Career and Technical Education

- Agriculture, Food & Natural Resources
- Architecture & Construction
- A/V Technology & Communication
- Finance
- Business Management & Administration
- Health Science
- Education & Training
- Public Safety, Corrections & Security
- Hospitality & Tourism
- Human Services
- Information Technology
- Transportation, Distribution & Logistics
- Marketing
- Manufacturing
- Science, Technology, Engineering & Mathematics
### CAREER AND TECHNOLOGY EDUCATION COURSES

#### AGRICULTURE, FOOD AND NATURAL RESOURCES (AFNR)
- Principles of Agriculture, Food and Natural Resources
- Livestock Production
- Small Animal Management
- Wildlife, Fisheries, Ecology Management
- Principles & Elements of Floral Design
- Ag Mechanics & Metal Tech
- Veterinary Medical Application
- Math Applications
- Landscape Design and Turf Grass Management
- Horticulture Science
- Ag Facilities Design & Fabrication

#### ARTS, AUDIO/VIDEO TECHNOLOGY AND COMMUNICATIONS
- Principles of Arts, Audio/Video Technology & Communications
- Professional Communications
- Audio Video Production
- Fashion Design
- Graphic Design & Illustration
- Advanced Audio/Video Production
- Animation
- Advanced Graphic Design & Illustration
- Commercial Photography
- Practicum in Audio/Video Production
- Problems & Solutions in Audio/Video Production
- Practicum in Fashion Design
- Problems & Solutions in Fashion Design
- Advanced Animation
- Problems & Solutions in Graphic Design & Illustration
- Practicum in Graphic Design & Illustration
- Advanced Commercial Photography

#### BUSINESS MANAGEMENT AND ADMINISTRATION
- Principles of Business, Marketing & Finance
- Business Information Management I
- Virtual Business
- Business Information Management II
- Business Management
- Career Preparation
- Global Business

#### HEALTH SCIENCE
- Principles of Health Science
- Health Science
- Anatomy & Physiology
- Practicum in Veterinary Technology
- Practicum in Health Science - Clinical Internship
- Practicum in Health Science - Certified Nurse Aid
- Practicum in Health Science - Pharmacy Technician

#### INFORMATION TECHNOLOGY
- Principles of Information Technology
- Digital Interactive Media
- Computer Programming
- Advanced Computer Programming
- Problems & Solutions in Information Technology
- Research in Information Technology Solutions

#### MARKETING
- Principles of Business, Marketing & Finance
- Sports & Entertainment Marketing
- Entrepreneurship
- Advertising & Sales promotion
- Marketing Dynamics
- Problems & Solutions in marketing
- Career Preparation

#### LAW, PUBLIC SAFETY, CORRECTIONS, AND SECURITY
- Principles of Law, Public Safety, Corrections and Security
- Law Enforcement I
- Court Systems & Practices
- Law Enforcement II
- Practicum in Law, Public Safety, Corrections and Security
- Forensic Science

#### SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM)
- Concepts of Engineering & Technology
- Electronics
- Engineering Design & Preparation
- Robotics & Animation
- Advanced Engineering Design & Preparation
- Problems & Solutions in STEM

#### ARCHITECTURE AND CONSTRUCTION
- Principles of Architecture and Construction
- Interior Design
- Architectural design
- Construction Management
- Advanced Interior Design
- Advanced Architectural Design
- Advanced Construction Management
- Mill & Cabinet Making
- Practicum in Interior Design
- Problems & Solutions in Interior Design
- Practicum in Architectural Design
- Practicum in Construction
- Problems & Solutions in Construction

#### FINANCE
- Principles of Business, Marketing and Finance
- Banking & Financial Services
- Money Matters
- Accounting I
- Securities & Investments
- Accounting II
- Financial Analysis

#### HUMAN SERVICES
- Principles of Human Services
- Child Development
- Interpersonal Skills
- Dollars & Sense
- Introduction to Cosmetology
- Child Guidance
- Cosmetology I
- Family & Community Services
- Cosmetology II
- Problems & Solutions in Cosmetology

#### MANUFACTURING
- Principles of Manufacturing
- Welding
- Advanced Welding
- Practicum in Manufacturing
- Problems & Solutions in Manufacturing

#### TRANSPORTATION, DISTRIBUTION, AND LOGISTICS
- Energy, Power, & Transportation Systems
- Automotive Technology
- Advanced Automotive Technology
- Practicum in Automotive Technology
- Problems & Solutions in Transportation, Distribution & Logistics
AGRICULTURE, FOOD AND NATURAL RESOURCES

Principles of Agriculture, Food and Natural Resources (AFNR)
1 Credit

Equine Science
0.5 Credit
Livestock Production
0.5 Credit
Small Animal Management
0.5 Credit
Wildlife, Fisheries Ecology Mgmt
0.5 Credit
Principles & Elements of Floral Design **
1.0 Credit
Ag Mechanics & Metal Tech
1.0 Credit

Veterinary Medical Application
1.0 Credit
Math Applications ***
1.0 Credit
Rudder High School
Landscape Design and Turf Grass Mgmt
1.0 Credit
Horticulture Science
1.0 Credit
Ag Facilities Design and Fabrication ****
1.0 Credit

Advanced Animal Science *
1.0 Credit
Practicum in AFNR ****
2.0 Credits
Advanced Plant & Soil Science *
1.0 Credit
Problem and Solutions in AFNR
1.0 Credit
New for 2013 - 2014

*Course approved for 4th Science Credit
** Course approved for Fine Arts Credit
***Course approved for Math Credit
**** Possible Dual Credit - Blinn
### Principles of Agriculture, Food and Natural Resources (AFNR) 810100

**Grade Level:** Grades 9 - 10  
**Course Length:** 2 Semesters  
**Credit:** 1.0  
A comprehensive course for first year agriculture students that introduces them to the international scope of agriculture, food, and natural resources and its effect upon society. It includes topics related to career development, building leadership skills through communication practices, and developing technical knowledge and skills related to AFNR. *Lab fees and/or supplies may be required.*

### Equine Science 840010

**Grade Level:** 10 - 12  
**Course Length:** 1 Semester  
**Credit:** 0.5  
Equine Science prepares students for a career in the field of animal sciences as it relates to horse/equine care and production. Students will learn the responsibilities of ownership, health, facilities management, and anatomy and physiology.

### Livestock Production 820110

**Grade Level:** 10 - 12  
**Course Length:** 1 Semester  
**Credit:** 0.5  
Livestock Production is a course designed to prepare students for a career in the field of animal science. Students will learn employability characteristics, technical skills dealing with livestock, animal health, and business operating plans. Within these areas, they will learn animal health, anatomy and physiology, feeding, breeding, and facility design and management. 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 830010

**Grade Level:** 10 - 12  
**Course Length:** 1 Semester  
**Credit:** 0.5  
Small Animal Management is a course designed to prepare students for a career in the field of animal science as it relates to small animal care and production. Students will learn responsibility of small animal ownership, animal welfare, care and management, and examine career opportunities. Small animal species to be addressed in this course may include, but are not limited to, small mammals, amphibians, reptiles, avian, dogs, and cats.
Wildlife, Fisheries, and Ecology Management 820010

Grade Level: 10 - 12  
Pre-requisite: Principles of AFNR  
Course Length: 1 Semester  
Credit: 0.5

This course is designed to inform students about wildlife management and outdoor recreation. Hunting and fishing skills and safety are taught as well as water and boating safety. State certification in these areas is available to students who qualify (state-mandated fee required for certification). Wise use of our natural resources and career opportunities are also covered. The student will complete the state required Hunter Safety course. Identification of wildlife and fish, state and federal policies and wildlife careers are also covered.

Agricultural Mechanics and Metal Technologies 820700

Grade Level: 10 - 12  
Pre-requisite: Principles of AFNR  
Course Length: 2 Semesters  
Credit: 1.0

To be prepared for careers in agricultural power, structural and technical systems, students need to attain technical knowledge and skills related to power, structural, and technical agricultural systems and the industry. 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. *Lab fees and/or supplies may be required.*

Principles and Elements of Floral Design 820300

Grade Level: 10 - 12  
Pre-requisite: Principles of AFNR  
Course Length: 2 Semesters  
Credit: 1.0

This lab based technical course demonstrates the principles and techniques related to floral design as well as developing an understanding of the management of floral enterprises. Students will learn how to make homecoming mums, symmetrical and asymmetrical arrangements as well as learn about balance, color, and symmetry. *Successful completion of this course fulfills the Fine Arts graduation requirement.* *Lab fees and/or supplies may be required.*

Veterinary Medical Applications 840400

Grade Level: 11 - 12  
Pre-requisite: Small Animal Management, Livestock Prod., or Equine Science  
Course Length: 2 Semesters  
Credit: 1.0

This course is designed for students preparing for careers in the field of animal science. Topics covered include, but are not limited to career opportunities, entry requirements, industry expectations, animal systems, and veterinary practices as they relate to both large and small animal species.
### Agricultural Facilities Design and Fabrication

**Grade Level:** 11 - 12  
**Pre-requisite:** Agricultural Mechanics and Metal Technologies  
**Course Length:** 2 Semesters  
**Credit:** 1.0

This course will provide students with the knowledge and skills necessary to consider a career in constructing agricultural and building systems. The student will have the opportunity to develop skills in electric arc welding, in oxy-fuel welding, and in the construction of equipment needed in agriculture uses. Areas will include safety procedures, use and identification of metals, design of structures, repairs of equipment, and use of hand and power tools related to metal fabrication. *Lab fees and/or supplies may be required.*

### Landscape Design and Turf Grass Management

**Grade Level:** 11 - 12  
**Pre-requisite:** Principles of AFNR  
**Course Length:** 2 Semesters  
**Credit:** 1.0

Landscape Design and Turf Grass Management is a lab based technical course designed to develop knowledge and skills associated with landscape and turf grass management. Students will identify environments, aesthetic and financial benefits of landscaped sites, perform landscape business procedures, analyze the cost and maintenance of tools, equipment and structures used in the landscape industry and perform turf grass establishment and maintenance techniques. *Lab fees and/or supplies may be required*

