

Career and Technology Education

Building the Bridge between School and Work

As we continue to move into the “Age of Information”, the world we live in is changing more rapidly every day. Planning for the future is more difficult as a result. What we do know is that every job within the next 10 years will require technical skills. What this means to students is that planning needs to extend beyond the high school experience. The East Central Independent School district is committed to assisting their student’s plan for the future.

Developing a 6-year Plan ... All students are required to take CTE coursework during their 8th grade year. This will allow students to explore their interests and aptitudes. Students develop a tentative four year plan in the 8th grade course, and update their plan yearly using a web-based software purchased by the district.

Dual Credit... There are several courses in the Agriscience Cluster and Manufacturing Cluster where dual credit can be earned through a local community college. Successful completion of the college admission tests is required. For more information see your counselor or CTE instructor.

Advanced Technical Credit ... Are you interested in majoring in one of the following areas at a community or junior college?

- Business
- Marketing
- Health Sciences
- Child Development
- Culinary Arts
- Welding
- Automotive
- Drafting
- Computers/Electronics
- Criminal Justice
- Other technical areas

Students can earn college credit by taking ATC courses while in high school. An ATC course is an enhanced version of a normal high school course that is taught by a teacher who has had special training. For more information see your counselor or CTE instructor.

Go Center... Texas is on a path to becoming a less educated, less prosperous state. Currently, one million Texans are enrolled in higher education, representing only five percent of the state’s population. In response to this future crisis the Texas High Education Coordinating Board (THECB) produced a landmark document called “Closing the Gaps” that proposed an aggressive strategy for taking a proactive approach to declining enrollment rates. The Go Center is a concept of involving local educational, business and community based organizations to assist in the college recruitment process.

Career Week... Each year in early spring ECHS will celebrate career week. During the week each teacher is asked to secure a speaker to visit with at least one class during that three day period and share with the students how that particular course is relevant to the career of the guest speaker. ECHS may also hold an annual Career Fair where numerous businesses and agencies gather to share information about careers, colleges, and professions.

It is our goal that every student who graduates from East Central High School will have clear understanding of their future goals related to college and career.

The following is a list of course requirements for the Career Clusters and Pathways that are supported at East Central High School.

Information Technology Cluster Courses

Course #	Course	Credit	Grade	Recommended and/or Prerequisite
7670	Principles of Information Technology	0.5	9-12	None
6741	Digital and Interactive Media	1.0	9-12	Principles of Information Technology
7674	Web Technologies	1.0	9-12	Principles of Information Technology
7675	Advanced Web Technologies 2	2.0	10-12	Web Technologies
6815	Computer Programming	1.0	9-12	None
6816	Advanced Computer Programming	1.0	10-12	Computer Programming
7671	Research in IT Solutions 1	3.0	11-12	Application and Accuplacer Testing
7673	Research in IT Solutions 2	3.0	12	Research in IT Solutions 1

7670 Principles of Information Technology

Grades: 9-12 Credit: 0.5

Prerequisite: None

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. The student applies design and web publishing techniques.

6741 Digital and Interactive Media

Grades: 9-12 Credit: 1.0

Recommended Prerequisite: Principles of Information Technology

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.

7674 Web Technologies

Grades: 9-12 Credit: 1:0

Recommended Prerequisite: Principles of Information Technology

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.

7675 Advanced Web Technologies 2

Grades: 10-12 Credits: 2.0

Prerequisite: Web Technologies

Advanced Web Technologies focuses on advanced techniques in web design with particular emphasis on design elements involving layout, navigation and interactivity using Adobe software. Hands-on web design exercises will be taught using Adobe Dreamweaver, and Photoshop. Teacher directed lectures, hands-on labs and projects will comprise the majority of lessons. Demonstrations and lectures on the Adobe software packages will permit the students to construct a full functioning website with the intent of promoting

entrepreneurship (via service learning projects) within the community.

6815 Computer Programming

Grades: 9-12 Credit: 1.0

Prerequisite: None

Computer Programming is a one-year course designed to enable students to develop skills in writing computer programs in the Java language. Upon completion students will be able to write programming code independently and as part of a programming team, as well as, troubleshoot for errors of others code. Topics will include designing algorithms to solve math problems, software development, top-down program design, object-oriented programming, Java classes, objects and methods, Java syntax, primitive data types, strings, loops, array, searching and sorting.

6816 Advanced Computer Programming

Grades: 10-12 Credit: 1.0

Prerequisite: Computer Programming

Advanced Computer Programming is a continuation of Computer Programming and is year long course. It focuses on developing computer programs to solve problems. The course also emphasizes the design of programs that are understandable, adaptable and reusable. Other important concepts in computer science are covered including the development and analysis of algorithms, the development and use of fundamental data structures, and the study of standard algorithms.

7671 Research in IT Solutions I

Grades: 11-12 Credit: 3.0

Prerequisite: Application and Testing

This course is Year 1 of the Information Technology and Security Academy. An approved application is required. This course is taught off-site at the St. Philips Southwest Campus.

7673 Research in IT Solutions II

Grades: 12 Credit: 3.0

Prerequisite: Research in IT Solutions I

This course is Year 2 of the Information Technology and Security Academy. An approved application is required. This course is taught off-site at the St. Philips Southwest Campus.

