.

HEALTH SCIENCE CONCEPTS

This year-long course introduces high school students to the fundamental concepts of anatomy and physiology—including the organization of the body, cellular functions, and the chemistry of life. As they progress through each unit, students learn about the major body systems, common diseases and disorders, and the career specialties associated with each system. Students investigate basic medical terminology as well as human reproduction and development. Students are introduced to these fundamental health science concepts through direct instruction, interactive tasks, and practice assignments. This course is intended to provide students with a strong base of core knowledge and skills that can be used in a variety of health science career pathways.

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES*

This semester-length high school course introduces students to the basic scientific principles of agriculture and natural resources. Students recognize and research plant systems, animal systems, government policy, "green" technologies, agribusiness principles, and sustainability systems. In this course, students apply understanding of ecosystems and systems thinking to the management of natural resources to maximize the health and productivity of the environment, agriculture, and communities. Students also analyze community practice or policy development related to sustainability in agriculture, food, and natural resources. Finally, students apply adaptive ecosystem management to a common pool resource problem in a manner that addresses ecological, socioeconomic, and institutional contexts.

INTRODUCTION TO BUSINESS

In this two-semester introductory course, students learn the principles of business using real-world examples—learning what it takes to plan and launch a product or service in today's fast-paced business environment. This course covers an introduction to economics, costs and profit, and different business types. Students are introduced to techniques for managing money, personally and as a business, and taxes and credit; the basics of financing a business; how a business relates to society both locally and globally; how to identify a business opportunity; and techniques for planning, executing, and marketing a business to respond to that opportunity.

INTRODUCTION TO CAREERS IN ARCHITECTURE AND CONSTRUCTION*

The goal of this semester-long high school course is to provide students with an overview of careers in architecture and construction in order to assist with informed career decisions. This dynamic, rapidly evolving career cluster is comprised of three pathways (fields): Design and Pre-Construction (Architecture and Engineering); Construction (Construction and Extraction); and Maintenance and Operations (Installation, Maintenance, and Repair). The Architecture and Construction career cluster is defined as careers in building, designing, managing, maintaining, and planning the built environment. The built environment encompasses all zones of human activity—from natural conservation areas with minimal human intervention to highly dense areas with tall skyscrapers and intricate highway systems to suburban cul-de-sacs. The interrelated components that make up the built environment are as varied and unique as the professionals who help shape it.

INTRODUCTION TO CAREERS IN ARTS, A/V TECHNOLOGY, AND COMMUNICATIONS*

This introductory semester-long high school course provides comprehensive information on five separate areas of arts and communications as potential educational and career pathways, including: audio/video technology and film, performing arts, visual arts, printing technology, journalism and broadcasting, and telecommunication systems. Students who are interested in careers across a broad spectrum of professional positions, including fine artist, telecommunications administrator, magazine editor, broadcast journalist, or computer graphic artist, will gain useful perspective on industry terminology, technology, work environment, job outlook, and guiding principles.

INTRODUCTION TO CAREERS IN EDUCATION AND TRAINING*

Introduction to Careers in Education and Training is a semester-long course that introduces students to the field of education and training, and the opportunities available for early-childh ood through adult and continuing education. Students gain an understanding of the career options available in teaching, administrative work, and support services. They also explore the education and background experience needed to succeed in these careers. Students learn about the evolution of the modern educational system in the United States, and the policies and laws that govern educational institutions. They also discover the similarities and differences between the ethical and legal obligations of working with adults versus working with children.

INTRODUCTION TO CAREERS IN FINANCE*

Introduction to Careers in Finance is a semester-long course that provides the fundamentals of the financial services industry in the United States and explores the jobs and career opportunities that the industry offers. Course units address a broad set of services in the industry including finance overview, financial services, securities analysis, investments, principles of corporate finance, banking services, risk management, and insurance.

INTRODUCTION TO CAREERS IN GOVERNMENT AND PUBLIC ADMINISTRATION*

This semester-long course provides students with an overview of American politics and public administration, including how political institutions and public management systems at the local, state, and federal levels exercise supervisory authority and maintain accountability. Students explore the foundations of the U.S. government, the separation of powers, the federal civil service system, and the relationship between the government and state and local officials. Students learn about politics in the United States and the electoral process, political attitudes and opinions, and American political parties. Students explore the structure of U.S. federal governmental institutions, the nature of bureaucracy, and the functions of the three branches of government. Students also learn about policy making in American government, including discussions of foreign and defense policies.