### Horticulture Science

**Grade Level:** 11 - 12  
**Pre-requisite:** Principles of AFNR  
**Course Length:** 2 Semesters  
**Credit:** 1.0

Horticulture Science is a lab based technical course designed to develop knowledge and skills associated with the management and production of plants, identifying structures and physiological processes used in plant production, managing and controlling common pests and marketing plant products. *Lab fees or supplies may be required*

### Mathematical Applications in AFNR

**Grade Level:** 11 - 12  
**Pre-requisite:** Principles of AFNR, Algebra I and Geometry  
**Course Length:** 2 Semesters  
**Credit:** 1.0

Want to know how many gallons of water fall in a quarter inch rain over thirty acres? What’s the best way to finance major farm equipment? All these questions and more can be answered in Mathematical Applications in AFNR. This course is a mathematics credit taught with an agricultural base, and fulfills the requirements for a recommended diploma; follows geometry and precedes Algebra II.
<table>
<thead>
<tr>
<th>Course Name</th>
<th>Code</th>
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</thead>
<tbody>
<tr>
<td>Advanced Animal Science</td>
<td>840200</td>
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<tr>
<td>Advanced Plant and Soil Science</td>
<td>840500</td>
</tr>
<tr>
<td>Practicum in Agriculture, Food, and Natural Resources</td>
<td>840700</td>
</tr>
<tr>
<td>Problems and Solutions in AFNR</td>
<td>880100</td>
</tr>
</tbody>
</table>

**Advanced Animal Science**

Grade Level: 12  
Pre-requisite: Small Animal Management, Livestock Production, or Equine Science  
Course Length: 2 Semesters  
Credit: 1.0

Want to be a vet? Advanced Animal Science is a lab based technical course that allows students to explore various areas of livestock production, through hands-on approach learning. Nutrition, genetics, breeding systems, anatomy and physiology, health and selection are some of the areas that will be covered. **Successful completion of this course fulfills the 4th Science graduation requirement.** Lab fees and/or supplies may be required.

**Advanced Plant and Soil Science**

Grade Level: 12  
Pre-requisite: Horticulture Science  
Course Length: 2 Semesters  
Credit: 1.0

This lab based, research oriented course provides a way of learning about the natural world. Investigations, laboratory practices, and field exercises will be used to develop an understanding of current plant and soil science. Lab fees and/or supplies may be required.

**Practicum in Agriculture, Food, and Natural Resources**

Grade Level: 12  
Pre-requisite: Agriculture Facilities Design and Fabrication  
Course Length: 2 Semesters  
Credit: 2.0

This laboratory based class offers students an opportunity to earn Technical dual credit. Students will further their knowledge of welding by completing welding projects. Techniques learned include oxy-fuel welding and cutting, shielded metal arc welding, and gas metal arc welding. Lab fees and/or supplies may be required.

**Problems and Solutions in AFNR**

Grade: 11 – 12  
Pre-requisite: Teacher Approval  
Semester Length: 2 Semesters  
Credit: 1.0

This course is a supervised research study/project-based class where students will apply knowledge and skills from previous AFNR course in a related advanced/specialized field of study. Students are required to submit a formal project plan within 15 school days after enrollment in the course. The plan should specify the additional concepts and/or technologies that will be studied and utilized, along with an overview of the culminating project. Lab fees and/or supplies may be required.
ARCHITECTURE AND CONSTRUCTION

Principles of Architecture and Construction
0.5 Credit

Interior Design
1.0 Credit

Advanced Interior Design
1.0 Credit

Architectural Design
1.0 Credit

Advanced Architectural Design
2.0 Credits

Advanced Construction Management
2.0 Credits
Rudder High School

Construction Management
1.0 Credit
Rudder High School

Mill & Cabinetmaking Technology
2.0 Credits
Rudder High School
New for 2013 - 2014

Proactices & Solutions in Interior Design
1.0 Credit
New for 2013 - 2014

Proactices & Solutions in Architectural Design
2.0 Credits
New for 2013 - 2014

Proactices & Solutions in Architectural Design
1.0 Credit
New for 2013 - 2014

Proactices & Solutions in Construction
2.0 Credits
Rudder High School

Proactices & Solutions in Construction
1.0 Credit
Rudder High School
New for 2013 - 2014
<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Code</th>
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<tbody>
<tr>
<td>Principles of Architecture and Construction</td>
<td>811010</td>
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<tr>
<td>Interior Design</td>
<td>821900</td>
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<tr>
<td>Architectural Design</td>
<td>821100</td>
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<tr>
<td>Construction Management</td>
<td>831200</td>
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</tbody>
</table>

**Principles of Architecture and Construction**

- **Grade Level:** 9 - 12
- **Course Length:** 1 Semester
- **Pre-requisite:** None
- **Credit:** 0.5

Providing an overview to the various fields of architecture, interior design, construction science, and construction technology. Students use self knowledge, educational, and career information to set and achieve realistic career and educational goals.

**Interior Design**

- **Grade Level:** 10 - 12
- **Course Length:** 2 Semesters
- **Pre-requisite:** Principles of Architecture and Construction
- **Credit:** 1.0

Students will learn about design, color and texture theories for interior and exterior design. Students will design models for presentations. Interior design addresses psychological, physiological and sociological needs of individuals by enhancing the environments in which they live and work.

**Architectural Design**

- **Grade Level:** 10 - 12
- **Course Length:** 2 Semesters
- **Pre-requisite:** Principles of Architecture and Construction
- **Credit:** 1.0

In this course, 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.

**Construction Management**

- **Grade Level:** 10 - 12
- **Course Length:** 2 Semesters
- **Pre-requisite:** Principles of Architecture and Construction
- **Credit:** 1.0

Students gain knowledge and skills specific to those needed to enter the work force as carpenters or building maintenance supervisors or build a foundation toward a postsecondary degree in architecture, construction science, drafting, or engineering. Construction Management includes the knowledge of the design techniques and tools related to the management of architectural and engineering projects.
<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Grade Level</th>
<th>Pre-requisite</th>
<th>Course Length</th>
<th>Credit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Interior Design</td>
<td>831900</td>
<td>11 - 12</td>
<td>Principles of Interior Design</td>
<td>2 Semesters</td>
<td>1.0</td>
<td>Advanced Interior Design students will extend their knowledge in interior/exterior design. A professional presentation reflecting a design board for interior and exterior of a building will be required. Individuals will use knowledge and skills needed to make wise consumer decisions or increase productivity in a work place.</td>
</tr>
<tr>
<td>Advanced Architectural Design</td>
<td>831100</td>
<td>11 - 12</td>
<td>Architectural Design</td>
<td>2 Semesters</td>
<td>2.0</td>
<td>Students gain advanced knowledge and skills to enter a career in architecture and construction or to prepare a foundation toward a postsecondary degree in architecture, construction science, drafting, interior design, and landscape architecture. Advanced Architectural design includes the advanced 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.</td>
</tr>
<tr>
<td>Advanced Construction Management</td>
<td>841200</td>
<td>11 - 12</td>
<td>Construction Management</td>
<td>2 Semesters</td>
<td>2.0</td>
<td>In Advanced Construction Management students will continue to build knowledge and skills needed to enter the workforce as carpenters or building maintenance supervisors or build a foundation toward a postsecondary degree in architecture, construction science, drafting, or engineering. Advanced Construction Management includes the knowledge of the design, techniques, and tools related to the management of architectural and engineering projects.</td>
</tr>
<tr>
<td>Mill and Cabinetmaking Technology</td>
<td>821200</td>
<td>11 - 12</td>
<td>Construction Management</td>
<td>2 Semesters</td>
<td>2.0</td>
<td>Students gain knowledge and skills specific to those needed to enter the work force in the area of mill work and cabinet manufacturing and installation. The student may also apply these skills to professions in carpentry or building maintenance supervision or use the skills as a foundation for a postsecondary degree in construction management, architecture, or engineering. Students acquire knowledge and skills in cabinet design, tool usage, jointing methods, finishes, and numerical and computer control production methods. (Lab fees and supplies may be required</td>
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<td>Course Name</td>
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<tr>
<td>Practicum in Interior Design</td>
<td>841900</td>
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<tr>
<td>Practicum in Architectural Design</td>
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<tr>
<td>Practicum in Construction</td>
<td>851200</td>
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<tr>
<td>Problems and Solutions in Construction</td>
<td>881200</td>
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</table>

**Practicum in Interior Design**

**Grade Level:** 12  
**Pre-requisite:** Advanced Interior Design  
**Course Length:** 2 Semesters  
**Credit:** 2.0

This course is an occupationally specific course designed to provide technical instruction in interior design. Safety and career opportunities are included in addition to work ethics and interior design study.

**Practicum in Architectural Design**

**Grade Level:** 12  
**Pre-requisite:** Advanced Architectural Design  
**Course Length:** 2 Semesters  
**Credit:** 2.0

This course is an occupationally specific course designed to provide technical instruction in architectural design. Safety and career opportunities are included in addition to work ethics and architectural design study.

**Practicum in Construction**

**Grade Level:** 12  
**Pre-requisite:** Advanced Construction Management or Mill and Cabinet Making  
**Course Length:** 2 Semesters  
**Credit:** 2.0

The practicum is designed to give students supervised technical instruction. Safety and career opportunities are included in addition to work ethics and job-related study in the classroom.

