

# **CAREER AND TECHNICAL EDUCATION**

## **Agriculture, Food & Natural Resources**

### **Principles of Agriculture, Food, and Natural Resources (One-Half to One Credit).**

Requirements: This course is recommended for students in Grades 9-12.

Course Description: To be prepared for careers in agriculture, food, and natural resources, students must attain academic skills and knowledge in agriculture. This course allows students to develop knowledge and skills regarding career opportunities, personal development, globalization, industry standards, details, practices, and expectations. To prepare for success, students need to have opportunities to learn, reinforce, experience, apply, and transfer their knowledge and skills in a variety of settings.

### **Livestock Production (One-Half to One Credit).**

Requirements: This course is recommended for students in Grades 10-12.

Course Description: To be prepared for careers in the field of animal science, students need to attain academic skills and knowledge, acquire knowledge and skills related to animal systems and the workplace, and develop knowledge and skills regarding 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. Animal species to be addressed in this course may include, but are not limited to, beef cattle, dairy cattle, swine, sheep, goats, and poultry.

### **Small Animal Management (One-Half to One Credit).**

Requirements: This course is recommended for students in Grades 9-12.

Course Description: To be prepared for careers in the field of animal science, students need to enhance academic knowledge and skills, acquire knowledge and skills related to animal systems, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer knowledge and skills in a variety of settings. Suggested small animals which may be included in the course of study include, but are not limited to, small mammals, amphibians, reptiles, avian, dogs, and cats.

### **Equine Science (One-Half to One Credit).**

Requirements: This course is recommended for students in Grades 10-12.

Course Description: To be prepared for careers in the field of animal science, students need to enhance academic knowledge and skills, acquire knowledge and skills related to animal systems, and develop knowledge and skills regarding 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. Suggested animals which may be included in the course of study include, but are not limited to, horses, donkeys, and mules.

**Principles and Elements of Floral Design (One Credit).**

Requirements: This course is recommended for students in Grades 10-12.

Course Description: To be prepared for careers in floral design, students need to attain academic skills and knowledge as well as technical knowledge and skills related to horticultural systems and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply and transfer their knowledge and skills and technologies in a variety of settings. This course 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 develop respect for the traditions and contributions of diverse cultures. Students respond to and analyze floral designs, thus contributing to the development of lifelong skills of making informed judgments and evaluations.

**Landscape Design and Turf Grass Management (One-Half to One Credit).**

Requirements: This course is recommended for students in Grades 10-12.

Course Description: To be prepared for careers in horticultural systems, students need to attain academic skills and knowledge, acquire technical knowledge and skills related to horticultural systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills and technologies in a variety of settings. This course is designed to develop an understanding of landscape and turf grass management techniques and practices.

**Horticulture Science (One-Half to One Credit).**

Requirements: This course is recommended for students in Grades 10-12.

Course Description: To be prepared for careers in horticultural systems, students need to attain academic skills and knowledge, acquire technical knowledge and skills related to horticulture and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer knowledge and skills in a variety of settings. This course is designed to develop an understanding of common horticultural management practices as they relate to food and ornamental plant production.

**Agricultural Mechanics and Metal Technologies (One-Half to One Credit).**

Requirements: This course is recommended for students in Grades 10-12. Students may take this course in Grade 9 if they have met the recommended prerequisite of Principles of Agriculture, Food, and Natural Resources.

Course Description: To be prepared for careers in agricultural power, structural, and technical systems, students need to attain academic skills and knowledge; acquire technical knowledge and skills related to power, structural, and technical agricultural systems and the industry; and develop knowledge and skills regarding career opportunities, entry requirements, industry certifications, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer knowledge and skills and technologies in a variety of settings. This course is designed to develop an understanding of agricultural mechanics as it relates to safety and skills in tool operation, electrical wiring, plumbing, carpentry, fencing, concrete, and metal working techniques.

## **Arts, A/V Technology and Communications**

### **Professional Communications , One-Half Credit**

Requirements: This course is recommended for students in Grades 9-12.

Course Description: Professional Communications blends written, oral, and graphic communication in a career-based environment. Careers in the global 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 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.

## **Business Management and Administration**

### **Principles of Business, Marketing, and Finance (1/2 Credit)**

Prerequisites: None, entry level course.

Course Description: In Principles of Business, Marketing, and Finance, students gain knowledge and skills in economies and private enterprise systems, the impact of global business, 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.

### **Business Information Management I (1Credit)**

Prerequisites: Principles of Business, Marketing, and Finance

Course Description: Students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and make a successful transition to the workforce and postsecondary education. Students apply technical skills to address business applications of emerging technologies, create word-processing documents, develop a spreadsheet, formulate a database, and make an electronic presentation using appropriate software.