Agriculture, Food, and Natural Resources Cluster Courses

Course #	Course	Credit	Grade	Recommended and/or Prerequisite
7211	Principles of Agriculture, Food and Natural Resources	1.0	9-12	None
7221	Floral Design	1.0	10-12	Principles of Agriculture, Food and Natural Resources
7222	Landscape Design and Maintenance	0.5	10-12	Principles of Agriculture, Food and Natural Resources
7223	Greenhouse Management	0.5	10-12	Principles of Agriculture, Food and Natural Resources
7237	Horse Management	0.5	10-12	Principles of Agriculture, Food and Natural Resources
7236	Livestock Production	0.5	10-12	Principles of Agriculture, Food and Natural Resources
7240	Wildlife and Ecology Management	1.0	10-12	Principles of Agriculture, Food and Natural Resources
7255	Small Animal Management	0.5	10-12	Principles of Agriculture, Food and Natural Resources
7215	Veterinary Medical Applications	1.0	11-12	Small Animal Management or Horse Management or Livestock Production
7238	Food Technology and Safety	0.5	10-12	Principles of Agriculture, Food and Natural Resources
7264	Biotechnology	0.5	11-12	Principles of Agriculture, Food and Natural Resources
7265	Meats Processing 1	2.0	11-12	Principles of Agriculture, Food and Natural Resources and Food and Technology Safety
7273	Meats Processing 2	2.0	12	Meats Processing 1
7226	Floral Design Dual Credit	1.0	11-12	Meet dual credit entrance requirements
7233	Power Systems	1.0	10-12	Principles of Agriculture, Food and Natural Resources
7231	Introduction to Metal Working	1.0	10-12	Principles of Agriculture, Food and

				Natural Resources
7232	Advanced Welding	2.0	11-12	Introduction to Metal Working
7235	Wood Working	1.0	10-12	Principles of Agriculture, Food and Natural Resources
7251	Agricultural Leadership Development 1	1.0	10-12	Principles of Agriculture, Food and Natural Resources or Advisor Approval
7252	Agricultural Leadership Development 2	1.0	11-12	Ag. Leadership Development 1
7253	Agricultural Leadership Development 3	2.0	12	Ag. Leadership Development 1 or 2
Course #	Course	Credit	Grade	Recommended and/or Prerequisite
7258	Advanced Animal Science	1.0	11-12	Biology and Chemistry
7229	Advanced Plant & Soil Science	1.0	11-12	Biology and Chemistry
7271	Agricultural Science Internship/Mentorship	2.0	11-12	Application
7281	Mathematical Applications in Agriculture, Food, and Natural Resources	1.0	11-12	Algebra 1 and Geometry

7211 Principles of Agriculture, Food and Natural Resources

Grades: 9-12 Credit: 1.0

Prerequisite: None

Be a part of the world's most important industry! This is a basic class that will allow you to find your area of interest in animal, plant, food, or mechanical systems. Students will learn about global agriculture, career development, leadership, communications, personal finance, mechanized agriculture, and project programs. Other topics covered will include soils, plants, shop construction and animal science. This is where your FFA career begins!

7221 Floral Design

Grades: 10-12 Credit: 1.0

Recommended Prerequisite: Principles of Agriculture, Food and Natural Resources

Flowers, Balloons, and More. This is a basic floral design course that will provide you with hands on skills in arranging flowers and the "book smarts" to make a competitive arrangement. This course meets the criteria for a fine arts credit.

7222 Landscape Design and Maintenance

Grades: 10-12 Credit: 0.5

Recommended Prerequisite: Principles of Agriculture, Food and Natural Resources

Design, grow, and care for landscapes. You will have hands on experiences to enrich your knowledge of plants and designing. You will work in the greenhouse, on campus and in the classroom.

7223 Greenhouse Management

Grades: 10-12 Credit: 0.5

Recommended Prerequisite: Principles of Agriculture, Food and Natural Resources

Greenhouse, plants and more plants. Spend a fun and exciting time learning about plants and how to grow, manage and market them.

7237 Horse Management

Grades: 10-12 Credit: 0.5

Recommended Prerequisite: Principles of Agriculture, Food and Natural Resources

So horses are your love? This is the class for you. A whole course devoted to the study of horses. We will focus on breeds, feeding, health, training, and careers dealing with horses. This is a must for anyone interested in trying out for the Horse Judging Team.

7236 Livestock Production

Grades: 10-12 Credit: 0.5

Recommended Prerequisite: Principles of Agriculture, Food and Natural Resources

Does anyone want to be a veterinarian? Spend the semester devoted to learning and studying large animals. You think you might want to have a goat, lamb, or pig? Take this class and learn everything you ever wanted to know. This is a fun class that just focuses on livestock.

7240 Wildlife and Ecology Management

Grades: 10-12 Credit: 1.0

Recommended Prerequisite: Principles of Agriculture, Food and Natural Resources

Hunting, fishing, and the great outdoors! You'll love learning about our country's greatest natural asset.....our wildlife. You will go through the Texas Parks and Wildlife programs for Hunter Education, Boater Education, and Angler Education. You will also learn vital management skills to maintain our wildlife.

7255 Small Animal Management

Grades: 10-12 Credit: 0.5

Prerequisite: None

Do you love furry little kittens and floppy eared dogs with wet noses? Take a class that every animal lover can really learn something from. Learn about small animals including dogs, cats, lizards, snakes, birds, and much more. Examine health issues, section, training, breeding, and social issues.

7215 Veterinary Medical Applications**Grades: 11-12 Credit: 1.0****Prerequisite: Small Animal Management**

This course provides training in the veterinary assistant field. It includes topics such as animal handling and restraint, health and safety, sanitation, surgical preparation, anatomy, physiology, medical terminology, infectious diseases, instrument and equipment identification, vaccine preparation and injection techniques, laws and ethics, and veterinary office procedures. The following is part of the instruction: reinforcement of basic communication skills, utilizing listening skills to follow directions, practicing basic math skills as applied to a medical setting and reading to gain information and to perform assignments and tasks as directed.

7238 Food Technology and Safety**Grades: 10-12 Credit: 0.5****Recommended Prerequisite: Principles of Agriculture, Food and Natural Resources**

Ever wonder how jerky or ice cream is made? Here's a class where you will learn the basics of food production. We will focus on the steps to take a raw food product to a product that consumers will purchase. Know how to tell a T-Bone from a rib eye? If not you will learn the basics of retail meat identification along with the methods to fabricate and process them. Other topics include milk and ice cream processing, fruit and vegetable processing, as well as food safety and sanitation principles.

