

# Career and Technology Education

## Course Descriptions

### *Accounting I*

**PEIMS #:** 13016600

**Career Pathways:** Computer Programming

**Program of Study:** Accounting & Financial Services

**Grades:** 10-12

**Prerequisite:** Principles of Business, Marketing and Finance

**Credit:** 1

In Accounting I, students will investigate the field of accounting, including how it is impacted by industry standards as well as economic, financial, technological, international, social, legal and ethical factors. Students will reflect on this knowledge as they engage in the process of recording, classifying, summarizing, analyzing and communicating accounting information. Students will formulate and interpret financial information for use in management decision making.

### *Accounting II*

**PEIMS #:** 13016700 (Math elective)

**Career Pathways:** Elective

**Program of Study:** Accounting & Financial Services

**Grades:** 11, 12

**Prerequisite:** Accounting I

**Credit:** 1

In Accounting II, students will continue investigating the field of accounting, including how it is impacted by industry standards as well as economic, financial, technological, international, social, legal and ethical factors. Students will reflect knowledge of Accounting I as they engage in various managerial, financial and operational accounting activities. Students will formulate, interpret and communicate financial information for use in management decision making. Students will use equations, graphical representations, accounting tools, spreadsheet software, and accounting systems in real-world situations to maintain, monitor, control, and plan the use of financial resources.

### *Advanced Animal Science*

**PEIMS #:** 13000700 (Science elective)

**Career Pathways:** Agribusiness, Veterinary Studies,

**Program of Study:** Animal Science, Applied Agricultural Engineering

**Grades:** 11, 12

**Prerequisite:** Biology and Chemistry or Integrated Physics and Chemistry (IPC), Algebra I and Geometry, and either Small Animal Management, Equine Science or Livestock Production

**Credit:** 1

Advanced Animal Science examines the interrelatedness of human, scientific and technological dimensions of livestock production. Instruction is designed to allow for the application of scientific and technological aspects of animal science through field and laboratory experiences. To prepare for careers in the field of animal science, students acquire knowledge and skills related to animal systems, and develop knowledge and skills regarding career opportunities, entry requirements and industry standards. To receive the science credit, the student must meet the 40% laboratory and fieldwork requirement.

### *Agribusiness Management and Marketing*

**PEIMS #:** 13000900

**Career Pathways:** Agribusiness

**Program of Study:** Agribusiness

**Grades:** 10-12

**Prerequisite:** None

**Credit:** 1

Agribusiness Management and Marketing is designed to provide a foundation to agribusiness management and the free enterprise system. Instruction includes the use of economic principles such as supply and demand, budgeting, record keeping, finance, risk management, business law, marketing and careers in agribusiness.

# Career and Technology Education

## Course Descriptions

### ***Agriculture Structures Design and Fabrication***

**PEIMS #13002300**

**Career Pathway:** Applied Agriculture Engineering

**Grades:** 9,10,11

**Credit:** 1

In Agricultural Structures Design and Fabrication, students will explore career opportunities, entry requirements, and industry expectations. To prepare for careers in mechanized agriculture and technical systems, students must attain knowledge and skills related to agricultural structures design and fabrication.

### ***Anatomy and Physiology***

**PEIMS #:** 13020600 (Science elective)

**Career Pathways:** All Pathways

**Program of Study:** Nurse Science

**Grades:** 11, 12

**Prerequisite:** Biology; Chemistry recommended; Medical Term or Health Science recommended

**Credit:** 1

This course provides an opportunity for an intense study of the human anatomical systems and the interrelationships of the body systems according to function. A great deal of work is hands-on. Laboratory exercises and observation are used and designed to enhance student understanding of both physiological body functions and scientific theory with an emphasis toward medical applications. Students interested in pursuing medical careers are highly encouraged to take this course. Both semesters must be successfully completed to receive high school credit. Students must meet the 40% laboratory and fieldwork requirement.

### ***Business English***

**PEIMS #:** 13011600 (CTE/English Elective)

**Career Pathways:** Elective

**Grade:** 12

**Prerequisite:** English III;

**Credit:** 1

Recommended Touch System Data Entry In Business English, students enhance communication and research skills by applying them to the business environment, in addition to exchanging information and producing properly formatted business documents using emerging technology.