### **Business Information Management II (1 Credit)**

Prerequisites: Principles of Business, Marketing, and Finance; Business Information Management I

Course Description: Students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and make a successful transition to the workforce or postsecondary education. Students apply technical skills to address business applications of emerging technologies, create complex word-processing documents, develop sophisticated spreadsheets using charts and graphs, and make an electronic presentation using appropriate multimedia software.

### **Global Business (One-Half to One Credit)**

**Requirements:** This course is recommended for students in Grades 10-12..

**Course Description:** Students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and to make a successful transition to the workforce and postsecondary education. Students apply technical skills to address global business applications of emerging technologies. Students develop a foundation in the economical, financial, technological, international, social, and ethical aspects of business to become competent consumers, employees, and entrepreneurs. Students enhance reading, writing, computing, communication, and reasoning skills and apply them to the business environment.

### **Virtual Business (One-Half to One Credit)**

**Requirements:** This course is recommended for students in Grades 10-1

**Prerequisite:** Touch System Data Entry

**Course Description:** Students incorporate a broad base of knowledge that includes the legal, managerial, marketing, financial, ethical, and international dimensions of business to make appropriate business decisions. Students will be able to identify steps needed to locate customers, set fees, and develop client contracts. Student will be able to provide administrative, creative, and technical services using advanced technological modes of communication and data delivery. The student builds a functional website that incorporates the essentials of a virtual business.

## **Career Development**

### **Career Preparation I (Three Credits).**

**Requirements:** This course is recommended for students in Grades 11-12.

**Course Description:** Career Preparation I provides opportunities for students to participate in a learning experience that combines classroom instruction with paid business and industry employment experiences and supports strong partnerships among school, business, and community stakeholders. The goal is to prepare students with a variety of skills for a fast-changing workplace. This instructional arrangement should be an advanced component of a student's individual program of study. Students are taught employability skills, which include job-specific skills applicable to their training station, job interview techniques, communication skills, financial and budget activities, human relations, and portfolio development. Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.

### **Career Preparation II (Two to Three Credits).**

**Requirements:** This course is recommended for students in Grade 12.

**Prerequisite:** Career Preparation I.

**Course Description:** Career Preparation II develops essential knowledge and skills through classroom technical instruction and on-the-job training in an approved business and industry training area. Students will develop skills for lifelong learning, employability, leadership, management, work ethics, safety, and communication as a group; however, each student will have an individual training plan that will address job-specific knowledge and skills. Approved training sponsors will provide paid occupational training for a student. The training sponsor will assist the teacher in providing the necessary knowledge and skills for the student's specific career preparation

## **Education and Training**

### **Human Growth and Development (One Credit)**

Requirements: This course is recommended for students in Grades 10-12.  
Course Description: Human Growth and Development is an examination of human development across the lifespan with emphasis upon research, theoretical perspectives, and common physical, cognitive, emotional, and social developmental milestones. The course covers material that is generally taught in a postsecondary, one-semester introductory course in developmental psychology or human development.

### **Instructional Practices in Education and Training (One to Two Credits)**

Requirements: This course is recommended for students in Grades 11-12.  
Course Description: Instructional Practices in Education and Training is a field-based internship that provides students with background knowledge of child and adolescent development as well as principles of effective teaching and training practices. Students work under the joint direction and supervision of both a teacher with knowledge of early childhood education and exemplary educators or trainers in direct instructional roles with elementary-, middle school-, and high school-aged students. Students learn to plan and direct individualized instruction and group activities, prepare instructional materials, develop materials for educational environments, assist with record keeping, and complete other responsibilities of teachers, trainers, paraprofessionals, or other educational personnel.

## **FINANCE**

### **Money Matters (One-Half to One Credit)**

Requirements: This course is recommended for students in Grades 9-12.  
Recommended prerequisite: Principles of Business, Marketing, and Finance.  
Course Description: Students will investigate global economics with emphasis on the free enterprise system and its impact on consumers and businesses. Students apply critical-thinking skills to analyze financial options based on current and projected economic factors. Students will gain knowledge and skills necessary to set long-term financial goals based on those options. Students will determine methods of achieving long-term financial goals through investment, tax planning, asset allocation, risk management, retirement planning, and estate planning.

### **Accounting I, (One Credit)**

Requirements: This course is recommended for students in Grades 10-12.  
Prerequisite: Principles of Business, Marketing, and Finance.  
Course Description: Students 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 reflect on this knowledge as they engage in the process of recording, classifying, summarizing, analyzing, and communicating accounting information. Students formulate and interpret financial information for use in management decision making.

**Accounting II** (One Credit)

Requirements: This course is recommended for students in Grades 11-12

Prerequisite: Accounting I.