INTRODUCTION TO COMPUTER SCIENCE

Introduction to Computer Science is a year-long course designed for students in grades 9-10, although any students across 9-12 may enroll. This course introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. Students have creative, hands-on learning opportunities to create a computer program, develop a web page, design a mobile app, write algorithms, and collaborate with peers while building a strong foundational knowledge base. This course provides a solid foundation for more advanced study as well as practical skills they can use immediately.

Required Materials:

- Activities in this course require that Python is installed on students' computers.

INTRODUCTION TO HUMAN GROWTH AND DEVELOPMENT*

This semester-long course focuses on human growth and development over the lifespan, as well as careers that help people deal with various physical, intellectual, and socioemotional issues, such as physicians, nurses, nutritionists, substance abuse counselors, clergy, teachers, career counselors, psychologists, and psychiatrists. The course provides a background in human growth and development from before birth, through childhood, into adulthood, and through death and grief. It gives the student perspective and highlights where people in the caring professions are most needed. Students who take this course will come away with a broad understanding of all the careers that help people from birth to death.

INTRODUCTION TO CAREERS IN THE HEALTH SCIENCES*

This semester-long course is an overview of health careers and overriding principles central to all health professions. The course provides a foundation for further study in the field of health science. Upon completion of the course, students are able to discuss the potential career choices and have an understanding of basic concepts that apply to these different choices such as science and technology in human health, disease, privacy, ethics and safety. Essential skill development, such as communication and teamwork, are also addressed.

INTRODUCTION TO CAREERS IN TRANSPORTATION, DISTRIBUTION, AND LOGISTICS*

This semester-long course introduces students to the complicated world of commercial transportation. Students undertake an overview of the fields of transportation, distribution, and logistics, learning the differences between the fields and the primary services provided in each. Students learn how warehousing, inventory, and other associated businesses impact the economy, which includes the advantages and disadvantages of automation on employment. Students learn about the history of transportation including. Students examine the fields that serve to support and manage transportation systems. Lastly, the role of technology and technological development on transportation-related businesses is addressed.

INTRODUCTION TO CODING*

Intro to Coding covers a basic introduction to the principles of programming, including algorithms and logic. Students engage in hands-on programming tasks in the Python programming language as they write and test their own code using the approaches real programmers use in the field. Students will program with variables, functions and arguments, and lists and loops, providing a solid foundation for more advanced study as well as practical skills they can use immediately.

INTRODUCTION TO CONSUMER SERVICES*

In this semester-long course, students analyze various career paths in terms of employment opportunities and educational requirements, such as hard and soft skills, certifications, and licensures for different pathways. Developing research, analytical, and presentations skills are key components. This course is designed as an overview to prepare students for a consumer services-related career and to introduce them to specialty areas. Emphasis is placed on the human services aspect (vs. corporate concerns) of consumer services. Social issues and advocacy, as well as ethics and legalities, are a recurring theme. Students gain knowledge of current issues affecting various consumer services professions, and the impact of local, state, national and global issues on consumer services.

INTRODUCTION TO HEALTH SCIENCE

This high school course introduces students to a variety of healthcare careers, as they develop the basic skills required in all health and medical sciences. In addition to learning the key elements of the U.S. healthcare system, students learn terminology, anatomy and physiology, pathologies, diagnostic and clinical procedures, therapeutic interventions, and the fundamentals of medical emergency care. Throughout the course, instructional activities emphasize safety, professionalism, accountability, and efficiency for workers within the health care field.

INTRODUCTION TO HUMAN SERVICES*

This semester-long course introduces high school students to the possibilities for careers in the human services professions. Through anecdotes, lessons, and a variety of assignments and projects, students learn about the broad variety of jobs available in the human services. These begin with entry-level positions, such as associate social workers, that require a two-year Associate of Arts degree. Students also learn ethics and philosophies of the helping professions. The history of the profession, as well as the impact of the cultural, social, and economic environment on individual people, especially those who need social services assistance, is also explored.