7264 Biotechnology**Grades: 11-12 Credit: 1.0****Recommended Prerequisite: Principles of Agriculture, Food and Natural Resources**

Students will explore molecular biology and its application to the real world by integrating biological principles to animal and plants with biotechnology. A variety of hands on skills to utilize biotechnology principles will be used.

7265 Meats Processing I**Grades: 11-12 Credit: 2.0****Recommended Prerequisite: Principles of Agriculture, Food and Natural Resources**

Want to work in the meat or food processing industry? This lab oriented course will develop technical skills in processing, preparing, and packaging of meat, fish and poultry. This class will emphasize equipment care and sanitation, HACCP development, government regulations, meat quality, identification, grading, fabrication, preparation and preservation, and merchandising.

7226 Floral Design DC**Grades: 11-12 Credit: 1.0****Prerequisite: Approved dual credit application, and qualifying exam scores**

Flowers, Balloons, and More. This is a basic floral design course that will provide you with hands-on skills in arranging flowers and the "book smarts" to make a competitive arrangement. This course can be taken for dual high school and college credit through Palo Alto College provided all college admission requirements are met. This course meets criteria for a fine arts credit.

7231 Introduction to Metal Working**Grades: 10-12 Credit: 1.0****Recommended Prerequisite: Principles of Agriculture, Food and Natural Resources**

This hands-on course will give a brief look at oxy/fuel welding and cutting, Arc Welding, MIG Welding, soldering, brazing, and metal fabrication. Small projects will be built. In addition to this course; safety, tool/fastener identification, electrical, and plumbing will be incorporated. The OSHA 10-hr. safety certification is available. The NCCER safety in construction may also be available.

7234 Advanced Welding**Grades: 11-12 Credit: 2.0****Prerequisite: Introduction to Metal Working, skills test, good record of shop safety****7832 Advanced Welding II****Grade: 12 Credits: 2.0****Prerequisite: Advanced Welding, good record of shop safety**

Have you ever wondered what welding has to offer you? This two period course will give an in-depth coverage of METAL FABRICATION & WELDING. Students will gain a greater understanding of what the welding industry has to offer. Opportunities to participate in professional student organizations, contests for student projects/ welding ability, and industry certifications are available in this course. Certifications may include: AWS Welding Certification, NCCER safety in construction, and OSHA 10-hr. certification. Dual Credit may be made possible through St. Philip's College.

7235 Woodworking**Grades: 10-12 Credit: 1.0****Recommended Prerequisite: Principles of Agriculture, Food and Natural Resources**

This hands-on course will give a brief look at building structures and how wood products can be fabricated. Students will learn how to set up a level concrete slab, how to build basic roof designs, and have the opportunity to use the many wood working tools in the shop. In addition to this course students will learn basic safety, tool/fastener identification, and each student will be able to build their own wood working project. The OSHA 10-hr. safety certification is available.

7233 Power Systems**Grades: 10-12 Credit: 1.0****Recommended Prerequisite: Principles of Agriculture, Food and Natural Resources**

Have you ever wondered how an engine works? In this course, you will gain insight to the internal workings of an engine, how to rebuild an engine, study mechanical theory, and many other facets of the transportation industry. The OSHA 10-hr. safety certification is also available.

7251 Agricultural Leadership Development I**Grades: 10-12 Credit: 1.0****Recommended Prerequisite: Principles of Agriculture, Food and Natural Resources**

This class is designed for those students wanting to take their leadership and career development to another level. Students can earn speech credit by completing this class. Students will develop leadership and communication skills in the fall by competing on leadership development teams. During the spring students will continue developing their critical thinking skills, communication skills and problem solving skills by competing on career development event teams. FFA membership and team participation is required.

7252 Agricultural Leadership Development II**Grades: 11-12 Credit: 1.0****Prerequisite: Agricultural Leadership Development I**

This class is designed for those students wanting to continue taking their leadership and career development to another level. Students will develop leadership and communication skills in the fall by competing on leadership development teams. During the spring, students will continue developing their critical thinking skills, communication skills and problem solving skills by competing on career development event teams. FFA membership and team participation is required.

7253 Agricultural Leadership Development III**Grades: 12 Credit: 2.0****Prerequisite: Agricultural Leadership Development I or II**

This practicum is designed to give students supervised practical application of knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experiences such as independent student, internships, assistantships, mentorships or laboratories.

7258 Advanced Animal Science**Grades: 11-12 Credit: 1.0****Prerequisite: Biology and Chemistry**

Seniors in the Animal Science Systems, here could be your 4th science. This course will prepare students for careers in the field of animal science. The course examines how man and animal interrelate. Students must have taken Horse Management, Small Animal Care, Livestock Production or Vet Tech prior to Advanced Animal Science.

7229 Advanced Plant & Soil Science**Grades: 10-12 Credit: 1.0****Prerequisite: Greenhouse Management**

Sunlight, Soil and Plants. Gain more knowledge of the industry and find yourself growing and testing your skills of plant production in the school greenhouse. Students are encouraged to do a Science Fair Project.

7271 Agricultural Science Internship/Mentorship**Grades: 11-12 Credit: 2.0****Prerequisite: Application**

This practicum is designed to give students supervised practical application of knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experiences such as independent student, internships, assistantships, mentorships or laboratories.

7281 Mathematical Applications in Agriculture, Food & Natural Resources**Grades: 11-12 Credit: 1.0****Prerequisite: Algebra I and Geometry**

Love math? Want to find out how math is really used in the real world. Students in this class 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 success, students are afforded opportunities to reinforce, apply, and transfer their knowledge and skills related to mathematics in a variety of contexts.