**Problems and Solutions in Construction**

**Grade Level:** 11 - 12  
**Pre-requisite:** Construction Management  
**Course Length:** 2 Semesters  
**Credit:** 1.0

This course is a supervised research study project-based class where students will apply knowledge and skills from previous construction courses in a related advanced/specialized field of study. Students are required to submit a formal project plan within 15 school days after enrollment in the course. The plan should specify the additional concepts and/or technologies that will be studied and utilized, along with an overview of the culminating project.
Problems and Solutions in Architectural Design  

Grade Level: 11 - 12  
Pre-requisite: Architectural Design  
Course Length: 2 Semesters  
Credit: 1.0  
This course is a supervised research study project-based class where students will apply knowledge and skills from previous drafting courses in a related advanced/specialized field of study. Students are required to submit a formal project plan within 15 school days after enrollment in the course. The plan should specify the additional concepts and/or technologies that will be studied and utilized, along with an overview of the culminating project.

Problems and Solutions in Interior Design  

Grade Level: 11 - 12  
Pre-requisite: Interior Design  
Course Length: 2 Semesters  
Credit: 1.0  
This course is a supervised research study project-based class where students will apply knowledge and skills from previous Interior Design courses in a related advanced/specialized field of study. Students are required to submit a formal project plan within 15 school days after enrollment in the course. The plan should specify the additional concepts and/or technologies that will be studied and utilized, along with an overview of the culminating project.
ARTS, AUDIO/VIDEO TECHNOLOGY AND COMMUNICATIONS

Principles of Arts, Audio/Video Technology and Communications

Professional Communications *
0.5 Credit

Audio Video Production
1.0 Credit

Advanced Audio/Video Production
2.0 Credits

Fashion Design
1.0 Credit

Advanced Fashion Design
2.0 Credits

Graphic Design and Illustration
1.0 Credit

Animation
1.0 Credit

Advanced Graphic Design and Illustration
2.0 Credits

Commercial Photography
1.0 Credit

Practicum in Audio/Video Production
2.0 Credits

Problems & Solutions in Audio/Video Production
1.0 Credit New for 2013 - 2014

Practicum in Fashion Design
2.0 Credits

Problems & Solutions in Fashion Design
1.0 Credit New for 2013 - 2014

Advanced Animation
2.0 Credits

Problems & Solutions in Graphic Design & Illustration
1.0 Credit New for 2013 - 2014

Practicum in Graphic Design & Illustration
2.0 Credits

Advanced Commercial Photography
2.0 Credits

Problems & Solutions in Fashion Design
1.0 Credit New for 2013 - 2014

*Course approved for Speech Credit
**Principles of Arts, A/V, Technology and Communications**

Grade Level: 9 - 10
Course Length: 1 Semester
Pre-requisite: None
Credit: 0.5

Students will be expected to develop an understanding of the various and multifaceted career opportunities in this cluster and the knowledge, skills, and educational requirements for those opportunities. Students will learn about animation, photography, graphic design and illustration, fashion design, and audio video production.

**Professional Communications**

Grade Level: 9 - 12
Course Length: 1 Semester
Pre-requisite: None
Credit: 0.5

This high school speech course is designed to provide opportunities for students to understand and develop effective interpersonal communication skills for the 21st Century. Professional Communications blends written, oral, and graphic communication into a career-based, business environment. Students will prepare, present, and evaluate a variety of multi-media presentations that are appropriate for the professional setting.

**Audio/Video Production**

Grade Level: 10 - 12
Course Length: 2 Semesters
Pre-requisite: Principles of Arts, A/V Tech & Communications
Credit: 1.0

Audio/Video Production is a course designed to provide training for entry level employment in the radio, television, and film industries. This course is designed to teach students the pre-production, production, and post-production phases, as well as nonlinear editing using Adobe software.

**Fashion Design**

Grade Level: 10 - 12
Course Length: 2 Semesters
Pre-requisite: Principles of Arts, A/V Tech & Communications
Credit: 1.0

Students will develop an understanding of fashion, textile and apparel industries. They will design apparel products using principles of effective design: body types, clothing silhouettes, and fabric selection. They will use basic tools and techniques for fashion drawing, draping, and flat pattern methods for fitting a garment. Identifying characteristics of quality apparel construction as a basis for consumer decision making is included.
<table>
<thead>
<tr>
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<tr>
<td>Graphic Design and Illustration</td>
<td>812100</td>
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<tr>
<td>Grade Level: 10 - 12</td>
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</tr>
<tr>
<td>Pre-requisite: Principles of Arts, A/V Tech &amp; Communications</td>
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<tr>
<td>Course Length: 2 Semesters</td>
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<tr>
<td>Credit: 1.0</td>
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<tr>
<td>A course for creative and artistic students, this course will appeal to students who enjoy designing and creating projects that communicate visually. The course is a creative study of the art of visual communications and advertising through creativity, illustration, design, analysis, approach, and technical skills. Students will improve communication skills by learning to communicate visually, defend/describe their work, interview clients, present complicated layouts, and develop electronic and print portfolios. Possible certifications include Adobe Certified Associate I Photoshop.</td>
<td></td>
</tr>
</tbody>
</table>

| Advanced Audio/Video Production              | 832400 |
| Grade Level: 11 - 12                        |        |
| Pre-requisite: Audio/Video Production        |        |
| Course Length: 2 Semesters                   |        |
| Credit: 2.0                                  |        |
| Advanced Audio/Video Production is a course designed for students to continue learning all three phases of the production process as well as using nonlinear editing such as Adobe software. This course is project based. Students write, storyboard, video tape, and edit their advanced projects. |        |

| Advanced Fashion Design                     | 832200 |
| Grade Level: 11 - 12                        |        |
| Pre-requisite: Fashion Design               |        |
| Course Length: 2 Semesters                  |        |
| Credit: 2.0                                  |        |
| Students will develop their design portfolio of fashion drawings. They will develop an advanced technical understanding of fashion with emphasis on design and production. Students will analyze international design influences and trends and the planning production of garments. |        |

| Animation                                    | 822100 |
| Grade Level: 11 - 12                        |        |
| Pre-requisite: Graphic Design and Illustration |        |
| Course Length: 2 Semesters                  |        |
| Credit: 1.0                                  |        |
| Students will study several aspects of the animation industry. Topics will include the history and development of the industry, to current trends and techniques. Students will create 2D and 3D animations using current industry software, such as Adobe Flash, 3D Studio Max, Maya, and Bryce. The student will create 2D animations for use in games, websites, industry control panels, company logos, advertising, and local current business applications. For 3D imaging, students will learn the basics of modeling, applying materials, and key-frame animation. Possible certification includes Autodesk® Studio 3-D Max. |
Advanced Graphic Design and Illustration  822300

Grade Level:  11 - 12     Pre-requisite:  Graphic Design and Illustration
Course Length:  2 Semesters     Credit:  2.0
Advanced Graphic Design and Illustration will be a more in-depth study of illustration and visual communication with demonstrated ability to create, illustrate and communicate complicated ideas or designs with regards to technique and layout skills. Advanced students will be involved in projects for real world situations and clients. Possible certifications include Adobe Certified Associate | Photoshop.

Commercial Photography  822600

Grade Level:  11 - 12     Pre-requisite:  Graphic Design and Illustration
Course Length:  2 Semesters     Credit:  1.0
For the shutterbugs! For students who love to take pictures but want to take it to the next level -- commercial photography covers everything from setting up a shot to delivering the finished product. Students will develop knowledge of different types of cameras and lenses and their applications to photography. They will also develop the knowledge and skills necessary to analyze customer needs and preferences, apply the principles of art to photography, and develop photographs using a variety of production processes.

Advanced Animation  832100

Grade Level:  11 - 12     Pre-requisite:  Animation
Course Length:  2 Semesters     Credit:  2.0
Careers in animation span all aspects of motion graphics. Students will be expected to create two- and three-dimensional animations. Students will use computers to model, light, surface texture, animate, camera shoot, and render characteristics and projects as directed by the instructor. The instruction also assists students seeking careers in the animation industry. Possible certifications include Autodesk® Studio 3-D Max.

Advanced Commercial Photography  832600

Grade Level:  12     Pre-requisite:  Commercial Photography
Course Length:  2 Semesters     Credit:  2.0
Advanced Commercial Photography develops advanced skills and knowledge in commercial photography projects. Students’ knowledge will increase in creating photographs for defined purposes, applying elements and principles of design to projects, choosing appropriate camera equipment for projects, and selecting appropriate production processes for the finished product.
Practicum in Audio/Video Production

Grade Level: 12
Pre-requisite: Advanced Audio/Video Production
Course Length: 2 Semesters
Credit: 2.0
Careers in audio and video technology and film production span all aspects of the audio/video communications industry. Within this context, in addition to developing advanced technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop an increasing understanding of the industry with a focus on applying pre-production, production, and post-production audio and video activities in a studio environment. This course may be implemented in an advanced audio, video, or animation format. Instruction may be delivered through lab-based classroom experiences.

Practicum in Fashion Design

Grade Level: 12
Pre-requisite: Advanced Fashion Design
Course Length: 2 Semesters
Credit: 2.0
Careers in fashion span all aspects of the textile and apparel industries. Within this context, in addition to developing advanced technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop an advanced technical understanding of the business aspects of fashion, with emphasis on promotion and retailing. Instruction may be delivered through lab-based classroom experiences.

Practicum in Graphic Design & Illustration

Grade Level: 12
Pre-requisite: Advanced Graphic Design and Illustration or Animation
Course Length: 2 Semesters
Credit: 2.0
Careers in graphic design and illustration span all aspects of the advertising and visual communications industry. Within this context, in addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop a technical understanding of the industry with a focus on skill proficiency. Instruction may be delivered through lab-based classroom experience.