INTRODUCTION TO INFORMATION TECHNOLOGY

This course introduces students to the essential technical and professional skills required in the field of Information Technology (IT). Through hands-on projects and written assignments, students gain an understanding of the operation of computers, computer networks, Internet fundamentals, programming, and computer support. Students also learn about the social impact of technological change and the ethical issues related to technology. Throughout the course, instructional activities emphasize safety, professionalism, accountability, and efficiency for workers within the field of IT.

INTRODUCTION TO INFORMATION TECHNOLOGY SUPPORT AND SERVICES*

This semester-long course focuses on real-world application, including common industry best practices and specific vendors that offer tools for technicians, project managers, and IT leadership. Students learn how the IT department of an enterprise supports the

overall mission of the company. Students apply their knowledge of hardware and software components associated with IT systems while exploring a variety of careers related to IT support and services. Students analyze technical support needs to perform customer service and configuration management activities. Students also evaluate application software packages and emerging software. Students demonstrate and apply knowledge of IT analysis and design by initiating a system project and evaluating applications within the IT system.

INTRODUCTION TO LAW, PUBLIC SAFETY, CORRECTIONS, AND SECURITY*

In this semester-long course, students learn about the many careers that exist within the fields of law, law enforcement, public safety, corrections, and security. In addition to learning about the training and educational requirements for these careers, students explore the history of these fields and how they developed to their current state. Students also learn how these careers are affected by and affect local, state, and federal laws. Finally, students examine the relationships between professionals in these fields and how collaborations between professionals in these careers help to create a safer, more stable society.

INTRODUCTION TO NETWORK SYSTEMS*

This semester-long course introduces students to the fundamental technology and concepts that make networking systems possible. The most important concept introduced is that of the OSI reference model and its bottom four layers, which are most directly concerned with networking instead of computing. The course explores the software and hardware supporting LANs, WANs, and Wi-Fi networks. Students are introduced to the protocols in the TCP/IP stack that are used to communicate across a network, and to networking hardware, including hubs, switches, bridges, routers, and transmission media. Students explore questions of security, network management, and network operating systems.

INTRODUCTION TO STEM*

This semester-long course introduces students to the four areas of Science, Technology, Engineering, and Mathematics through an interdisciplinary approach that will increase awareness, build knowledge, develop problem solving skills, and potentially awaken an interest in pursuing a career in STEM. Students are introduced to the history, fundamental principles, applications, processes, and concepts of STEM. Students are exposed to several computer applications used to analyze and present technical or scientific information. Finally, students explore the kinds of strategies frequently used to solve problems in these disciplines. Throughout the course, students discover their strengths through practical applications and awareness of the various STEM careers.

KEYBOARDING AND APPLICATIONS*

Keyboarding and Applications is a semester-long course that teaches students keyboarding skills, technical skills, effective communication skills, and productive work habits. Students learn proper keyboarding techniques. Once students have been introduced to keyboarding skills, lessons include daily practice of those skills. Students gain an understanding of computer hardware, operating systems, file management, and the Internet. In addition, students apply their keyboarding skills and create a variety of business documents, including word processing documents and electronic presentations.

Required materials:

- word-processing software (e.g., MS Word)
- presentation software (e.g., MS PowerPoint)

LAW ENFORCEMENT FIELD SERVICES*

This semester-long course introduces students to the field of law enforcement and the local, county, state, and federal laws that law enforcement personnel are sworn to uphold. The students also gain an understanding of the career options available in this field and the skills, education, and background experience needed to succeed. Students learn about the evolution of the role of law enforcement in the United States including key changes affecting law enforcement. Students learn about the interaction between local, county, state, and federal law enforcement agencies. Finally, students learn about the types of crime that are commonly committed and the procedures, evidence collection techniques, and technological advances that law enforcement personnel use to investigate crimes.