### ***Child Development***

**PEIMS #:** 13024700

**Career Pathways:** Psychology and Counseling

**Program of Study:** Early Learning, Family & Community Services

**Grades:** 10-12

**Prerequisite:** Principles of Human Services

**Credit:** 1

This technical laboratory course addresses knowledge and skills related to child growth and development from prenatal through school-age children, equipping students with child development skills. Students use these skills to promote the well-being and healthy development of children and investigate careers related to the care and education of children.

# Career and Technology Education

## Course Descriptions

### *Child Guidance*

**PEIMS #:** 13024800

**Career Pathway:** Psychology and Counseling

**Program of Study:** Early Learning

**Grade:** 12

**Prerequisite:** Family and Community Services

**Credits:** 2

Child Guidance is a technical laboratory course that addresses the knowledge and skills related to child growth and guidance, equipping students to develop positive relationships with children and effective caregiver skills. Students use these skills to promote the well-being and healthy development of children, strengthen a culturally diverse society, and pursue careers related to the care, guidance and education of children, including those with special needs. Instruction may be delivered through school-based laboratory training or through work-based delivery arrangements such as cooperative education, mentoring and job shadowing.

### *Commercial Photography I*

**PEIMS #:** 13009100

**Career Pathways:** Elective

**Grades:** 9-12

**Prerequisite:** None

**Credit:** 1

Commercial Photography require skills that span all aspects of the industry from setting up a photo shot to delivering products in a competitive market. In addition to developing knowledge and skills needed for success in the Arts, Audio/Video Technology and Communications career cluster, students will be expected to develop an understanding of the commercial photography industry with a focus on creating quality photographs.

### *Computer Science I*

**PEIMS #:** 03580200

**Career Pathway:** Computer Technology, Computer Programming – P-TECH, Web Development

**Grades:** 9-12

**Prerequisite:** Algebra I

**Credit:** 1

In this course, students acquire knowledge of structured programming techniques and concepts appropriate to developing executable programs and creating appropriate documentation.

### *Computer Science II*

**PEIMS #:** 03580300

**Career Pathway:** Computer Programming P-TECH, Computer Technology, Web Development

**Grades:** 11, 12

**Prerequisite:** Computer Science I

**Credit:** 1

Students will gain an understanding of computer science through the study of technology operations, systems, and concepts. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

### *Dollars and Sense*

**PEIMS #:** 13024300

**Career Pathways:** Elective

**Grades:** 11, 12

**Program of Study:** Family and Community Services

**Credit:** .5

Dollars and Sense focuses on consumer practices and responsibilities, money-management processes, decision-making skills, impact of technology, and preparation for human services careers

# Career and Technology Education

## Course Descriptions

### **Digital Media**

**PEIMS #:** 13027800

**Career Pathways:** None

**Grades:** 9-12

**Prerequisite:** Principles of Information Technology or Principles of Business, Marketing and Finance

**Credit:** 1

Through the study of digital and interactive media and its application in information technology, students will analyze and assess current and emerging technologies while designing and creating multimedia projects that address customer needs and resolve a problem. Students implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment.

### **Equine Science**

**PEIMS #:** 13000500

**Career Pathways:** Agribusiness, Veterinary Studies

**Program of Study:** Animal Science

**Grades:** 10-12

**Prerequisite:** Principles of Agriculture, Food and Natural Resources

**Credit:** .5

In Equine Science, students will acquire knowledge and skills related to equine animal systems and the equine industry. Equine Science may address topics related to horses, donkeys and mules. To prepare for careers in the field of animal science, students must acquire knowledge and skills related to animal systems, and develop an understanding of career opportunities, entry requirements and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply and transfer their knowledge and skills in a variety of settings.

### **Family and Community Services**

**PEIMS #:** 13024900

**Career Pathway:** Psychology and Counseling

**Program of Study:** Family & Community Services

**Grades:** 11, 12

**Prerequisite:** Principles of Human Services

**Credit:** 1

Family and Community Services is a laboratory-based course designed to involve students in realistic and meaningful community-based activities through direct service or service-learning experiences. Students are provided opportunities to interact with and provide services to individuals, families, and the community through community or volunteer services. Emphasis is placed on developing and enhancing organizational and leadership skills and characteristics.