Business, Management and Administration Cluster Courses

Course #	Course	Credit	Grade	Recommended and/or Prerequisite
6613	Principles of Business, Marketing and Finance	0.5	9-12	None
7331	Business Information Management 1	1.0	9-12	Principles of Business, Marketing and Finance
7332	Business Information Management 2	1.0	10-12	Business Information Management 1
7311	Introductory Business Documents	0.5	9-12	Principles of Business, Marketing and Finance
7312	Business Law	0.5	10-12	Principles of Business, Marketing and Finance
7313	Business Management	1.0	10-12	Principles of Business, Marketing and Finance
7314	Human Resources Management	0.5	10-12	Principles of Business, Marketing and Finance

6613 Principles of Business, Marketing and Finance**Grades: 9-12 Credit: 0.5****Prerequisite: None**

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. We will focus on the roles of business in the lives of individuals, consumers, workers and citizens.

7331 Business Information Management I**Grades: 10-12 Credit: 1.0****Recommended Prerequisite: Principles of Business, Marketing and Finance**

Business Information Management I prepares students to apply technology skills to personal and workplace business situations. The course focuses on business documents such as word processing, databases, spreadsheets, and presentation management technologies. Students complete the course with an intermediate skill level in spreadsheet and database applications.

7332 Business Information Management II**Grades: 11-12 Credit: 1.0****Prerequisite: Business Information Management I**

This course provides advanced technology skills necessary for success in the workplace. This course focuses on the computer as a tool to solve business problems. BIM II prepares the students to master the objectives of the MCAS certification test. The MCAS certification exam recognizes individuals who have achieved a certain level of mastery in Word, Excel, & Access. Passing this exam may waive an introduction to a computer course at a university. The final product for the class will be a multimedia presentation.

7311 Introductory Business Documents**Grades: 9-12 Credit: 0.5****Recommended Prerequisite: Principles of Business, Marketing and Finance**

This course is designed to further develop the skills necessary for personal and professional development in relation to technology. The course focuses on the computer as a tool to solve business problems. The student will learn the basics in word processing, calculating keypad, and introductory PowerPoint.

7312 Business Law**Grades: 11-12 Credit: 0.5****Recommended Prerequisite: Principles of Business, Marketing and Finance**

An introductory course on business law covering such topics as: contracts, ethics, employment law, credit, banking, partnerships, bankruptcy, and more. The course includes computer applications, electronic issues, and legal research, with an introduction to personal law topics that interest students. We will follow a young entrepreneur's business start-up and experience law in action.

7313 Business Management**Grades: 10-12 Credit: 1.0****Recommended Prerequisite: Principles of Business, Marketing and Finance**

A practical course combining skills needed to manage and operate a successful business. Topics include: Finance, Marketing, Communications, Human Resources, and many more. Profiles of business leaders, ethical and global issues, challenges in the business world, computer applications, and real-life scenarios are included throughout the course.

7314 Human Resources Management**Grades: 11-12 Credit: 0.5****Recommended Prerequisite: Principles of Business, Marketing and Finance**

This course will introduce students to the rapidly evolving business environment as it relates to human resource management. The course will center itself on skills and concepts of recruiting, selecting, training, development and compensation of employees. This course is designed to prepare students to become competent managers, employees and entrepreneurs. Students will study legal, managerial, financial, ethical and international strands of business to make good human resource decisions.

Finance Cluster Courses

Course #	Course	Credit	Grade	Recommended and/or Prerequisite
6613	Principles of Business, Marketing and Finance	0.5	9-12	None
6721	Accounting	1.0	10-12	Principles of Business, Marketing and Finance
6722	Advanced Accounting	1.0	11-12	Accounting 1
7315	Banking and Financial Systems	0.5	10-12	Principles of Business, Marketing and Finance

6613 Principles of Business, Marketing and Finance**Grades: 9-12 Credit: 0.5****Prerequisite: None**

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. We will focus on the roles of business in the lives of individuals, consumers, workers and citizens.

6721 Accounting**Grades: 10-12 Credit: 1.0****Recommended Prerequisite: Principles of Business, Marketing and Finance**

"The Language of Business", this course provides an introduction to standard business accounting. Whether you want to be an accounting major, work after school in an accounting-related job, work in a non-accounting job, or want to learn how to take care of your personal finances, this class is for you. Regardless of your career field, employers want people who have these skills: problem solving, critical thinking, understanding of business/profit motive, organization/accuracy/integrity, and use of technology- all skills that are essential in the high school accounting classroom.

6722 Advanced Accounting**Grades: 11-12 Credit: 1.0****Prerequisite: Accounting 1**

Advanced Accounting reinforces basic accounting principles through topics on partnerships and corporations. Students learn the material in "real-life" simulations and through automated accounting software. Other topics of study include: business ethics, career choices, accounting and business practices in the global community, and multicultural awareness.

7315 Banking and Financial Systems**Grades: 10-12 Credit: 0.5****Recommended Prerequisite: Principles of Business, Marketing and Finance**

This course introduces banking and financial concepts, principles and procedures; emphasizes the role of money in the modern economy; recognizes the economic theories and financial forces that influence international business; and compares consumer financial transactions with government transactions.

Education and Training Cluster Courses

Course #	Course	Credit	Grade	Recommended and or Prerequisite
7161	Principles of Education and Training	0.5	9-12	None
7162	Child Development	1.0	10-12	Principles of Education and Training
7163	Child Guidance	1.0	11-12	Child Development
7174	Teaching Preparation 1	2.0	11-12	Principles of Education and Training
7175	Teaching Preparation 2	2.0	12	Teaching Preparation 1

7161 Principles of Education and Training**Grades: 9-12 Credit: 0.5****Prerequisite: None**

This course is designed to introduce learners to the various careers available within the education and training career cluster. Students use self-knowledge and educational and career information to analyze various careers within the education and training career cluster. Students will also gain an understanding of the basic knowledge and skills essential to careers within the education and training career cluster. Students will develop a graduation plan that leads to a specific career choice in the students interest area.