Problems and Solutions in A/V Production

Grade Level: 11-12
Pre-requisite: Teacher approval
Course Length: 2 Semesters
Credit: 1.0
This course is a supervised research study project-based class where students will apply knowledge and skills from previous A/V production courses in a related advanced/specialized field of study. Students are required to submit a formal project plan within 15 school days after enrollment in the course. The plan should specify the additional concepts and/or technologies that will be studied and utilized, along with an overview of the culminating project.
<table>
<thead>
<tr>
<th>Problems and Solutions in Fashion Design</th>
<th>882200</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grade Level:</strong> 11-12</td>
<td><strong>Pre-requisite:</strong> Teacher approval</td>
</tr>
<tr>
<td><strong>Course Length:</strong> 2 Semesters</td>
<td><strong>Credit:</strong> 1.0</td>
</tr>
<tr>
<td>This course is a supervised research study project-based class where students will apply knowledge and skills from previous fashion design courses in a related advanced/specialized field of study. Students are required to submit a formal project plan within 15 school days after enrollment in the course. The plan should specify the additional concepts and/or technologies that will be studied and utilized, along with an overview of the culminating project.</td>
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<table>
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<td></td>
</tr>
</tbody>
</table>
BUSINESS MANAGEMENT AND ADMINISTRATION

Principles of Business, Marketing & Finance
0.5 Credit

Business Information Management I
1.0 Credit

Virtual Business
0.5 Credit

Business Law
0.5 Credit

Business Information Management II
1.0 Credit

Business Management
1.0 Credit

Career Preparation
3.0 Credits

Global Business
1.0 Credit
### Principles of Business, Marketing, and Finance

**Grade Level:** 9 - 10  
**Pre-requisite:** None  
**Course Length:** 1 Semester  
**Credit:** 0.5  
In Principles of Business, Marketing, and Finance, students gain knowledge and skills in economics 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

**Grade Level:** 10 - 12  
**Pre-requisite:** Principles of Business, Marketing and Finance  
**Course Length:** 2 Semesters  
**Credit:** 1.0  
This course contains essential skills for college and workforce readiness. Students will learn the Microsoft Office Suite (Word, Excel, PowerPoint, and Access) and its application to secondary education, and the workplace. Students apply technical skills to create word-processing documents, develop spreadsheets, formulate databases, and make an electronic presentation using appropriate software.

### Virtual Business

**Grade Level:** 10 - 12  
**Pre-requisite:** Principles of Business, Marketing and Finance  
**Course Length:** 1 Semester  
**Credit:** 0.5  
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.

### Business Law

**Grade Level:** 10 - 12  
**Pre-requisite:** Principles of Business, Marketing and Finance  
**Course Length:** 1 Semester  
**Credit:** 0.5  
Business Law students will gain knowledge and skills in business applications of contemporary legal issues which include: legal environment, business ethics, contracts, negotiable financial instruments, personal property, sales, warranties, business organizations, and real property. Students apply technical skills to address business applications of contemporary legal issues. 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.
Business Management 823200

Grade Level: 11 - 12  
Pre-requisite: Virtual Business and/or Business Law  
Course Length: 2 Semesters  
Credit: 1.0

The goal of this course is to increase student understanding of business management concepts, leadership skills, managerial functions, economic and social components of productivity, international business, human relations, develops and implements a business plan, changing nature of the business environment, business integrity, and career paths. Technology skills like accessing the Internet to research companies, visiting websites, and obtaining current information are integral to management careers in today's world.

Business Information Management II 833100

Grade Level: 11 - 12  
Pre-requisite: Business Information Management I  
Course Length: 2 Semesters  
Credit: 1.0

Business Information Management (BIM II) includes implementation of Microsoft Office in an advanced setting utilizing word processing, manipulation of spreadsheet data, use of charts and graphs to analyze business solutions, construction and design of database records. Students will also show an advanced degree of skill in the design and presentation of PowerPoint coupled with integration of sounds, pictures and/or video. Students will be able to create newsletters, brochures, forms and other desktop publications with project oriented individual and group activities.

Global Business 843200

Grade Level: 12  
Pre-requisite: Business Management  
Course Length: 2 Semesters  
Credit: 1.0

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.

Career Preparation 835200

Grade Level: 12  
Pre-requisite: At Least 16 years of Age and Reliable Transportation  
Course Length: 2 Semesters  
Credit: 3.0

This work-based course allows students to build upon the basic concepts and principles mastered in previous courses. In the classroom portion of the course, students will integrate skills from academic subjects, information technology, interpersonal communication, and supervisory/management training to make responsible decisions. Students will also receive industry-recognized training designed to make them more marketable and desirable in the workplace. Students are required to work 15 hours per week at an approved training site and must be employed at that site within 15 school days after enrollment in the course.
EDUCATION AND TRAINING

Principles of Education & Training
0.5 Credit

Human Growth & Development
1.0 Credit

Instructional Practices in Education & Training
1.0 Credit

Practicum in Education & Training
2.0 Credits
Principles of Education and Training 814410

Grade Level: 9 - 10 Pre-requisite: None
Course Length: 1 semester Credit: 0.5
Principles of Education and Training is designed to introduce learners to various careers available within the education and training career clusters. 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.

Human Growth and Development 824400

Grade Level: 10 - 12 Pre-requisite: Principles of Education and Training
Course Length: 2 semesters Credit: 1.0
Human Growth and Development provides an overview of human development across the lifespan with emphasis on the four developmental areas—physical, cognitive, emotional and social development. Evaluation of society, culture, legislation, theory, guidance techniques, and responsibilities are a part of the various age groups.

Instructional Practices in Education and Training 834400

Grade Level: 11 - 12 Pre-requisite: Human Growth and Development
Course Length: 2 semesters Credit: 1.0
Students work under the joint direction and supervision of the elementary/middle school teacher and the high school instructor. Students learn to plan and direct individualized instruction and group activities, prepare instructional materials, develop activities for educational environments and complete responsibilities of teachers in general.

Practicum in Education and Training 844400

Grade Level: 12 Pre-requisite: Instructional Practices in Education and Training
Course Length: 2 semesters Credit: 2.0
Practicum in Education and Training provides an advanced educational internship conducted with an exemplary teacher in one of Bryan ISD’s elementary or middle school classes. Students will plan and present lessons, supervise individualized instruction and group activities, prepare instructional materials, assist with record keeping, manage the physical environment and other teacher responsibilities.
### Principles of Business, Marketing, and Finance  
**Grade Level:** 9 - 10  
**Pre-requisite:** None  
**Course Length:** 1 Semester  
**Credit:** 0.5  
Will you make a good business owner or team member in the corporate world? In Principles of Business, Marketing, and Finance, students gain knowledge and skills in economics 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.

### Banking and Financial Services  
**Grade Level:** 10 - 12  
**Pre-requisite:** Principles of Business, Marketing and Finance  
**Course Length:** 1 Semester  
**Credit:** 0.5  
Students develop knowledge and skills in the economical, financial, technological, international, social, and ethical aspects of banking to become competent consumers, employees, and entrepreneurs. Students incorporate a broad base of knowledge that includes the operations, sales, and management of banking institutions to gain a complete understanding of how banks function within society.

### Money Matters  
**Grade Level:** 10 - 12  
**Pre-requisite:** Principles of Business, Marketing and Finance  
**Course Length:** 1 Semester  
**Credit:** 0.5  
Students will survey the management of personal and family finances: including budgeting, consumer buying, personal credit, savings, investment, insurance and retirement. In addition, this course will provide students with the skills necessary to live in today’s constantly-changing financial world. With personal bankruptcies and credit card debt increasing, the need for financial literacy within our high schools is critical.

### Accounting I  
**Grade Level:** 10 - 12  
**Pre-requisite:** Principles of Business, Marketing and Finance  
**Course Length:** 1 Semester  
**Credit:** 1.0  
Students will explore the field of accounting, as well as the economic, financial, technological, international, social, legal, and ethical issues related to the maintenance of financial records. Students will record, classify, summarize and analyze accounting information in order to communicate it effectively to others. Students will learn to formulate and interpret financial information used in management decision making. Students will learn these processes both on paper and electronically.
### Securities and Investments

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Code</th>
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<tbody>
<tr>
<td>Securities and Investments</td>
<td>833800</td>
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</tbody>
</table>

**Grade Level:** 11 - 12  
**Pre-requisite:** Banking & Financial Services and/or Money Matters  
**Course Length:** 2 Semesters  
**Credit:** 1.0  
As close to Wall Street as you can get in Bryan! This class focuses on the investment and security side of finance. Students will learn about monetary regulations, investing, how to run a financially secure business, managing portfolios, providing investment advice and how to develop a career in the securities industry.

### Accounting II

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Code</th>
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<tbody>
<tr>
<td>Accounting II</td>
<td>833700</td>
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</tbody>
</table>

**Grade Level:** 11 - 12  
**Pre-requisite:** Accounting I  
**Course Length:** 2 Semesters  
**Credit:** 1.0  
Students continue to explore the field of accounting. Students will include industry standards and the impact of economic, financial, technological, social, legal and ethical issues on the field. Students will integrate and interpret managerial and cost accounting information as it would relate to managerial decision making. Electronic methods to convey financial information would be employed.

### Financial Analysis

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<tbody>
<tr>
<td>Financial Analysis</td>
<td>843700</td>
</tr>
</tbody>
</table>

**Grade Level:** 12  
**Pre-requisite:** Accounting II or Securities and Investments  
**Course Length:** 2 Semesters  
**Credit:** 1.0  
Students apply technical skills to develop knowledge and skills in the economical, financial, technological, international, social, and ethical aspects of business to become competent consumers, employees, and entrepreneurs. Students develop analytical skills by actively evaluating financial results of multiple businesses, interpreting results for stakeholders, and presenting strategic recommendations for performance improvement.
Hammond Oliver Health Science Academy at
Travis B. Bryan High School

- Principles of Human Services
  - 0.5 Credit
- Principles of Health Science
  - 1.0 Credit
- Health Science
  - 1.0 Credit
- Anatomy & Physiology *
  - 1.0 Credit
- Practicum in Veterinary Technology **
  - 2.0 Credits
- Practicum in Health Science**
  - (Clinical Internship)
  - 2.0 Credits
- Practicum in Health Science**
  - (Certified Nursing Assistant)
  - 2.0 Credits
- Practicum in Health Science**
  - (Pharmacy Technician)
  - 2.0 Credits

*Course approved for 4th Science Credit
** Possible Dual Credit - Blinn
### Principles of Human Services

<table>
<thead>
<tr>
<th>Grade Level: 9 - 10</th>
<th>Pre-requisite: None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Length: 1 Semester</td>
<td>Credit: 0.5</td>
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</tbody>
</table>

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 human service occupations.