LEGAL SERVICES* NOV

Legal Services is a high school semester-long course that provides students with an overview of the system of laws in the United States, the practice areas, and career options in the field. Students learn about how the legal system operates, the consequences to those who commit crimes, and how disputes are settled, as well as how criminal and civil cases reach court and are resolved. Students learn about the courtroom and the basics of a typical court case. Students explore constitutional rights and legal safeguards, types of evidence, as well as how technology has changed the practice of law. They also learn about legal education and various careers in the legal field.

MEDICAL TERMINOLOGY

This full-year course introduces students to the structure of medical terms, plus medical abbreviations and acronyms. The course allows students to achieve comprehension of medical vocabulary appropriate to health care settings, medical procedures, pharmacology, human anatomy and physiology, and pathology. The knowledge and skills gained in this course provide students

entering the health care field with a deeper understanding of the application of the language of health and medicine. Students are introduced to these skills through direct instruction, interactive tasks, practice assignments, and unit-level assessments.

MARKETING AND SALES FOR TOURISM AND HOSPITALITY*

This semester-long course is designed as an introduction to the study of tourism and hospitality marketing and sales. Students are introduced to marketing theory and application of the basic principles of marketing as applied in hospitality and tourism. The relationship between marketing and other functions such as advertising, sales techniques, and public relations to maximize profits in a hospitality organization is addressed. Students have an opportunity to explore this multi-faceted world, identifying multiple career paths and opportunities.

MICROSOFT® OFFICE® SPECIALIST

This two-semester course introduces students to the features and functionality of Microsoft® Office® 2016 while preparing them for the beginning, intermediate, and advanced levels of the Microsoft User Specialist (MOS) certification program. Through video instruction, interactive skills demonstrations, practice assignments, and unit-level assessments, students become proficient in Microsoft Word®, Excel®, PowerPoint®, Outlook®, and Access®. By the end of the course, students are prepared to demonstrate their skills by obtaining one or more MOS certifications.

NETWORK SYSTEM DESIGN*

Network System Design is a semester-long course that provides students with an understanding of computer networks and how they operate, as well as a basic understanding of how to manage and maintain computer networks. These skills provide students with the ability to design, configure, and troubleshoot networks of all sizes. Students learn the basics of network design, including how to identify network requirements and determine proper network architecture. Students are introduced to network models. Students also learn about internet protocol and the basics of routing data on a network. Students learn about network security issues and network management. Lastly, students learn about network operating systems and their role in connecting computers and facilitating communications.

NEW APPLICATIONS: WEB DEVELOPMENT IN THE 21ST CENTURY*

New Applications is a survey course that travels from the first software programs developed to facilitate communication on the Internet, to the new generation of mobile and native apps that access the Internet without a reliance on a web browser. New Applications is also a practical course in how to develop a presence on the World Wide Web using WordPress and other available web-application tools. The goal of the course is to provide the learner insight into the rapidly evolving universe of programming and application development to support informed career decisions in an industry that is changing as quickly as it is growing.

NURSING ASSISTANT

This two-semester course prepares students to provide and assist with all aspects of activities of daily living and medical care for the adult patient in hospital, long-term care, and home settings. Through direct instruction, interactive skills demonstrations, and practice assignments, students are taught the basics of nurse assisting, including interpersonal skills, medical terminology and procedures, legal and ethical responsibilities, safe and efficient work, gerontology, nutrition, emergency skills, and employability skills. Successful completion of this course from an approved program prepares the student for state certification for employment as a Certified Nursing Assistant (CNA).

NURSING: UNLIMITED POSSIBILITIES AND UNLIMITED POTENTIAL* NOV

Nursing: Unlimited Possibilities and Unlimited Potential provides high school students opportunities to compare and contrast the various academic and clinical training pathways to an entry-level position in nursing and to explore the growing number of opportunities for professional advancement given the proper preparation and experience. In this semester-long course, students have several opportunities to learn about the expanding scope of professional practice for registered nurses and better understand the important changes proposed in the education and ongoing professional development of nurses.