7162 Child Development**Grades: 10-12 Credit: 1.0****Recommended Prerequisite: Principles of Education and Training**

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 education of children.

7163 Child Guidance**Grades: 11-12 Credit 1.0****Recommend Prerequisite: Child Development**

This year-long course addresses the knowledge and skills related to child development and guidance equipping students to develop positive relationships with children and effective caregiver skills. Student use these skills to promote the well-being and healthy development of children and to pursue careers related to the care, guidance, and education of young children, including those with special needs. (As of the printing of this catalog, this course is pending administration and board approval)

7174 Teaching Preparation I (Instructional Practices in Education and Training)**Grades: 11-12 Credit: 2.0****Recommended Prerequisite: Principles of Education and Training, application, skills assessment**

This course 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.

7175 Teaching Preparation II
Prerequisite: Teaching Preparation I

Grade: 12 Credit: 2.0

This course is a field-based internship that provides students background knowledge of child and adolescent development principles as well as principles of effective teaching and training practices. Students in the course work under the joint direction and supervision of both a teacher with knowledge of early childhood education and exemplary educators 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, assist with record keeping, make physical arrangements, and complete other responsibilities of classroom teachers, trainers, paraprofessionals, or other educational personnel.

Human Service Cluster Courses

Course #	Course	Credit	Grade	Recommended and/or Prerequisite
7101	Principles of Human Services	0.5	9-12	None
7111	Interpersonal Studies	0.5	10-12	Principles of Human Resources
7122	Fashion Design	1.0	10-12	Principles of Human Resources
7131	Family and Community Services	1.0	10-12	Principles of Human Resources
7141	Lifetime Nutrition & Wellness	0.5	10-12	Principles of Human Resources
3610	Food Science (4 th Science)	1.0	11-12	Biology and Chemistry
7151	Interior Design	0.5	10-12	Principles of Human Resources

7101 Principles of Human Services
Prerequisite: None

Grades: 9-12 Credit: 0.5

This laboratory course will enable students to investigate careers in the human services career cluster, including counseling and mental health, early childhood development, and family and community. Each student is expected to complete the knowledge and skills essential for success in high-skill, high-wage, or high-demand human services careers.

7111 Interpersonal Studies
Recommended Prerequisite: Principles of Human Services

Grades: 10-12 Credit: 0.5

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. Students are encouraged to join Family Career Community Leaders of America, which focuses on family, leadership skills, individual careers, and current teen issues.

7122 Fashion Design
Recommended Prerequisite: Principles of Human Services

Grades: 10-12 Credit: 1.0

This technical laboratory course focuses on apparel from the perspective of personal decision making related to apparel, the apparel industry, and career preparation. Topics include: an understanding of fashion and the textile and apparel industries, managing the apparel dollar, apparel repair and alteration, and wardrobe planning, care and maintenance. Quality apparel construction is addressed as it relates to consumer decision making and career preparation for the apparel industry.

7131 Family and Community Services
Recommended Prerequisite: Principles of Human Services

Grades: 10-12 Credit: 1.0

The 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 in individuals, families, and the community through community or volunteer services. Emphasis is placed on developing and enhancing organizational and leadership skills and characteristics. FCCLA officers, project managers and members participate in extended learning experiences as FCCLA members. Students are encouraged to join Family Career Community Leaders of America, which focuses on family, leadership skills, individual careers, and current teen issues.

7141 Lifetime Nutrition and Wellness (formerly Food Science)
Recommended Prerequisite: Principles of Human Services

Grades: 10-12 Credit: 0.5

This technical laboratory course concentrates on nutrition, food choices, and food management skills for individuals and the family throughout the life cycle. Meal etiquette, career options, and techniques for managing multiple family, community, and wage-earner roles are part of the content.

3610 Food Science (4th science)**Grades: 11-12 Credit: 1.0****Prerequisite: Biology and Chemistry**

Food Science is designed to reinforce and enhance the student's knowledge of scientific principles and processes through the study of food and nutrition. Discover the science behind foods by conducting laboratory and field investigations. Why does bread rise? Will you get sick if you eat mold? These questions and more will be answered as we investigate the nature of foods, the principles of food processing, the causes of deterioration, and how we can improve the quality of our foods. This science credit will help relate science principles to the "real" world.

7151 Interior Design**Grades: 10-12 Credit: 0.5****Recommended Prerequisite: Principles of Human Services**

This is a technical course that addresses psychological, physiological, and sociological needs of individuals by enhancing the environment in which they live and work. Individuals use knowledge and skills related to interior and exterior environments, constructions and furnishings to make wise consumer decisions, increase productivity, and compete in industry.

Hospitality and Tourism Cluster Courses

Course #	Course	Credit	Grade	Recommended and/or Prerequisite
7551	Principles of Hospitality and Tourism	0.5	9-12	None
7553	Hotel Management	0.5	10-12	Principles of Hospitality and Tourism
7558	Restaurant Management	0.5	10-12	Principles of Hospitality and Tourism
7561	Hospitality Services	1.0	10-12	Principles of Hospitality and Tourism
7562	Hospitality Practicum	2.0	11-12	Hospitality Services
7141	Lifetime Nutrition & Wellness	0.5	10-12	None
7563	Culinary Arts 1	1.0	10-12	Principles of Hospitality and Tourism
7564	Culinary Arts 2	2.0	11-12	Culinary Arts 1
3610	Food Science (4 th Science)	1.0	11-12	Biology and Chemistry

7551 Principles of Hospitality and Tourism**Grades: 9-12 Credit: 0.5****Prerequisite: None**

The hospitality and tourism industry encompasses lodging; travel and tourism; recreation, amusements, attractions and resorts; and restaurants and food beverage service. Students use knowledge and skills that meet industry standards to function effectively in various positions within this industry.