### Child Development

<table>
<thead>
<tr>
<th>Grade Level: 10 - 12</th>
<th>Pre-requisite: Principles of Human Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Length: 1 Semester</td>
<td>Credit: 0.5</td>
</tr>
</tbody>
</table>

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.

### Principles of Health Science

<table>
<thead>
<tr>
<th>Grade Level: 10</th>
<th>Pre-requisite: None</th>
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</thead>
<tbody>
<tr>
<td>Course Length: 2 Semesters</td>
<td>Credit: 1.0</td>
</tr>
</tbody>
</table>

Students are introduced to systems within the health care industry as well as professional skills, traits and abilities necessary to be informed consumers and potential employees in health careers. Students will be exposed to limited clinical and laboratory experiences to begin a transition into patient care areas.

### Health Science

<table>
<thead>
<tr>
<th>Grade Level: 11</th>
<th>Pre-requisite: Principles of Health Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Length: 2 Semesters</td>
<td>Credit: 1.0</td>
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</table>

Health Science is a course designed to introduce students to the wide breadth of opportunities in health care. The course utilizes various classroom and community experiences including simulations, lectures, field trips, guest speakers, health care facility tours and job shadowing. Health Science will also include a comprehensive Medical Terminology course. The student will have an opportunity to take the National Health Foundation Skills certification examination. Students can receive certification in CPR, AED, and First Aid.
Anatomy & Physiology

Grade Placement: 11 - 12
Course Length: 2 Semesters
Credit: 1.0
This is a preparatory course for students with an interest in pursuing a career in a health-related field. The course will provide a detailed exploration of the structures and functions of the various organ systems of the human body. In addition, this laboratory-oriented course will include research on current topics in the health science fields and investigations of related employment. **Successful completion of this course fulfills the 4th Science graduation requirement.**

Practicum in Veterinary Technology

Grade Level: 12
Course Length: 2 Semesters
Credit: 2.0
The Veterinary Assistant program allows students to explore current topics in veterinary medicine, and understand the importance of animals in society. Students will identify animal characteristics and behavioral temperaments as well as investigate body systems, their purpose, functions and how systems are affected by disease. Students will also research issues of professional ethics and laws that relate to veterinary medicine. Students will be expected to master and apply clinical skills in animal assessment and treatment. A minimum of 500 hours will be required to successfully complete the certification associated with this course. Students demonstrating proficiency in Medical Terminology will receive dual credit through Blinn College.

Practicum in Health Science – Clinical Internship

Grade Level: 12
Course Length: 2 Semesters
Credit: 2.0
Practicum in Health Science is an occupationally specific course designed to provide exposure to knowledge and skills necessary for an allied health career. Students develop advanced clinical and interpersonal skills necessary for employment in the health care industry. This course is taught by a variety of methods including classroom lecture, laboratory practice, and clinical internships supervised by practicing health care professionals. Students demonstrating proficiency in Medical Terminology will receive dual credit through Blinn College.
Practicum in Health Science - Certified Nursing Assistant

Grade Level: 12  
Pre-requisite: Health Science  
Course Length: 2 Semesters  
Credit: 2.0
A Certified Nurse Assistant option is offered in the spring semester for selected Hammond-Oliver students. This class will meet the required classroom and clinical practice hours needed for students to be eligible to take the NACES exam to become a Certified Nurse Assistant (C.N.A.) in the state of Texas. Additional dual credit through Blinn College is possible.

Practicum in Health Science - Pharmacy Technician

Grade Level: 12  
Pre-requisite: Health Science  
Course Length: 2 Semesters  
Credit: 2.0
Practicum in Health Science-Pharmacy Technician is a course designed to teach an introduction to the skills needed to become employed as a Pharmacy Technician upon high school graduation. Students will be introduced to the framework of learning pharmacy medical terminology, the drug names, pronunciations, and medical abbreviations used commonly in the modern pharmacy. Students will learn the history of the pharmacy profession, pharmacy laws and ethics, how to assist in dispensing medications, billing, inventory management, and other various administrative duties. This course is taught by a variety of methods including, but not limited to, classroom instruction, laboratory practice, and clinical pharmacy internship. A Certified Pharmacy Technician option is available after graduation for students fulfilling all requirements, including passing an industry examination. Students demonstrating proficiency in Medical Terminology will receive dual credit through Blinn College.
HOSPITALITY AND TOURISM

Principles of Hospitality and Tourism
0.5 Credit

Travel and Tourism Management
0.5 Credit

Hotel Management
0.5 Credit

Restaurant Management
0.5 Credit

Lifetime Nutrition and Wellness
0.5 Credit

Hospitality Services
1.0 Credit

Practicum in Hospitality Services
2.0 Credits

Problems and Solutions in Hospitality and Tourism
1.0 Credit
New for 2013 - 2014

Culinary Arts
1.0 Credit 2013 – 2014
2.0 Credits 2014 - 2015

Practicum in Culinary Arts
2.0 Credits
<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>Principles of Hospitality and Tourism</td>
<td>814210</td>
</tr>
<tr>
<td>Travel and Tourism Management</td>
<td>824010</td>
</tr>
<tr>
<td>Hotel Management</td>
<td>834410</td>
</tr>
<tr>
<td>Restaurant Management</td>
<td>824210</td>
</tr>
</tbody>
</table>

**Principles of Hospitality and Tourism**

**Grade Level:** 9 - 10  
**Pre-requisite:** None  
**Course Length:** 1 Semester  
**Credit:** 0.5  
The hospitality and tourism industry encompasses lodging; travel and tourism, recreation, amusements, attractions, and resorts, and restaurants and food beverage service. The hospitality and tourism industry maintains the largest national employment base in the private sector. Students use knowledge and skills that meet industry standards to function effectively in various positions within this multifaceted industry.

**Travel and Tourism Management**

**Grade Level:** 10 - 12  
**Pre-requisite:** Principles of Hospitality and Tourism  
**Course Length:** 1 Semester  
**Credit:** 0.5  
This course incorporates management principles and procedures of the travel and tourism industry as well as destination geography, airlines, international travel, cruising, travel by rail, lodging, recreation, amusements, attractions, and resorts. Employment qualifications and opportunities are also included in this course.

**Hotel Management**

**Grade Level:** 10 - 12  
**Pre-requisite:** Principles of Hospitality and Tourism  
**Course Length:** 1 Semester  
**Credit:** 0.5  
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. This course will focus on, but not be limited to, professional communication, leadership, management, human resources, technology, and accounting.

**Restaurant Management**

**Grade Level:** 10 - 12  
**Pre-requisite:** Lifetime Nutrition and Wellness  
**Course Length:** 1 Semester  
**Credit:** 0.5  
Students will develop menu selections, production schedules as well as marketing strategies. Students will learn cooking techniques as well as food handling techniques. Students will learn how to properly follow a recipe and proper baking times and techniques. In addition, students will prepare meals and desserts for various school and community events.
**Lifetime Nutrition and Wellness** 824110

- **Grade Level:** 10 - 12
- **Pre-requisite:** Principles of Hospitality and Tourism
- **Course Length:** 1 Semester
- **Credit:** 0.5

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 human service occupations.

**Hospitality Services** 834100

- **Grade Level:** 11 - 12
- **Pre-requisite:** Travel & Tourism Management and/or Hotel Management
- **Course Length:** 2 Semesters
- **Credit:** 1.0

Students will develop the skills needed to excel in careers including: Hotel and Restaurant, Cruise Ship Director, Chef, Amusement Park Manager, Travel agent, and many more. Skills covered include: communications and guest services, hotel ownership types, career exploration, security, ethics, forecasting, housekeeping, food service, and travel and tourism.

**Culinary Arts** 834200

- **Grade Level:** 10 - 12
- **Pre-requisite:** Lifetime Nutrition and Restaurant Management
- **Course Length:** 2 Semesters
- **Credit:** 1.0 for 2013 - 2014  2.0 for 2014 - 2015

This is an introductory course into the professional world of food production. The student will have the opportunity to explore many facets of the food service industry. There is a nationally recognized certification that accompanies this course and once completed the learner will focus on basic food preparation skills. There will be practical experiences to accompany the course work through the various catering opportunities that are offered to our students.

**Practicum in Hospitality Services** 844100

- **Grade Level:** 11 - 12
- **Pre-requisite:** Hospitality Services
- **Course Length:** 2 Semesters
- **Credit:** 2.0

This course is taught by a variety of methods including but not limited to classroom instruction, laboratory practice and internship. The student will expand upon the basic skills that they developed in Hospitality Services. Students will have the opportunity to work with local industry professionals.
<table>
<thead>
<tr>
<th>Course Title</th>
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<tbody>
<tr>
<td>Problems &amp; Solutions in Hospitality &amp; Tourism</td>
<td>884100</td>
</tr>
<tr>
<td>Practicum in Culinary Arts</td>
<td>844200</td>
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</tbody>
</table>

**Problems & Solutions in Hospitality & Tourism**

**Grade Level:** 11 - 12  
**Pre-requisite:** Hospitality Services or Culinary Arts  
**Course Length:** 2 Semesters  
**Credit:** 1.0  
This course is a supervised research study project-based class where students will apply knowledge and skills from previous Hospitality and Tourism courses in a related advanced/specialized field of study. Students are required to submit a formal project plan within 15 school days after enrollment in the course. The plan should specify the additional concepts and/or technologies that will be studied and utilized, along with an overview of the culminating project.