### **Financial Mathematics**

**PEIMS #:** 13018000 (Math Elective)

**Career Pathways:** All Career Pathways

**Program of Study:** Accounting & Financial Services

**Grades:** 10-12

**Prerequisite:** Algebra I

**Credit:** 1

Financial Mathematics is a course about personal money management. Students will apply critical thinking skills to analyze personal financial decisions based on current and projected economic factors. Financial Mathematics will integrate career and post-secondary education planning into financial decision making. When possible, students will apply mathematics to problems arising in everyday life, society, and the workplace. Students will use a problem-solving model for incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.

## Career and Technology Education

### Course Descriptions

#### **Floral Design**

**PEIMS #:** 13001800 (Fine Arts Elective)

**Career Pathway:** Agribusiness, Applied Agricultural Engineering

**Grades:** 9-12

**Prerequisites:** None

**Credit:** 1

Floral Design is designed to develop students' ability to identify and demonstrate the principles and techniques related to floral design as well as develop an understanding of the management of floral enterprises. Through the analysis of artistic floral styles and historical periods, students

#### **Human Growth and Development**

**PEIMS #:** 13014300

**Career Pathway:** Education

**Program of Study:** Health and Wellness, Family & Community Service

**Grades:** 10-12

**Prerequisite:** Principles of Education and Training

**Credit:** 1

This course is an examination of human development across the lifespan with emphasis on research, theoretical perspectives, and common physical, cognitive, emotional and social developmental milestones.

#### **Interpersonal Studies**

**PEIMS #:** 13024400

**Career Pathways:** Elective

**Program of Study:** Family and Community Services, Health and Wellness

**Grades:** 11, 12

**Prerequisite:** None

**Credit:** .5

This course examines how the relationships between individuals and among family members significantly affect the quality of life. Students use knowledge and skills in family studies and human development to enhance personal development, foster quality relationships, promote wellness of family members, manage multiple adult roles, and pursue careers related to counseling and mental health services.

#### **Introduction to Welding**

**PEIMS #:** 13032250

**Career Pathways:** Welding

**Grades:** 9-12

**Prerequisite:** Algebra I

**Credit:** 1

Introduction to Welding will provide an emphasis on basic welding laboratory principles and operating procedures. Students will be introduced to the three basic welding processes. Topics include: industrial safety and health practices, hand tool and power machine use, measurement, laboratory operating procedures, welding power sources, welding career potentials, and introduction to welding codes and standards.

## Career and Technology Education

### Course Descriptions

#### **Livestock Production**

**PEIMS #:** 13000300

**Career Pathways:** Agribusiness, Veterinary Studies, Food and Natural Resources

**Program of Study:** Animal Science

**Grades:** 10-12

**Prerequisite:** Principles of Agriculture,

**Credit:** 1

In this course, students will acquire knowledge and skills related to animal systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements and industry expectations.

#### **Lifetime Nutrition and Wellness**

**PEIMS #:** 13024500

**Career Pathways:** Elective

**Program of Study:** Family & Community Services, Health & Wellness

**Grades:** 9-12

**Prerequisites:** none

**Credit:** .5

This laboratory course allows students to use principles of lifetime wellness and nutrition to help them make informed choices that promote wellness as well as pursue careers related to hospitality and tourism, education and training, human services and health sciences.

#### **Mathematical Applications in Agriculture, Food, and Natural Resources**

**PEIMS #:** 13001000 (Math elective)

**Career Pathways:** Agribusiness, Applied

**Grades:** 10-12

Agricultural Engineering, Veterinary Studies

**Prerequisites:** Algebra I and one credit from the courses in the Agriculture, Food and Natural Resources Career Cluster.

**Credit:** 1

In Mathematical Applications in Agriculture, Food and Natural Resources, students will apply knowledge and skills related to mathematics, including algebra, geometry, and data analysis in the context of agriculture, food and natural resources. To prepare for careers in agriculture, food and natural resources, students must acquire technical knowledge in the discipline as well as apply academic skills in mathematics.

#### **Medical Terminology**

**PEIMS #:** 13020300

**Career Pathway:** All Health Science Pathways

**Program of Study:** Nursing Science

**Grades:** 9-12

**Prerequisite:** None

**Credit:** 1

This course is designed to introduce students to the structure of medical terms, including prefixes, suffixes, word roots, combining forms, and singular and plural forms, plus medical abbreviations and acronyms. The course allows students to achieve comprehension of medical vocabulary appropriate for medical procedures, human anatomy and physiology, and pathophysiology.