7553 Hotel Management**Grades: 10-12 Credit: 0.5****Recommended Prerequisite: Principles of Hospitality and Tourism**

This course focuses on the knowledge and skills needed to pursue staff and management positions available in the hotel industry. This in-depth study of the lodging industry includes departments within a hotel such as front desk, food and beverage, housekeeping, maintenance, human resources, and accounting. Students are encouraged to join Family Career Community Leaders of America, which focuses on family, leadership skills, individual careers, and current teen issues.

7558 Restaurant Management**Grades: 10-12 Credit: 0.5****Recommended Prerequisite: Principles of Hospitality and Tourism**

This course will emphasize the principles of planning, organizing, staffing, directing, and controlling the management of a variety of food service operations. The course will provide insight into the operation of a well-run restaurant.

7141 Lifetime Nutrition and Wellness (formerly Food Science)**Grades: 10-12 Credit: 0.5****Recommended Prerequisite: Principles of Human Services**

This technical laboratory course concentrates on nutrition, food choices, and food management skills for individuals and the family throughout the life cycle. Meal etiquette, career options, and techniques for managing multiple family, community, and wage-earner roles are part of the content.

3610 Food Science (4th science)**Grades: 11-12 Credit: 1.0****Prerequisite: Biology and Chemistry**

Food Science is designed to reinforce and enhance the student's knowledge of scientific principles and processes through the study of food and nutrition. Discover the science behind foods by conducting laboratory and field investigations. Why does bread rise? Will

you get sick if you eat mold? These questions and more will be answered as we investigate the nature of foods, the principles of food processing, the causes of deterioration, and how we can improve the quality of our foods. This science credit will help relate science principles to the “real” world.

7561 Hospitality Services

Grades: 10-12 Credit: 1.0

Recommended Prerequisite: Principles of Hospitality and Tourism

This course provides occupationally-specific training designed to develop knowledge and skills for employment in the multifaceted hospitality services industry. Emphasized are career options in the industry; managing multiple family, community, and career roles; business procedures; laws; industry technology applications; safety; sanitation; customer relations; and other knowledge and skills for employment in lodging operations and food and beverage operations. Content includes an orientation to supportive operations such as sales and marketing, quantity food production, human resources, accounting, security, and engineering.

7562 Hospitality Practicum

Grades: 11-12 Credit: 2.0

This course provides occupationally-specific training designed to develop knowledge and skills for employment in the multifaceted hospitality services industry. Emphasized are career options in the industry; managing multiple family, community, and career roles; business procedures; laws; industry technology applications; safety; sanitation; customer relations; and other knowledge and skills for employment in lodging operations and food and beverage operations. Content includes an orientation to supportive operations such as sales and marketing, quantity food productions, human resources, accounting, security, and engineering.

7563 Culinary Arts 1

Grades: 10-12 Credit: 1.0

Recommended Prerequisite: Principles of Hospitality and Tourism, Food Science or Lifetime Nutrition and Wellness

This course includes the student studying safety and sanitation by pursuing the national ServSafe certificate. Instruction includes operation and management of food service establishments, marketing strategies, quantity food production skills, food presentation and service techniques. The fundamentals and principles of the art of cooking and the science of baking are also covered. Legal considerations, customer service, career options, food safety, and managing multiple family, community, and career roles are contained in the content.

7564 Culinary Arts 2

Grades: 11-12 Credit: 2.0

Prerequisite: Culinary Arts 1, written assessment, teacher references (2)

This course teaches employability skills, which include job-specific skills, job interview techniques, communication skills, resume writing skills, financial and budget activities, and human relations. This practicum course is relevant and rigorous, supports student application of academic standards, and effectively prepares students for college and career success.

Health Science Cluster Courses

Course #	Course	Credit	Grade	Recommended and/or Prerequisite
7401	Principles of Health Science	0.5	9-12	None
7402	Health Science Technology 1	1.0	10-12	Principles of Health Science
7411	Health Science Tech 2	2.0	11-12	HST 1 and Application
7421	Medical Terminology	0.5	10-12	Principles of Health Science

7401 Principles of Health Science

Grades: 9-12 Credit: 0.5

Prerequisite: None

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 health care industry.

7402 Health Science Technology I

Grades: 10-12 Credit: 1.0

Recommended Prerequisite: Principles of Health Science

A course designed to develop health-care specific knowledge and skills in effective communication, ethical and legal responsibilities, client care, safety, first aid, and CPR. This course prepares the student for the transition to clinical or work-based experiences in health care. The abstinence education program entitled “Worth the Wait” is included as part of this course. (Parent permission required)

7411 Health Science Technology II

Grades: 11-12 Credit: 2.0

Prerequisite: Health Science Technology I, written assessment, forms as required by the state

A course designed to provide for the development of multi-occupational knowledge and skills related to a wide variety of health careers. Students will have hands-on experiences for continued knowledge and skill development. Students will have the opportunity to earn Nursing Assistant certification through the TX Department of Aging and Disability Services. Seniors may also begin the coursework to prepare for Pharmacy Technician certification. The course may be taught by different methodologies, such as pre-employment laboratory, clinical rotation, or cooperative education.

7421 Medical Terminology**Grades: 9-12 Credit: 0.5*****Recommended Prerequisite: None***

A course designed to develop a working knowledge of the language of medicine. Students acquire word-building skills by learning prefixes, suffixes, roots and abbreviations. Relating terms to body systems, students identify proper use of the word in a medical environment. Knowledge of medical terminology enhances the student's ability to successfully secure employment or pursue advanced education in health care.