**Practicum in Culinary Arts**

**Grade Level:** 11 - 12  
**Pre-requisite:** Culinary Arts  
**Course Length:** 2 Semesters  
**Credit:** 2.0  
The student will expand upon the basic skills that they developed in culinary arts, through more in depth baking as well as exploring international cuisines. They will take on the role of leadership during the catered events thus developing their managerial skills.
HUMAN SERVICES

Principles of Human Services
0.5 Credit

Child Development
0.5 Credit

Interpersonal Skills
0.5 Credit

Dollars and Sense
0.5 Credit

Introduction to Cosmetology
0.5 Credit
Bryan High School

Child Guidance
1.0 Credit

Family and Community Services
1.0 Credit

Cosmetology I
3.0 Credits
Bryan High School

Cosmetology II
3.0 Credits
Bryan High School

Problems and Solutions in Cosmetology
1.0 Credit
Bryan High School
New for 2013 - 2014
<table>
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<td>Principles of Human Services</td>
<td>814010</td>
</tr>
<tr>
<td>Child Development</td>
<td>824310</td>
</tr>
<tr>
<td>Interpersonal Studies</td>
<td>824810</td>
</tr>
<tr>
<td>Dollars and Sense</td>
<td>824510</td>
</tr>
</tbody>
</table>

**Principles of Human Services**  
*Grade Level: 9 - 10*  
*Pre-requisite: None*  
*Course Length: 1 Semester*  
*Credit: 0.5*

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 human service occupations.

**Child Development**  
*Grade Level: 10 - 12*  
*Pre-requisite: Principles of Human Services*  
*Course Length: 1 Semester*  
*Credit: 0.5*

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.

**Interpersonal Studies**  
*Grade Level: 10 - 12*  
*Pre-requisite: Principles of Human Services*  
*Course Length: 1 Semester*  
*Credit: 0.5*

Students will develop valuable skills that will help them prepare for life as a young adult. This program has a central focus on family but also on developing young minds that will have a positive impact in their community and beyond. The goal is to provide opportunities for personal development through a variety of activities including decision making and problem solving.

**Dollars and Sense**  
*Grade Level: 10 - 12*  
*Pre-requisite: Principles of Human Services*  
*Course Length: 1 Semester*  
*Credit: 0.5*

This course focuses on consumer practices and responsibilities, including budgeting and money management. Financial decision making skills, impact of technology, and preparation for human services careers are also explored.
Introduction to Cosmetology  
Grade Level: 10  
Pre-requisite: Principles of Human Services and Student Application  
Course Length: 1 Semester  
Credit: 0.5
This exploratory course is required for students who are interested in a career in cosmetology. It also assists students who have an interest, but are unsure this is the career path they wish to follow. Learners explore areas such as bacteriology, sterilization and sanitation, hair styling, manicuring, shampooing, as well as the principles of hair cutting, hair coloring, skin care, and facial makeup. Connected to this is the study of careers in the personal care services industry. To be successful in this profession, students should possess skills/aptitudes relative to the industry, as well as academic knowledge and motivation. Attendance is critical to the earning of the required 1000 clock hours of High School supervised classroom instruction and demonstration needed before students qualify to take the state board test for licensing. Students in this course may begin to earn clock hours toward state licensing requirements. Lab/kit/uniform fees and/or supplies may be required.

Child Guidance  
Grade Level: 11 - 12  
Pre-requisite: Child Development  
Course Length: 2 Semesters  
Credit: 1.0
Child Guidance focuses on knowledge and skills related to child growth and guidance to help students develop positive relationships with children and learn effective caregiver skills. This technical laboratory course provides an opportunity for students 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.

Cosmetology I  
Grade Level: 11  
Pre-requisite: Introduction to Cosmetology and Student Application  
Course Length: 2 Semesters  
Credit: 3.0
Students review academic knowledge and skills related to cosmetology. This course is designed to provide advanced training for employment in cosmetology careers. Instruction includes advanced training in sterilization and sanitation processes, hair care, nail care, and skin care and meets the Texas Department of Licensing and Regulation requirements for licensure upon passing the state examination. Students apply, combine, and justify knowledge and skills to a variety of settings and problems. Lab/kit/uniform fees and/or supplies may be required.

Family and Community Services  
Grade Level: 12  
Pre-requisite: Child Guidance  
Course Length: 2 Semesters  
Credit: 1.0
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.
Cosmetology II

<table>
<thead>
<tr>
<th>Grade Level: 12</th>
<th>Pre-requisite: Cosmetology I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Length: 2 Semesters</td>
<td>Credit: 3.0</td>
</tr>
</tbody>
</table>

Students review academic knowledge and skills related to cosmetology. This course is designed to provide advanced training for employment in cosmetology careers. Instruction includes advanced training in sterilization and sanitation processes, hair care, nail care, and skin care and meets the Texas Department of Licensing and Regulation requirements for licensure upon passing the state examination. Students apply, combine, and justify knowledge and skills to a variety of settings and problems. Lab/kit/uniform fees and/or supplies may be required.

Problems and Solutions in Cosmetology

<table>
<thead>
<tr>
<th>Grade Level: 11 -12</th>
<th>Pre-requisite: Co-enrollment in Cosmetology I or II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Length: 2 Semesters</td>
<td>Credit: 1.0</td>
</tr>
</tbody>
</table>

Students are required to submit a formal project plan. The plan should specify the additional concepts and/or technologies that will be studied and utilized, along with an overview of the culminating project. Hours earned will be applied towards the Texas Department of Licensing and Regulation requirements for licensing.
INFORMATION TECHNOLOGY

Principles of Information Technology
0.5 Credit

Digital and Interactive Media
0.5 Credit

Computer Programming
1.0 Credit

Web Technologies
1.0 Credit

Advanced Computer Programming
2.0 Credits

Problems and Solutions in Information Technology
1.0 Credit
New 2013 - 2014

Research in Information Technology Solutions
2.0 Credits
# Principles of Information Technology

**Grade Level:** 9 - 10  
**Pre-requisite:** None  
**Course Length:** 1 Semester  
**Credit:** 0.5

Principles of IT is a preparatory course in using computers. Students will examine the ethical and legal use of application software on computers as well as the function of computer hardware. Students will learn to prepare software based presentations, documents and spreadsheets using Google Docs in addition to the use of database applications such as Microsoft Access and MySQL. Students will also learn the basics of web development, networking and computer programming. Students will learn to improve their typing skills, select appropriate technology, set professional goals and develop a resume as well as job interviewing skills. Strong math and reading skills are necessary.

# Digital and Interactive Media

**Grade Level:** 10 – 12  
**Pre-requisite:** Principles of Information Technology  
**Course Length:** 1 Semester  
**Credit:** 0.5

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.

# Computer Programming

**Grade Level:** 10 - 12  
**Pre-requisite:** Principles of IT and Co-Enrollment or Completion of Geometry  
**Course Length:** 2 Semesters  
**Credit:** 1.0

Computer Programming is a first level programming course in Java. Students learn the basics of creating “apps”. Techniques learned in the class may be applied to developing web applications, mobile apps or desktop apps ranging from productivity programs to video games.

# Web Technologies

**Grade Level:** 11 - 12  
**Pre-requisite:** Principles of IT or Digital Media (strong math skills recommended)  
**Course Length:** 2 Semesters  
**Credit:** 1.0

Web Technologies explores the construction of web based documents (web sites) using current and emerging web technologies. Students implement web based documents using HTML, CSS and Flash. Students also create interactive content using JavaScript and ActionScript. Students are expected to keep a portfolio of work.
Advanced Computer Programming

Grade Level: 11 - 12
Course Length: 2 Semesters
Required Pre-requisite: Algebra II & Computer Programming
Credit: 2.0

Advanced Computer Programming covers the design and development of commercial software. Students investigate the design and development techniques used by professional programmers to create business applications and/or video games. Students create a portfolio of work during the course and investigate employment opportunities in Software Engineering, Computer Programming, Web Application Development and Video Game Design. Students who complete this course will be prepared for and strongly encouraged to investigate internships in software development as well as certifications in software development. The programming language used is Java.

Problems & Solutions in Information Technology

Grade Level: 11 - 12
Course Length: 2 Semesters
Pre-requisite: Teacher Approval
Credit: 1.0

This course is a supervised research study project-based class where students will apply knowledge and skills from previous programming and/or web technologies courses in a related advanced/specialized field of study. Students are required to submit a formal project plan within 15 school days after enrollment in the course. The plan should specify the additional concepts and/or technologies that will be studied and utilized, along with an overview of the culminating project.

Research in Information Technology Solutions

Grade Level: 12
Course Length: 2 Semesters
Pre-requisite: Advanced Computer Programming
Credit: 2.0

Students will examine specific topics in Computer Programming selected by the student and approved by the instructor. Example topics might include: Video Game Design, Web Application Development, Artificial Intelligence Systems, and Interactive Graphics Applications. Students interested in taking the research course must get their topic approved before registering for the course.
LAW, PUBLIC SAFETY, CORRECTIONS, AND SECURITY

Principles of Law, Public Safety, Corrections, and Security **
1.0 Credit

Law Enforcement I **
1.0 Credit

Court Systems & Practices
1.0 Credit

Law Enforcement II **
1.0 Credit

Practicum in Law, Public Safety, Corrections And Security
2.0 Credits

Forensic Science *
1.0 Credit

*COURSES APPROVED FOR 4TH SCIENCE CREDIT
** POSSIBLE DUAL CREDIT COURSES - BLINN
### Principles of Law, Public Safety, Corrections and Security 813500

**Grade Level:** 09 - 10

**Pre-requisite:** None

**Course Length:** 2 Semesters

**Credit:** 1.0

This course will cover the various careers in law, public safety, corrections, and securities. This includes law enforcement, security, corrections, fire, emergency management, and the legal field. Students examine specific opportunities in local, county, state, and federal and private industry. It also includes an overview of philosophical, ethical, and educational considerations and requirements in pursuing such careers. Juniors and seniors taking this course may earn Technical Dual Credit at Blinn College.