Course Description: Students continue the investigation of 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 reflect on this knowledge as they engage in various managerial and cost accounting activities. Students formulate and interpret financial information for use in management decision making.

## **Human Services**

**Principles of Human Services** (One Credit).

Requirements: This course is recommended for students in Grades 9-12.

Course Description: This laboratory course will 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. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

**Lifetime Nutrition and Wellness** (One Credit).

Requirements: This course is recommended for students in Grades 10-12.

Recommended prerequisite: Principles of Human Services, Principles of Hospitality and Tourism, Principles of Health Science, or Principles of Education and Training.

Course Description: 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. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

**Child Development** (One Credit).

Requirements: This course is recommended for students in Grades 10-12.

Recommended prerequisite: Principles of Human Services.

Course Description: 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. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

**Family and Community Services (One-Half to One Credit).**

Requirements: This course is recommended for students in Grades 11-12.

Recommended prerequisite: Principles of Human Services.

Course Description: This laboratory-based course is designed to involve students in realistic and meaningful community-based activities through direct service experiences. Students are provided opportunities to interact 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. Students are encouraged to participate in extended learning experiences such as career and technical student organizations or other leadership or extracurricular organizations.

## **Information Technology**

**Principles of Information Technology-(1/2 Credit)**

Prerequisites: None

Course Description: Students develop computer literacy skills to adapt to emerging technologies used in the global marketplace. Students implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. Students enhance reading, writing, computing, communication, and reasoning skills and apply them to the information technology environment.

**Computer Maintenance (One to Two Credits).**

Requirements: This course is recommended for students in Grades 10-12.

Prerequisite: Principles of Information Technology.

Course Description: Students acquire principles of computer maintenance, including electrical and electronic theory, computer hardware principles, and broad level components related to the installation, diagnosis, service, and repair of computer systems. To prepare for success, students must have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems.

**Digital and Interactive Media-(1 Credit)**

Prerequisites: Principles of Information Technology

Course Description: 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. The knowledge and skills acquired and practiced will enable students to successfully perform and interact in a technology-driven society. Students enhance reading, writing, computing, communication, and critical thinking and apply them to the information technology environment.

### **Web Technologies-(1 Credit)**

Prerequisites: Principles of Information Technology

Course Description: Through the study of web technologies and design, students learn to make informed decisions and apply the decisions to the field of information technology. Students implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. The knowledge and skills acquired and practiced will enable students to successfully perform and interact in a technology-driven society. Students enhance reading, writing, computing, communication, and critical thinking and apply them to the information technology environment.

## **Manufacturing**

### **Principles of Manufacturing (One Credit).**

Requirements: This course is recommended for students in Grades 9-12.

Recommended prerequisite: Algebra I or Geometry.

Course Description: In Principles of Manufacturing, students gain knowledge and skills in the application, design, production, and assessment of products, services, and systems and how those knowledge and skills are applied to manufacturing. Knowledge and skills in the proper application of principles of manufacturing, the design of technology, the efficient production of technology, and the assessment of the effects of manufacturing production technology prepare students for success in the modern world. The study of manufacturing technology allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings in a manufacturing setting. In addition to general academic and technical knowledge and skills, students gain an understanding of career opportunities available in manufacturing and what employers require to gain and maintain employment in these careers.

### **Welding (One Credit).**

Requirements: This course is recommended for students in Grades 10-12.

Recommended prerequisite: Algebra 1.

Course Description: Rapid advances in technology have created new career opportunities and demands in many industries. Welding provides the knowledge, skills, and technologies required for employment in metal technology systems. Students develop knowledge and skills related to this system and apply them to personal career development. This course supports integration of academic and technical knowledge and skills. Students will reinforce, apply, and transfer knowledge and skills to a variety of settings and problems. Knowledge about career opportunities, requirements, and expectations and the development of workplace skills prepare students for future success.

### **Advanced Welding (Two Credits).**

Requirements: This course is recommended for students in Grades 11-12.

Recommended prerequisites: Algebra I or Geometry and Welding.

Course Description: Advanced Welding builds on knowledge and skills developed in Welding. Students will develop advanced welding concepts and skills as they relate to personal and career development. This course integrates academic and technical knowledge and skills. Students will have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems.

**Problems and Solutions** (One-Half to One Credit).

Requirements: This course is recommended for students in Grades 11-12.

Course Description: Problems and Solutions is a project-based research course for students who have the ability to research a real-world problem. Students develop a project on a topic related to career interests, use scientific methods of investigation to conduct in-depth research, are matched with a mentor from the business or professional community, compile findings, and present their findings to an audience that includes experts in the field. To attain academic success, students must have opportunities to learn, reinforce, apply, and transfer their knowledge, skills, and technologies in a variety of settings.