Architecture and Construction Cluster Courses

Course #	Course	Credit	Grade	Recommended and/or Prerequisite
7512	Principles of Architecture and Construction	0.5	9-12	None
7521	Architectural Design	1.0	10-12	Principles of Architecture and Construction
7522	Advanced Architectural Design	2.0	11-12	Architectural Design

7512 Principles of Architecture and Construction**Grades: 9-12 Credit: 0.5*****Prerequisite: None***

Principles of Architecture and Construction provide an entry level overview to the various fields of architecture and construction technology. This course will provide the necessary tools to be successful if you choose a pathway in the architecture and construction industry. This is an introductory class that features hand and computer drafting drawings, with basic model building skills and current construction terminology.

7521 Architectural Design**Grades: 10-12 Credit: 1.0*****Recommended Prerequisite: Principles of Architecture and Construction***

Students gain knowledge and skills specific to those needed to enter a career in architecture and construction or prepare a foundation toward a postsecondary degree in architecture, construction science, drafting, interior design, and landscape architecture. Architectural design includes the knowledge of the design, design history, techniques, and tools related to the production of drawings, renderings, and scaled models for commercial or residential architectural purposes.

7522 Advanced Architectural Design**Grades: 11-12 Credit: 2.0*****Prerequisite: Architectural Design***

This course expands the knowledge gained in the Architectural Design course and provides opportunities for real life, hands-on experience.

Science, Technology, Engineering and Math Cluster Courses

Course #	Course	Credit	Grade	Recommended and/or Prerequisite
7515	Concepts of Engineering and Technology	0.5	9-12	None
7524	Mechanical Engineering	1.0	10-12	Concepts of Engineering and Technology
7525	Advanced Engineering Design	2.0	11-12	Mechanical Engineering Design

7515 Concepts of Engineering and Technology**Grades: 9-12 Credit: 0.5*****Prerequisite: None***

This course provides an overview of the various fields of science, technology, engineering, and mathematics and their interrelationships. Students will use a variety of computer hardware and software applications to complete assignments and projects. Upon completing this course, students will have an understanding of the various fields and will be able to make informed decisions regarding a coherent sequence of subsequent courses. Further, students will have worked on a design team to develop a product or system. Students will use multiple software applications to prepare and present course assignments.

7524 Mechanical Engineering**Grades: 10-12 Credit: 1.0*****Recommended Prerequisite: Concepts of Engineering and Technology***

An entry-level course designed to provide training for entry level drafting careers. First year emphasis on orthographic, isometric, oblique, lettering, dimensioning, and line development through the use of hand drafting and computer aided design for the production of drawings for mechanical applications. Current software used are West Point Bridge and AutoDesk Inventor for engineers.

7525 Advanced Engineering Design**Grades: 11-12 Credit: 2.0****Prerequisite: Mechanical Engineering**

An advanced course designed to provide training for students who plan on attending college and considering a career in engineering. First and second year emphasis on model building skills, advanced orthographic, isometric, oblique, lettering, dimensioning, and line development through the use of hand drafting and computer aided design. Current software used is West Point Bridge and AutoDesk Inventor for engineers.

Manufacturing Cluster Courses

Course #	Course	Credit	Grade	Recommended and/or Prerequisite
7830	Principles of Manufacturing	0.5	9-12	None
7231	Introduction to Metal Working	1.0	10-12	Principles of Manufacturing
7832	Advanced Welding	2.0	11-12	Introduction to Metal Working
7833	Advanced Precision Metal Manufacturing	3.0	11-12	Application and Accuplacer Testing
7834	Manufacturing Engineering	3.0	12	Advanced Precision Metal Manufacturing

7830 Principles of Manufacturing**Grades: 9-12 Credit: 0.5****Prerequisite: None**

This is an introductory course for students interested in pursuing coursework and/or a career in manufacturing.

7231 Introduction to Metal Working**Grades: 10-12 Credit: 1.0****Recommended Prerequisite: Principles of Manufacturing**

This hands-on course will give a brief look at oxy/fuel welding and cutting, Arc Welding, MIG Welding, soldering, brazing, and metal fabrication. Small projects will be built. In addition to this course; safety, tool/fastener identification, electrical, and plumbing will be incorporated. The OSHA 10-hr. safety certification is available. The NCCER safety in construction may also be available.

7234 Advanced Welding**Grades: 11-12 Credits: 2.0****Prerequisite: Introduction to Metal Working, skills test, record of shop safety****7832 Advanced Welding II****Grade: 12 Credits: 2.0****Prerequisite: Advanced Welding, record of shop safety**

Have you ever wondered what welding has to offer you? This two period course will give an in-depth coverage of METAL FABRICATION & WELDING. Students will gain a greater understanding of what the welding industry has to offer. Opportunities to participate in professional student organizations, contests for student projects/ welding ability, and industry certifications are available in this course. Certifications may include: AWS Welding Certification, NCCER safety in construction, and OSHA 10-hr. certification. Dual Credit may be possible through St. Philip's College.

7833 Advanced Precision Metal Manufacturing**Grades: 11-12 Credit: 3.0****Prerequisite: Application and TSI Assessment**

This course is Year 1 of the Advanced Technology and Manufacturing Academy. An approved application is required. This course is taught off-site at the St. Philips Southwest Campus.

7834 Manufacturing Engineering**Grades: 12 Credit: 3.0****Prerequisite: Advanced Precision Metal Manufacturing**

This course is Year 2 of the Advanced Technology and Manufacturing Academy. An approved application is required. This course is taught off-site at the St. Philips Southwest Campus.

