



# HIGH SCHOOL

## Career and Technical Education (CTE)

### Course Descriptions

# MISD

#### MISD Disclaimer:

The contents of the Secondary School Information Guide are relevant to MISD Policy (LEGAL AND LOCAL), Regulation and Practice as of January 2016. For current information regarding district policy please refer to the Mullin Independent School District website at <http://pol.tasb.org/Home/Index/896/> or visit with your school counselor.

Specific school-related questions should be directed to campus staff. When a parent or guardian has a question or concern, he or she should contact the person who made the initial decision. After discussing the matter, if the concern continues, the principal should be contacted.

# Career and Technical Education Course Descriptions

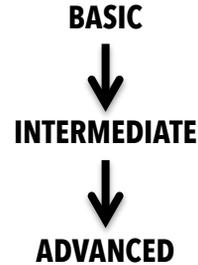
The Achieve Texas College and Career Initiative centers on establishing career clusters in schools as a strategy for improving high school completion rates and college and workforce readiness. It is based on the belief that the curricula of the 21st century should combine rigorous academics with relevant career education that incorporates the College Readiness Standards, personalized learning environments, academic and social support, relevant teaching and learning designed to promote postsecondary success, and effective educators and leaders.

Career clusters are a way of reorganizing learning around programs of study that will prepare students for an even more competitive global economy. Texas has adopted the U.S. Department of Education's Career Clusters System. The 16 broad career clusters and multiple programs of study support the Governor's Industry Cluster Initiative, which identifies high-growth/high-paying jobs for the 21st-century Texas economy. AchieveTexas offers guidance to help students plan their educational experience based on their career goals and allows students to develop the knowledge and skills necessary for a successful transition into skilled employment, advanced training, an associate's degree, a bachelor's degree, or technical certification. Career programs of study represent a recommended sequence of courses based on a student's personal interests and career goals. The idea is to connect what students learn in school every day to what they aspire to do tomorrow, thus increasing engagement with school and motivation to achieve.

## Career and Technical Education (CTE) Cluster Areas

- Agriculture, Food and Natural Resources
- Architecture and Construction
- Arts, AV Technology and Communications
- Education and Training
- Health Science
- Hospitality and Tourism
- Human Services
- Manufacturing
- Career Development

Students take the courses included in a program of study in a coherent sequence to maximize the effectiveness of the learning. Course sequences have been developed by each campus.



- Business & Industry
- Public Service
- Arts & Humanities

## ***Agriculture, Food, and Natural Resources Cluster***

The Agriculture, Food, and Natural Resources Career Cluster focuses on the production, processing, marketing, distribution, financing, and development of agricultural commodities and resources, including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources. The FFA student organization contributes to the advancement of leadership, citizenship, personal growth, and academic and technological skills.

## **PRINCIPLES OF AGRICULTURE, FOOD AND NATURAL RESOURCES**

**GRADE: 9-12 CREDIT: 1**

Principles of Agriculture, Food, and Natural Resources will allow students to develop knowledge and skills regarding career and educational opportunities, personal development, globalization, industry standards, details, practices, and expectations. To prepare for careers in agriculture, food, and natural resources, students must attain academic skills and knowledge in agriculture. To prepare for success, students need opportunities to learn, reinforce, experience, apply, and transfer their knowledge and skills in a variety of settings.

# Career and Technical Education Course Descriptions

## **PROFESSIONAL STANDARDS IN AGRIBUSINESS B**

**GRADE: 10-12      CREDIT: .5**

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

## **AGRIBUSINESS MANAGEMENT AND MARKETING**

**GRADE: 10-12      CREDIT: 1**

Agribusiness Management and Marketing is designed to provide a foundation to agribusiness management and the free enterprise system. Instruction includes the use of economic principles such as supply and demand, budgeting, record keeping, finance, risk management, business law, marketing, and careers in agribusiness. To prepare for careers in agribusiness systems, students must attain academic skills and knowledge, acquire technical knowledge and skills related to agribusiness marketing and management and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings.

## **EQUINE SCIENCE**

**GRADE: 10-12      CREDIT: .5**

In Equine Science, students will acquire knowledge and skills related to equine animal systems and the equine industry. Equine Science may address topics related to horses, donkeys, and mules. To prepare for careers in the field of animal science, students must enhance

academic knowledge and skills, acquire knowledge and skills related to animal systems, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings.