PERSONAL CARE SERVICES* NOV

Personal Care Services introduces high school students to a variety of careers in the following areas: cosmetology (including hairstyling and haircutting, esthetics, manicuring, makeup, and teaching) and barbering (including cutting and styling of hair and facial hair and manicuring for men); massage therapy, teaching body-mind disciplines (yoga, Pilates, and the martial arts), and fitness (general exercise classes and acting as a personal trainer); and mortuary science (embalming and funeral directing). The semester-long course teaches students about what each career entails and the education and training they need to become credentialed in various career specialties. In addition, about half of the course is devoted to teaching knowledge associated with the various professions, so that students can get a feel for what they should learn and whether they would like to learn it.

PERSONAL FINANCE*

This introductory finance course teaches what it takes to understand the world of finance and make informed decisions about managing finances. Students learn more about economics and become more confident in setting and researching financial goals as they develop the core skills needed to be successful. In this one-semester course, students learn how to open bank accounts, invest money, apply

for loans, apply for insurance, explore careers, manage business finances, make decisions about major purchases, and more. Students will be inspired by stories from finance professionals and individuals who have reached their financial goals.

PHARMACY TECHNICIAN

This two-semester course prepares students for employment as a Certified Pharmacy Technician (CPhT) and covers the skills needed for the pharmacy technician field. Through direct instruction, interactive skills demonstrations, and practice assignments, students learn the basics of pharmacy assisting, including various pharmacy calculations and measurements, pharmacy law, pharmacology, medical terminology and abbreviations, medicinal drugs, sterile techniques, USP 795 and 797 standards, maintenance of inventory, patient record systems, data processing automation in the pharmacy, and employability skills. Successful completion of this course prepares the student for national certification for employment as a CPhT.

PHYSICIANS, PHARMACISTS, DENTISTS, VETERINARIANS, AND OTHER DOCTORS* NOV

Physicians, Pharmacists, Dentists, Veterinarians, and Other Doctors focuses on preparation for physician-level careers, including dental, veterinary and pharmaceutical, along with a look into the physician assistant and alternative medicine systems. This semester-long course also introduces the topics of diversity and the move toward social and cultural skills in medicine, in addition to academic ability. This course focuses on the preparation for entry to practice, along with navigating the field once you are in it (working as part of a team, dealing with patients, etc.). Students choose their career path by studying different roles, responsibilities, settings, education needs, and amounts of patient contact. Degree and training requirements, working environment, salaries, and the day in the life of that career is also covered in this course. Students explore important aspects that are applicable to the entire health field, such as behaving ethically, keeping patients safe and free from infections and germs, and following laws and policies.

PLANNING MEETINGS AND SPECIAL EVENTS* NOV

Planning Meetings and Special Events is a semester-long high school course designed as an introduction to the study of planning meetings and special events. Being a meetings and special events planner is both demanding and rewarding. According to The Bureau of Labor Statistics employment of meeting, convention, and event planners is projected to grow 7 percent from 2018 to 2028, faster than the average for all occupations. Job opportunities should be best for candidates with hospitality experience and a bachelor's degree in meeting and event management, hospitality, or tourism management. It's not all fun and parties because a meeting coordinator is responsible for every detail of an event. Planners must know how to communicate, be empathetic, and think of their clients. It's crucial to remember that in some instances the event will be a once-in-a-lifetime occasion, so it's important to get it right.

PLANT SYSTEMS* NOV

Plant Systems is a semester-length high school course that introduces students to the basics of plant biology, soil science, agriculture, and horticulture, along with the environmental management practices involved in each, including integrated pest management, biotechnology, growth techniques, and crop management. Students learn the basic parts of a plant, how plants are scientifically classified, and how they interact with water, air, nutrients, and light to undergo the processes of photosynthesis and respiration. Plant reproduction, including pollination, germination, and dispersal of seeds, is also presented. The course concludes by looking at careers in the plant sciences which includes agronomy, horticulture, or landscape design.

POWER, STRUCTURAL, AND TECHNICAL SYSTEMS*

This semester-length high school course provides students with an understanding of the field of agriculture power and introduces them to concepts associated with producing the food and fiber required to meet today's and tomorrow's needs. Students are given the opportunity to explore agriculture machinery, as well as structures and technological concepts. They also learn about the historical changes in agriculture and how agriculture has changed to meet the needs of the future world population. Students are introduced to machinery, structures, biotechnology, and ethical and professional standards applicable to agriculture power.