### Law Enforcement I 823500

**Grade Level:** 10 - 12

**Pre-requisite:** Principles of Law, Public Safety, Corrections and Security

**Course Length:** 2 Semesters

**Credit:** 1.0

This course includes the role of constitutional law, the United States legal system, criminal law, law enforcement terminology, and the classification and elements of crime. Law Enforcement I is an overview of the history, organization, and functions of local, state, and federal law enforcement. Students will learn the basics of criminal scene investigations. Junior and Seniors taking this course may earn Technical Dual Credit at Blinn College.

### Court Systems and Practices 843500

**Grade Level:** 11 - 12

**Pre-requisite:** Law Enforcement I

**Course Length:** 2 Semesters

**Credit:** 1.0

Court Systems and Practices is an overview of the federal and state court systems. This course identifies the roles of judicial officers and the trial processes from pretrial to sentencing and examines the types and roles of evidence. Emphasis is placed on constitutional laws for criminal procedures such as search and seizure, stop and frisk, and interrogation. In addition to classroom learning, the student will hear lectures from individuals employed in the community in related fields. Students will participate in scenarios using skills from the course and academic courses to prepare various forms of grammatically correct communication, both orally and in writing.

### Law Enforcement II 833500

**Grade Level:** 11 - 12

**Pre-requisite:** Law Enforcement I

**Course Length:** 2 Semesters

**Credit:** 1.0

Law Enforcement II includes knowledge of and preparation for postsecondary education and training or employment in the law enforcement in the law enforcement field in the areas of forensic science, communications, law enforcement and investigations. These rules, regulations, laws, and techniques that assist the law enforcement professional are applied through the use of a variety of tools and techniques. Junior and Seniors taking this course may earn Technical Dual Credit at Blinn College.
### Practicum in Law, Public Safety, Corrections and Security

<table>
<thead>
<tr>
<th>Grade Level: 12</th>
<th>Pre-requisite: Law Enforcement II or Court Systems and Practices</th>
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</thead>
<tbody>
<tr>
<td>Course Length: 2 Semesters</td>
<td>Credit: 2.0</td>
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</table>

This course is a unique practicum that provides occupationally specific opportunities for students to participate in a learning experience that combines classroom instruction with actual business and industry career experiences. Practicum in Law and Public Safety integrates academic and career and technical education with the goal of preparing students with a variety of skills in a fast-changing workplace.

### Forensic Science

<table>
<thead>
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<th>Grade Level: 12</th>
<th>Pre-requisite: Law Enforcement II</th>
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Forensic Science is a course that uses a structured and scientific approach to the investigation of crime of assault, abuse, and neglect, domestic violence, accidental death, homicide and psychology of criminal behavior. Students will learn terminology and investigative procedures related to crime scene, questioning interviewing, criminal behavior characteristics, truth detection and scientific procedures used to solve crimes. **Successful completion of this course fulfills the 4th Science graduation requirement.**
MANUFACTURING

- Principles of Manufacturing
  0.5 Credit

- Welding *
  1.0 Credit

- Advanced Welding *
  2.0 Credits

- Practicum in Manufacturing *
  2.0 Credits

- Problems and Solutions in Manufacturing
  1.0 Credit
  New for 2013 - 2014

* POSSIBLE DUAL CREDIT COURSES - BLINN
<table>
<thead>
<tr>
<th>Course Title</th>
<th>Code</th>
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</thead>
<tbody>
<tr>
<td>Principles of Manufacturing</td>
<td>819210</td>
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<tr>
<td>Welding</td>
<td>829200</td>
</tr>
<tr>
<td>Advanced Welding</td>
<td>839200</td>
</tr>
<tr>
<td>Practicum in Manufacturing</td>
<td>849200</td>
</tr>
</tbody>
</table>

### Principles of Manufacturing
**Grade Level:** 9 - 10  
**Pre-requisite:** None  
**Course Length:** 1 Semester  
**Credit:** 0.5

In Principles of Manufacturing, students learn skills in the design, production, and testing of products, that can be made from raw materials. Manufacturing design, production and systems are studied as well as the effects of manufacturing production in order to prepare students for success in the modern world. Students will also gain an understanding of career opportunities available in manufacturing and what employers require in order to gain and maintain jobs in these careers. *Lab fees and/or supplies may be required.*

### Welding
**Grade Level:** 10 - 12  
**Pre-requisite:** Principles of Manufacturing  
**Course Length:** 2 Semesters  
**Credit:** 1.0

This course is an entry level technical welding course. The course is designed for the beginner with little or no welding experience who is interested in pursuing a course of study that can lead to an American Welding Society entry level certification. Topics include oxy-fuel welding, shielded metal arc welding, and gas metal arc welding. Dual credit is available. *Lab fees and/or supplies may be required.*

### Advanced Welding
**Grade Level:** 11 - 12  
**Pre-requisite:** Welding  
**Course Length:** 2 Semesters  
**Credit:** 2.0

This advanced level Career and Technical course is for students interested in welding as a career. Advanced Welding builds on knowledge and skills developed in the previous welding course. Training for employment with advance-level skills in welding trades will be emphasized. Instruction follows an industry-standard curriculum, and students' certifications are listed in a national registry upon successful completion. Oxy-fuel welding and cutting, plasma arc cutting, shielded metal arc welding, gas metal arc welding, flux cored arc welding, and gas tungsten arc welding will be covered. Hand and power tools, welding on various types of metals, reading blueprint welding symbols, metal characteristics, and equipment setup are other areas that students master. Safety, leadership, entrepreneurship, and career opportunities are included. Dual credit is available. *Lab fees and/or supplies may be required.*

### Practicum in Manufacturing
**Grade Level:** 12  
**Pre-requisite:** Advanced Welding  
**Course Length:** 2 Semesters  
**Credit:** 2.0

The practicum is designed to give students supervised practical application of previously acquired knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. *Lab fees and/or supplies may be required.*
<table>
<thead>
<tr>
<th>Grade Level:</th>
<th>11 - 12</th>
<th>Pre-requisite: Welding and Teacher Approval</th>
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<tbody>
<tr>
<td>Course Length:</td>
<td>2 Semesters</td>
<td>Credit: 1.0</td>
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This course is a supervised research study project-based class where students will apply knowledge and skills from previous manufacturing courses in a related advanced/specialized field of study. Students are required to submit a formal project plan within 15 school days after enrollment in the course. The plan should specify the additional concepts and/or technologies that will be studied and utilized, along with an overview of the culminating project. *Lab fees and/or supplies may be required.*
MARGETING

Principles of Business, Marketing and Finance
0.5 Credit

Sports and Entertainment Marketing
0.5 Credit

Entrepreneurship
0.5 Credit

Advertising and Sales Promotion
0.5 Credit

Marketing Dynamics
2.0 Credits

Problems and Solutions in Marketing
1.0 Credit
New for 2013 - 2014

Career Preparation
3.0 Credits
Principles of Business, Marketing, and Finance

Grade Level: 9 - 10
Course Length: 1 Semester
Pre-requisite: None
Credit: 0.5

Will you make a good business owner or team member in the corporate world? In Principles of Business, Marketing, and Finance, students gain knowledge and skills in economics 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.

Sports and Entertainment Marketing

Grade Level: 10 - 12
Course Length: 1 Semester
Pre-requisite: Principles of Business, Marketing and Finance
Credit: 0.5

This course will provide students with a thorough understanding of the marketing concepts and theories that apply to sports and sports events and entertainment. The areas this course will cover include basic marketing, target marketing and segmentation, sponsorship, event marketing, promotions, sponsorship proposals and implementation of sports and entertainment marketing plans. This course will also provide students an opportunity to develop promotional plans, sponsorship proposals, endorsement contracts, sports and entertainment marketing plans, and evaluation of management techniques.

Entrepreneurship

Grade Level: 10 - 12
Course Length: 1 Semester
Pre-requisite: Principles of Business, Marketing and Finance
Credit: 0.5

Students will gain the knowledge and skills needed to become an entrepreneur. They will learn the principles necessary to begin and operate a business. The primary focus of the course is to help students understand the process of analyzing a business opportunity, preparing a business plan, determining feasibility of an idea using research, and developing a plan to organize and promote the business and its products and services.

Advertising and Sales Promotion

Grade Level: 10 - 12
Course Length: 1 Semester
Pre-requisite: Principles of Business, Marketing and Finance
Credit: 0.5

Advertising and Sales Promotion is designed as a comprehensive introduction to the principles and practice of advertising. Students will gain knowledge of techniques used in current advertising, including print, broadcast and digital media. This course provides an overview of how communication tools can be used to reach target audiences and increase consumer knowledge.
### Marketing Dynamics

**Grade Level:** 11 - 12  
**Pre-requisite:** Principles of Business, Marketing and Finance  
**Course Length:** 2 Semesters  
**Credit:** 2.0  
Marketing is a series of dynamic activities that focus on the customer to generate a profitable exchange. Students gain knowledge and skills that help them to be proficient in one or more of the marketing functional areas associated with distribution, financing, marketing information management, pricing, product planning, promotion, purchasing, risk management, and selling skills. Students integrate skills from academic subjects, information technology, interpersonal communication, and management training to make responsible decisions. This course may include paid or unpaid career preparation experience.

### Problems and Solutions in Marketing and Finance

**Grade Level:** 11 - 12  
**Pre-requisite:** Teacher Approval  
**Course Length:** 2 Semesters  
**Credit:** 1.0  
This course is a supervised research study project-based class where students will apply knowledge and skills from previous graphic design courses in a related advanced/specialized field of study. Students are required to submit a formal project plan within 15 school days after enrollment in the course. The plan should specify the additional concepts and/or technologies that will be studied and utilized, along with an overview of the culminating project.