## Career and Technology Education

### Course Descriptions

#### *Money Matters*

**PEIMS #:** 13016200

**Career Pathways:** Elective

**Program of Study:** Accounting & Financial Services

**Grades:** 10-12

**Prerequisite:** Principles of Business, Marketing and Finance

**Credit:** 1

In Money Matters, students will investigate money management from a personal financial perspective. Students will apply critical-thinking skills to analyze financial options based on current and projected economic factors. Students will gain knowledge and skills necessary to establish short-term and long-term financial goals. Students will examine various methods of achieving financial goals through various methods such as investing, tax planning, asset allocation, risk management, retirement planning, and estate planning.

#### *Pathophysiology*

**PEIMS #:** 13020800

**Career Pathways:** All Health Science Pathways

**Program of Study:** Nursing Science

**Grades:** 11-12

**Prerequisite:** Biology and Chemistry

**Credit:** 1

The Pathophysiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Pathophysiology will study disease processes and how humans are affected. Emphasis is placed on prevention and treatment of disease. Students will differentiate between normal and abnormal physiology.

#### *Principles of Agriculture, Food and Natural Resources*

**PEIMS #:** 13000200

**Career Pathways:** Agribusiness Applied

**Program of Study:** Animal Science, Agribusiness

**Grades:** 9-12

Agricultural Engineering, Veterinary Studies

**Prerequisite:** None

**Credit:** 1

Principles of Agriculture, Food and Natural Resources will allow students to develop knowledge and skills regarding career and educational opportunities, personal development, globalization, industry standards, practices and expectations in fields related to agriculture.

#### *Principles of Business, Marketing and Finance*

**PEIMS #:** 13011200

**Career Pathways:** Business Management

**Program of Study:** Accounting & Financial Services

**Grades:** 9-12

**Prerequisite:** None

**Credit:** 1

In Principles of Business, Marketing and Finance students gain knowledge and skills in economies and private enterprise systems. Students learn about the function and impact of global business, the marketing of goods and services, advertising, and product pricing. Students analyze the sales process and financial management principles. This course allows students to reinforce, apply and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems and settings in business, marketing and finance.

## Career and Technology Education

### Course Descriptions

#### ***Principles of Education and Training***

**PEIMS #:** 13014200

**Career Pathway:** Education

**Program of Study:** Early Learning

**Grades:** 9-12

**Prerequisite:** None

**Credit:** 1

The Principles of Education and Training course is designed to introduce learners to the various careers available within the education and training career cluster. Students will also gain an understanding of the basic knowledge and skills essential to careers in education.

#### ***Principles of Health Science***

**PEIMS #:** 13020200

**Career Pathways:** All Health Science Pathways

**Program of Study:** Nursing Science

**Grades:** 9-12

**Prerequisite:** None

**Credit:** 1

The Principles of Health Science course provides an overview of the therapeutic, diagnostic, health informatics, support services, and biotechnology research and development systems of the healthcare industry. This course meets the health graduation requirement.

#### ***Principles of Human Services***

**PEIMS #:** 13024200

**Career Pathways:** Psychology and Counseling

**Program of Study:** Health & Wellness, Family & Community Services, Early Learning

**Grades:** 9-12

**Prerequisite:** None

**Credit:** 1

Principles of Human Services is a laboratory course to enable students to investigate careers in the human services career cluster, including counseling and mental health, early childhood development, family and community,

and personal care services. Each student is expected to complete the knowledge and skills essential for success in high-skill, high-wage or high-demand human services careers

#### ***Principles of Information Technology***

**PEIMS #:** 13027200

**Career Pathways:** Web Development, Computer

**Grades:** 9-12

**Program of Study:** P-TECH, Computer Technology

**Prerequisite:** None

**Credit:** 1

Principles of Information Technology is a course in which students will explore elements of information technology, computer hardware and software. The course will include an introduction to computer maintenance, networking, database, programming and web design.