PRINCIPLES OF FOOD (8500390) FL* NOV

Principles of Food is a comprehensive semester-long high school course that covers the principles and practices of food safety and sanitation that are essential in the hospitality industry for the protection and well-being of staff, guests, and customers. This course provides a systems approach to sanitation risk management and the prevention of food contamination by emphasizing the key components of the Hazard Analysis Critical Control Point (HACCP) food safety system. Compliance with OSHA standards is also covered. Students also learn about different management roles in a food service facility as well as about the different types of food styles a restaurant may serve. After successful completion of this course, students are prepared to meet the requirements of state and national certification exams.

PUBLIC HEALTH: DISCOVERING THE BIG PICTURE IN HEALTH CARE* NOV

Public Health: Discovering the Big Picture in Health Care is a semester-long high school course that discusses the multiple definitions of public health and the ways these definitions are put into practice. The five core disciplines and ways they interact to reduce disease, injury and death in populations is explored. By

understanding the roles of public health, students gain a greater appreciation for its importance and the various occupations one could pursue within the field of public health. Students explore the history, nature and context of the public health system. Students also learn how to promote public health, and how to coordinate a response to a public health emergency. Students explore how diseases spread and learn about the roles of the Centers for Disease Control and the World Health Organization. By entering the field of public health, students play an integral part in improving the health and lives of many people.

SCIENCE AND MATHEMATICS IN THE REAL WORLD* NOV

Science and Mathematics in the Real World is a semester-long high school course where students focus on how to apply scientific and mathematical concepts to the development of plans, processes, and projects that address real world problems, including sustainability and "green" technologies. This course also highlights how science, mathematics, and the applications of STEM will be impacted due to the development of a greener economy. This course exposes students to a wide variety of STEM applications and to real world problems from the natural sciences, technology fields, the world of sports, and emphasizes the diversity of STEM career paths. The importance of math, critical thinking, and mastering scientific and technological skill sets is highlighted throughout. Challenging and enjoyable activities provide multiple opportunities to develop critical thinking skills and the application of the scientific method, and to work on real world problems using STEM approaches.

SCIENTIFIC DISCOVERY AND DEVELOPMENT* NOV

Scientific Discovery and Development is a semester-long high school course that explores the history of clinical laboratory science, learning how clinical laboratories evolved and became professionalized, and how scientific discoveries and breakthroughs fueled the development of the laboratory while the sub-disciplines in biology were advancing. Students learn about the circulatory system and about microbiology and the subfields within it. Cells and tissues, cell division and basic genetics is also addressed. This course covers the three major areas in bioresearch: biotechnology, nanotechnology, and pharmaceutical research and development. More than two dozen career fields are explored along the way including laboratory techs, phlebotomists, and pathologist assistants. Students learn what is necessary in the areas of education and credentialing with an idea of the job outlook and salaries.

SCIENTIFIC RESEARCH* NOV

Scientific Research is a semester-long high school course that describes activities from the point of view of a professional scientist. The lessons provide support, accessible ideas, and specific language that guide students through most of the steps, insights, and experiences eventually faced if continued through higher education toward a graduate degree. Knowing the practical, everyday basics of scientific thinking and laboratory activity serves as a necessary first step to a career as a technician or a lab assistant. While these jobs are hands-on and technical, the intellectual and historical background covered in the course provides an awareness that is essential to working in such an atmosphere.

SECURITY AND PROTECTIVE SERVICES* NOV

Security and Protective Services is a semester-long high school course that offers an overview of the security and protective services industry. Students will understand different types of security services and how they relate to one another. The distinction between the criminal justice system within the public sector and private security is addressed. The course begins with an introduction to the history of private security, with subsequent units focusing on a specific sector. The concluding unit focuses on the emerging challenges facing security services in the twenty-first century, including international terrorism. In addition, the course provides information about many different careers that are available to students who are interested in security and protective services.

SMALL BUSINESS ENTREPRENEURSHIP

This full-year course is designed to provide the skills needed to effectively organize, develop, create, manage and own a business, while exposing students to the challenges, problems, and issues faced by entrepreneurs. Throughout this course, students explore what kinds of opportunities exist for small business entrepreneurs and become aware of the necessary skills for running a business. Students become familiar with the traits and characteristics that are found in successful entrepreneurs, and see how research, planning, operations, and regulations can affect small businesses. Students also learn how to develop plans for having effective business management, financing and marketing strategies.