### Career Preparation

**Grade Level:** 11 - 12  
**Pre-requisite:** At least 16 years of Age and Reliable Transportation  
**Course Length:** 2 Semesters  
**Credit:** 3.0  
This work-based course allows students to build upon the basic concepts and principles mastered in previous courses. In the classroom portion of the course, students will integrate skills from academic subjects, information technology, interpersonal communication, and supervisory management training to make responsible decisions. Students will also receive industry-recognized training designed to make them more marketable and desirable in the workplace. Students are required to work 15 hours per week at an approved training site and must be employed at that site within 15 school days after enrollment in the course.
SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS

Concepts of Engineering And Technology
0.05 Credit

- Electronics
  1.0 Credit
- Robotics and Automation
  1.0 Credit

- Engineering Design and Presentation
  1.0 Credit
- Advanced Engineering Design and Presentation
  2.0 Credits

Problems and Solutions in Science, Technology, Engineering and Mathematics
1.0 Credit
New for 2013 – 2014
Concepts of Engineering and Technology

Grade Level: 9 - 10
Course Length: 1 Semester
Pre-requisite: None
Credit: 0.5

Concepts of Engineering and Technology provide 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. Lab fees and/or supplies may be required.

Electronics

Grade Level: 10 - 12
Course Length: 2 Semesters
Pre-requisite: Concepts of Engineering and Technology
Credit: 1.0

What is electricity and electronics? How do we control it? How do we build "stuff" that uses it? Who designs it? Who builds it? Someone does, maybe you can! Watch the math and science "come alive" in the lab where students actually explore the greater world of electricity and electronics. Lab fees and/or supplies may be required.

Engineering Design and Presentation

Grade Level: 10 - 12
Course Length: 2 Semesters
Pre-requisite: Concepts of Engineering and Technology
Credit: 1.0

Students will demonstrate knowledge and skills of the process of design as it applies to engineering fields using multiple software applications and tools necessary to produce and present working drawings, solid model renderings, and prototypes. Students will use a variety of computer hardware and software applications to complete assignments and projects. Lab fees and/or supplies may be required.

Robotics and Automation

Grade Level: 11 - 12
Course Length: 2 Semesters
Pre-requisite: Electronics
Credit: 1.0

Students enrolled in this course will demonstrate knowledge and skills necessary for the robotic and automation industry. Through implementation of the design process, students will transfer advanced academic skills to component designs in a project-based environment. Students will build prototypes or use simulation software to test their designs. Additionally, students explore career opportunities, employer expectations, and educational needs in the robotic and automation industry. Lab fees and/or supplies may be required.
Advanced Engineering Design and Presentation  848100
Grade Level:  11 - 12  Pre-requisite:  Engineering Design and Presentation
Course Length:  2 Semesters  Credit:  2.0
This course will provide students the opportunity to master computer software applications in a variety of engineering and technical fields. This course further develops the process of engineering thought and application of the design process. *Lab fees and/or supplies may be required.*

Problems and Solutions in Science, Technology, Engineering and Mathematics  888100
Grade Level:  12  Pre-requisite:  Any upper level STEM course and Teacher approval
Course Length:  2 Semesters  Credit:  1.0
This course is a supervised research study project-based class where students will apply knowledge and skills from previous STEM courses in a related advanced/specialized field of study. Students are required to submit a formal project plan within 15 school days after enrollment in the course. The plan should specify the additional concepts and/or technologies that will be studied and utilized, along with an overview of the culminating project. *Lab fees and/or supplies may be required.*
TRANSPORTATION, DISTRIBUTION, AND LOGISTICS

Energy, Power, and Transportation Systems
0.5 Credit
Bryan High School

Automotive Technology
2.0 Credits
Bryan High School

Advanced Automotive Technology
2.0 Credits
Bryan High School

Practicum in Automotive Technology
3.0 Credits
Bryan High School

Problems and Solutions in Transportation, Distribution and Logistics
1.0 Credit
Bryan High School
New for 2013 – 2014
### Energy, Power, and Transportation Systems  
**Grade Level:** 10  
**Pre-requisite:** None  
**Credit:** 0.5  
The businesses and industries of the Transportation, Distribution, and Logistics cluster are rapidly expanding to provide new career opportunities. Students will need to understand the interaction between various vehicle systems, the logistics used to move goods and services to consumers, and the components of transportation infrastructure. Performance requirements will include academic and technical skills. Students prepared to meet the expectations of employers in this industry must be able to interact and relate to others and understand the technologies used in order to provide products and services in a timely manner. The increasing demand for employees will provide growth potential. *Lab fees and/or supplies may be required.*

### Automotive Technology  
**Grade Level:** 11 - 12  
**Pre-requisite:** Energy, Power, and Transportation Systems and Student Application  
**Credit:** 2.0  
In Automotive Technology, students gain knowledge and skills in the repair, maintenance, and diagnosis of motor vehicles. This study allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems and settings. The National Automotive Technician Education Foundation (NATEF) standards are the basis of the course curriculum. *Lab fees and/or supplies may be required.*

### Advanced Automotive Technology  
**Grade Level:** 12  
**Pre-requisite:** Automotive Technology  
**Credit:** 2.0  
In Advanced Automotive Technology, students gain knowledge and skills in the repair, maintenance, and diagnosis of motor vehicles. This study allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings. Students will also learn the safety procedures, uses, and care of major shop equipment and tools. *Lab fees and/or supplies may be required.*

### Practicum in Automotive Technology  
**Grade Level:** 12  
**Pre-requisite:** Automotive Technology  
**Credit:** 3.0  
In this course, students gain knowledge and skills in the repair, maintenance, and diagnosis of motor vehicles. This study allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings. Students will also learn the safety procedures, uses, and care of major shop equipment and tools. *Lab fees and/or supplies may be required.*
<table>
<thead>
<tr>
<th>Problems &amp; Solutions in Transportation, Distribution, &amp; Logistics 889100</th>
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<tbody>
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</tbody>
</table>

This course is a supervised research study project-based class where students will apply knowledge and skills from previous Automotive Technology course in a related advanced/specialized field of study. Students are required to submit a formal project plan within 15 school days after enrollment in the course. The plan should specify the additional concepts and/or technologies that will be studied and utilized, along with an overview of the culminating project. *Lab fees and/or supplies may be required.*
Texas Education Agency  
Division of Career and Technical Education  
Public Notification of Nondiscrimination in Career and Technical Education Programs

Bryan Independent School District offers career and technical education programs in Social, Personal, and Public Services, Industrial Technology and Engineering, Business, Marketing, Trades and Industry, Agriculture Science, Health Science and Technology. Admission to these programs is based on student interest and student aptitude, age appropriateness, and class availability.

It is the policy of Bryan Independent School District not to discriminate on the basis of race, color, national origin, sex or handicap in its vocational programs, services or activities as required by Title VI of the Civil Rights Act of 1964, as amended; Title IX of the Education Amendments of 1972; and Section 504 of the Rehabilitation Act of 1973, as amended.

It is the policy of Bryan Independent School District not to discriminate on the basis of race, color, national origin, sex, handicap, or age in its employment practices as required by Title VI of the Civil Rights Act of 1964, as amended; Title IX of the Education Amendments of 1972; the Age Discrimination Act of 1975, as amended; and Section 504 of the Rehabilitation Act of 1973, as amended.

Bryan Independent School District will take steps to assure that lack of English language skills will not be a barrier to admission and participation in all educational and vocational programs.

For information about your rights or grievance procedures, contact the Title IX Coordinator, Carol Cune, 101 N. Texas Avenue, Bryan, TX 77803, 979-209-1073 or Ronnie O'Neal, 101 N. Texas Avenue, Bryan, TX 77803, 979-209-1094, and/or the Section 504 Coordinator, Molley Perry, 1901 Villa Maria, Bryan, TX 77802, 979-209-2751.

Notificación Publica de No Discriminación en Programas Vocacionales  
(Career and Technical Education Programs)

Bryan Independent School District ofrece programas vocacionales en Social, Personal, and Public Services, Industrial Technology and Engineering, Business, Marketing, Trades and Industry, Agriculture Science, Health Science and Technology. La admisión a estos programas se basa en los intereses del estudiante, la aptitud, la edad apropiada, y la destreza para desarrollarse en las carreras.

Es norma de Bryan Independent School District no discriminar por motivos de raza, color, origen nacional, sexo o impedimento, en sus programas, servicios o actividades vocacionales, tal como lo requieren el Título VI de la Ley de Derechos Civiles de 1964, según enmienda; el Título IX de las Enmiendas en la Educación, de 1972, y la Sección 504 de la Ley de Rehabilitación de 1973, según enmienda.

Es norma de Bryan Independent School District no discriminar por motivos de raza, color, origen nacional, sexo, impedimento o edad, en sus procedimientos de empleo, tal como lo requieren el Título VI de la Ley de Derechos Civiles de 1964, según enmienda; el Título IX de las Enmiendas en la Educación, de 1972, la ley de Discriminación por Edad, de 1975, según enmienda, y la Sección 504 de la Ley de Rehabilitación de 1973, según enmienda.

Bryan Independent School District tomará las medidas necesarias para asegurar que la falta de habilidad en el uso del inglés no sea un obstáculo para la admisión y participación en todos los programas educativos y vocacionales.

Para información sobre sus derechos o procedimientos para quejas, comuníquese con el Coordinador del Título IX, Carol Cune, 101 N. Texas Avenue, Bryan, TX 77803, 979-209-1073 o Ronnie O'Neal, 101 N. Texas Avenue, Bryan, TX 77803, 979-209-1094, y/o el Coordinador de la Sección 504, Molley Perry, 1901 Villa Maria, Bryan, TX 77802, 979-209-2751.