Arts, A/V Technology and Communication Cluster Courses

Course #	Course	Credit	Grade	Recommended and/or Prerequisite
7721	Principles of Arts, Audio Video Technology, and Communication	0.5	9-12	None
7531	Graphic and Design Illustration	1.0	10-12	Principles of Arts, AV Technology and Communication
7532	Animation	1.0	10-12	Principles of Arts, AV Technology and Communication
7533	Advanced Animation	2.0	11-12	Animation I
7534	Animation 3	2.0	11-12	Advanced Animation
6821	Digital Photography	1.0	11-12	Graphic Design
7722	Introduction to Audio/Video Production	1.0	10-12	Principles of Arts, AV Technology and Communication
7723	Audio/Video Production 1	2.0	11-12	Introduction to Audio/Video Production
7724	Audio/Video Production 2	2.0	12	Audio/Video Production 1

7721 Principles of Arts, Audio Video Technology, and Communications

Grades: 9-12 Credit: 0.5

Prerequisite: None

Careers in the Arts, Audio/Video Technologies and Communication start with the principles class as the prerequisite for Animation, Radio-TV-Film and Graphic Design. Students will work with technology applications and gain an academic foundation and a proficiency in oral and written communication. It will provide students with a fundamental understanding of multifaceted career opportunities.

7531 Graphic and Design Illustration

Grades: 10-12 Credit: 1.0

Recommendation Prerequisite: Principles of Arts, AV Technology and Communication

This course is an introduction to skills required for a career in graphic design and illustration. Students will develop knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications careers. Students will develop an understanding of the industry with a focus on fundamental elements and principles of visual art and design.

7532 Animation

Grades: 10-12 Credit: 1.0

Recommendation Prerequisite: Principles of Arts, AV Technology and Communication

This course is designed for students who want a career in Animation. Students will design projects using various software packages and PCs. Students will develop an understanding of depth and dimension as well as spatial relations.

7533 Advanced Animation

Grades: 11-12 Credit: 2.0

Prerequisite: Animation

The advanced animation course will use 3D modeling and various computer software packages to complete animation projects. Students will work on advance motion development of objects with the various tools.

7534 Animation III

Grades: 11-12 Credits: 2.0

Animation III is designed to provide you with advanced skills in traditional animation, digital media and game design. In this course, students will engage in teamwork activities as well as working with industry and community clients. Students will also develop an individual animated reel and develop marketing skills that are essential in the industry.

6821 Digital Photography

Grades: 11-12 Credits: 1.0

Prerequisite: Recommend Graphic Design

This course will help the students become well rounded in the fundamentals of digital photography. Four areas of instruction will be emphasized: How cameras work, how composition works, how lighting works, and how to use photo editing software. (As of the printing of this catalog, this course is pending administration and board approval)

7722 Introduction to Audio/Video Production

Grades: 10-12 Credit: 1.0

Recommendation Prerequisite: Principles of Arts, AV Technology and Communication

This is the introductory course for careers in audio and video technologies. Students will understand the industry and fully understand pre-production development. Pre-production development will include script writing, using various cameras and audio recording devices and film projects. Laws and guidelines that affect the broadcast industry will be discussed.

7723 Audio/Video Production I**Grades: 11-12 Credit: 2.0****Prerequisite: Intro to Audio/Video Production**

Students will work with audio and video technologies to create movies and television broadcast production projects. Students will work on advance audio and video techniques such as music production and television broadcasting. Students will perfect roles in film and television production.

7724 Audio/Video Production II**Grade: 12 Credit: 2.0****Prerequisite: Audio/Video Production I**

Students will work in a non-school broadcast environment either at a television or radio station. Students will test for certification accreditation in the course work.

Transportation, Distribution, and Logistics Cluster Courses

Course #	Course	Credit	Grade	Recommended and/or Prerequisite
7641	Automotive Technology	2.0	11-12	Application and Accuplacer test
7642	Advanced Auto Technology	2.0	11-12	Year 1 of Auto Tech
7651	Practicum in Transportation, Distribution, and Logistics	3.0	11-12	Application and Accuplacer test
7652	Advanced Aircraft Technology	3.0	12	Year 1 of Aerospace Academy

7641 Automotive Technology**Grades: 11-12 Credit: 2.0****Prerequisite: Application and TSI Assessment**

This course is at St. Philip's College. An approved application is required. Transportation is not provided.

7642 Advanced Auto Technology**Grades: 12 Credit: 2.0****Prerequisite: Year 1 of Auto Tech**

This course is at St. Philip's College. An approved application is required. Transportation is not provided.

7651 Practicum in Transportation, Distribution, and Logistics I**Grades: 11-12 Credit: 3.0****Prerequisite: Application and TSI Assessment**

This course is Year 1 of the Alamo Area Aerospace Academy. An approved application is required.

7652 Advanced Aircraft Technology**Grades: 12 Credit: 3.0****Prerequisite: Year 1 of Alamo Area Aerospace Academy**

This course is Year 2 of the Alamo Area Aerospace Academy. An approved application is required.

CAREER PREPARATION COURSES

Course #	Course	Credit	Grade	Recommended and/or Prerequisite
9010	Vocational Adjustment Coop Class	1.0	10-12	Recommended by ARD Committee
9011	VAC Work Release	1.0-8.0	10-12	Recommended by ARD Committee

9010 Vocational Adjustment Cooperative Class**Grades: 10-12 Credit: 1.0****Prerequisite: Recommended by ARD Committee**

The students will learn the skills needed to gain and maintain employment. The class will teach the student how to complete job applications, prepare resumes, and go through the interview process. The student will learn to interpret paycheck data, maintain checking and savings accounts, and develop a personal budget.

9011 VAC Work Release**Grades: 10-12 Credits: 1.0-8.0****Prerequisite: Recommended by ARD Committee**

This Special Education elective is designed for the upper level student who is employed off campus. The V.A.C. instructor will monitor job performance routinely during each semester. The student will earn from 1-8 credits per year as determined by the ARD Committee