SOFTWARE DEVELOPMENT TOOLS*

This semester-long course introduces students to the variety of careers related to programming and software development. Students gather and analyze customer software needs and requirements, learn core principles of programming, develop software specifications, and use appropriate reference tools to evaluate new and emerging software. Students apply IT-based strategies and develop a project plan to solve specific problems and define and analyze system and software requirements.

STEM AND PROBLEM SOLVING* NOV

Science, technology, engineering, and mathematics (STEM) are active components in the real world. STEM and Problem Solving is a semester-long high school course that outlines how to apply the concepts and principles of scientific inquiry, encouraging the use of problem-solving and critical-thinking skills to produce

viable solutions to problems. Students learn the scientific method, how to use analytical tools and techniques, how to construct tests and evaluate data, and how to review and understand statistical information. This course is designed to help students understand what we mean by problem solving and to help understand and develop skills and techniques to create solutions to problems. Advanced problem-solving skills are necessary in all science, technology, engineering, and mathematics disciplines and career paths. This problem-solving course stresses analytic skills to properly format problem statements, use of the scientific method to investigate problems, the use of quantitative and qualitative approaches to construct tests, and an introduction to reviewing and interpreting statistical information.

SUSTAINABLE SERVICE MANAGEMENT FOR HOSPITALITY AND TOURISM*

This comprehensive semester-long course covers the principles and practices of sustainable service management. The purpose of this course is to provide students with an understanding of socially, environmentally, and financially sustainable hospitality management. The course provides a sustainable approach to service management, incorporating the role of the customer, employee, leaders, and the environment. After successful completion of this course, students understand and are able to explain the fundamentals of sustainability in the hospitality industry.

TEACHING AND TRAINING CAREERS* NOV

Teaching and Training Careers is a semester-long high school course that introduces students to the art and science of teaching. It provides a thorough exploration of pedagogy, curriculum, standards and practices, and the psychological factors shown by research to affect learners. In five units of study, lessons, and projects, students engage with the material through in-depth exploration and hands-on learning, to prepare them for teaching and training careers. Students are given many opportunities to be the teacher or trainer, and to explore the tasks, requirements, teaching strategies, and research-based methods that are effective and high-quality.

TECHNOLOGY AND BUSINESS

This year-long course teaches students technical skills, effective communication skills, and productive work habits needed to make a successful transition into the workplace or postsecondary education. In this course, students gain an understanding of emerging technologies, operating systems, and computer networks. In addition, they create a variety of business documents, including complex word-processing documents, spreadsheets with charts and graphs, database files, and electronic presentations.

THERAPEUTICS: THE ART OF RESTORING AND MAINTAINING WELLNESS* NOV

Therapeutics: The Art of Restoring and Maintaining Wellness is a semester-long high school course that focuses on careers that help restore and maintain mobility and physical and mental health, such as physical therapists, physical therapy assistants, occupational therapists, athletic trainers, massage therapists, dieticians and dietetic technicians, art therapists, neurotherapists, vocational rehabilitation counselors, and registered dental hygienists. Each career is explored in depth, examining typical job duties, educational and licensure requirements, working conditions, average salary, and job outlook. Key concepts and specific skill sets are introduced in the lessons, allowing students to apply what they have learned to health careers. This course is important because skilled health care workers are in high demand and expected to remain so for the foreseeable future.

TRANSPORTATION AND TOURS FOR THE TRAVELER*

Transportation and Tours for the Traveler is a semester-long course where students learn about today's package tour industry, travel industry professionals, and package tour customers. Students find out who tour operators must work with to create travel products and what kinds of decisions they must make in terms of meals, lodging, attractions, and, of course, transportation. Finally, students learn about how technology, world events, and increased environmental awareness are affecting the travel industry today. Students focus on the different components that go into creating a tour to get a sense of what working for a tour operator entails as well as what other careers are available in the tour industry.

* Courses marked with an asterisk are one-semester courses.