#### ***Professional Communications***

**PEIMS #:** 13009900

**Career Pathways:** Available to all pathways

**Program of Study:** Agribusiness, Family and Community Services

**Grades:** 9-12

**Prerequisites:** None

**Credit:** .5

This course blends written, oral and graphic communication in a career-based environment. Students will learn how careers in the economy require individuals to be creative and have a strong background in computer and technology applications; a strong and solid academic foundation; and a proficiency in the professional oral and written communication. Within this context, students will be expected to develop and expand the ability to write, read, edit, speak, listen, apply software applications, manipulate computer graphics, and conduct Internet research.

## Career and Technology Education

### Course Descriptions

#### **Professional Standards in Agribusiness**

**PEIMS #:** 13000800

**Career Pathways:** Agribusiness, Applied Agricultural Engineering, Veterinary Studies

**Program of Study:** Agribusiness

**Grades:** 10-12

**Prerequisite:** None

**Credit:** .5

Professional Standards in Agribusiness primarily focuses on leadership, communication, employer/employee relations, and problem solving as they relate to agribusiness. To prepare for careers in agribusiness systems, students acquire technical knowledge and skills related to leadership development and the workplace, agricultural career opportunities, entry requirements and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply and transfer their knowledge and skills in a variety of settings.

#### **Small Animal Management**

**PEIMS #:** 13000400

**Career Pathways:** Agribusiness, Veterinary Studies

**Program of Study:** Animal Science

**Grades:** 10-12

**Prerequisite:** None

**Credit:** .5

In Small Animal Management, students will acquire knowledge and skills related to small mammals such as dogs and cats, amphibians, reptiles, and birds. To prepare for careers in the field of animal science, students must enhance academic knowledge and skills related to animal systems, career opportunities, entry requirements and industry expectation

#### **Web Design**

**PEIMS #:** 03580820

**Career Pathways:** Web Development

**Grades:** 9-12

**Prerequisite:** None

**Credit:** 1

In Web Design students will acquire knowledge of web design and technological operations and concepts that support creativity, innovation, collaboration, information fluency, critical thinking and decision making. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

#### **Welding I**

**PEIMS #:** 13032300

**Career Pathways:** Welding

**Program of Study:** Welding

**Grades:** 10-12

**Prerequisite:** Introduction to Welding

**Credit:** 2

Welding I provides the knowledge, skills and technologies required for employment in metal technology systems. The student evaluates the function and application of the tools, equipment, technologies and materials used in welding. The student is expected to operate welding equipment according to safety standards; identify and properly dispose of environmentally hazardous materials; explain the importance of recycling materials; choose appropriate personal protective equipment; and evaluate skills related to health and safety in the workplace as specified by appropriate governmental regulations.

## Career and Technology Education

### Course Descriptions

#### **Welding II**

**PEIMS #:** 13032400

**Career Pathway:** Welding

**Program of Study:** Welding

**Grades:** 11-12

**Prerequisite:** Welding I

**Credits:** 2

Welding II builds on the knowledge and skills developed in Welding I. Students will develop advanced welding concepts and skills as related to personal and career development. Students will have opportunities to reinforce, apply and transfer knowledge and skills to a variety of settings and problems.

#### **Welding II/ Lab Dual Credit (WLDG 1417, 1428 or 1457)**

**PEIMS #:** 13032410

**Career Pathway:** Welding

**Program of Study:** Welding

**Grades:** 11-12

**Prerequisite:** Welding I;

**Enrolled in Ranger College**

**Credits:** 3, 4

Welding II builds on the knowledge and skills developed in Welding I. Students will develop advanced welding concepts and skills as related to personal and career development. Students will have opportunities to reinforce, apply and transfer knowledge and skills to a variety of settings and problems. Welding II Lab provides an emphasis on welding laboratory principles and operating procedures to include industrial safety and health practices, hand tool and power machine use, measurement, laboratory operating procedures, welding power sources, and welding career potentials.

#### **Wildlife, Fisheries and Ecology Management**

**PEIMS #:** 13001500

**Career Pathways:** Agribusiness, Veterinary Studies

**Grades:** 9-12

**Prerequisite:** Principles of Agriculture, Food and Natural Resources

**Credit:** 1

Wildlife, Fisheries and Ecology Management examines the management of game and non-game wildlife species, fish and aqua-crops, and their ecological needs as related to current agricultural practices. To prepare for careers in natural resource systems, students must attain related academic and technical skills and knowledge, and learn about career opportunities, entry requirements and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply and transfer their knowledge and skills in a variety of settings.

**Career and Technology Education  
Course Descriptions**