## **SMALL ANIMAL MANAGEMENT**

**GRADES: 10-12      CREDIT: .5**

In Small Animal Management, students will acquire knowledge and skills related to small animals and the small animal management industry. Small Animal Management may address topics related to small mammals such as dogs and cats, amphibians, reptiles, and birds. To prepare for careers in the field of animal science, students must enhance academic knowledge and skills, acquire knowledge and skills related to animal systems, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer knowledge and skills in a variety of settings.

## **AGRICULTURAL MECHANICS AND METAL TECHNOLOGIES**

**GRADE: 10-12      CREDIT: 1**

Agribusiness Management and Marketing is designed to provide a foundation to agribusiness management and the free enterprise system. Instruction includes the use of economic principles such as supply and demand, budgeting, record keeping, finance, risk management, business law, marketing, and careers in agribusiness. Attain academic skills and knowledge, acquire technical knowledge and skills related to agribusiness marketing and management and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations

# Career and Technical Education Course Descriptions

## **AGRICULTURAL EQUIPMENT DESIGN AND FABRICATION**

**GRADE: 11-12 CREDIT: 1**

In Agricultural Equipment Design and Fabrication, students will acquire knowledge and skills related to the design and fabrication of agricultural equipment. To prepare for careers in mechanized agriculture and technical systems, students must attain knowledge and skills related to agricultural equipment design and fabrication.

## ***Arts, Audio/ Video Technology and Communications Cluster***

This cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

## **PRINCIPLES OF ARTS, A/V TECHNOLOGY AND COMMUNICATIONS**

**GRADES: 9-10 CREDIT: 1**

Careers in the Arts, Audio/Video Technology, and Communications Career Cluster require a creative aptitude, a strong background in computer and technology applications, a strong academic foundation, and a proficiency in oral and written communication. Within this context, 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.

## **FASHION DESIGN I**

**GRADES: 10-12 CREDIT: 1**

Careers in fashion span all aspects of the textile and apparel industries. 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 an understanding of the fashion industry with an emphasis on design and construction.

## ***Architecture and Construction Cluster***

This cluster focuses on designing, planning, managing, building, and maintaining the built environment.

### **CONSTRUCTION MANAGEMENT I**

**GRADES: 10-12 CREDIT: 2**

In Construction Management I, students will gain knowledge and skills needed to enter the workforce as apprentice carpenters or building maintenance supervisors' assistants or to build a foundation toward a postsecondary degree in architecture, construction science, drafting, or engineering. Construction Management I includes the knowledge of design techniques and tools related to the management of architectural and engineering projects.

### **CONSTRUCTION MANAGEMENT II**

**GRADES: 10-12 CREDIT: 2**

In Construction Management II, students will gain knowledge and skills needed to enter the workforce as apprentice carpenters or building maintenance supervisors' assistants or to build a foundation toward a postsecondary degree in architecture, construction science, drafting, or engineering. Construction Management II includes knowledge of the design, techniques, and tools related to the management of architectural and engineering projects.

## ***Education and Training Cluster***

The cluster focuses on planning, managing, and providing education and training services and related learning support services.

# Career and Technical Education Course Descriptions

## **HUMAN GROWTH AND DEVELOPMENT**

**GRADE: 10-12 CREDIT: 1**

Human Growth and Development is an examination of human development across the lifespan with emphasis on research, theoretical perspectives, and common physical, cognitive, emotional, and social developmental milestones. The course covers material that is generally taught in a postsecondary, one-semester introductory course in developmental psychology or human development.

## **INSTRUCTIONAL PRACTICES**

**GRADES: 9-10 CREDIT: 2**

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

## **PRACTICUM IN EDUCATION AND TRAINING**

**GRADES: 12 CREDIT: 2**

Practicum in Education and Training is a field-based internship that provides students background knowledge of child and adolescent development principles as well as principles of effective teaching and training practices. Students in the course work under the joint direction and supervision of both a teacher with knowledge of early childhood, middle childhood, and adolescence education and exemplary educators in direct instructional roles with elementary-, middle school-, and high school- aged students

Students learn to plan and direct individualized instruction and group activities, prepare instructional materials, assist with record keeping, make physical arrangements, and complete other responsibilities of classroom teachers, trainers, paraprofessionals, or other educational personnel.

## ***Health Science Cluster***

This cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development.

## **MEDICAL TERMINOLOGY**

**GRADES: 9-12 CREDIT: 2**

The Medical Terminology course is designed to introduce students to the structure of medical terms, including prefixes, suffixes, word roots, singular and plural forms, and medical abbreviations. The course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology. This is taught as a Dual Credit Course.

## ***Hospitality and Tourism Cluster***

This cluster focuses on the management, marketing, and operations of restaurants and other food/beverage services, lodging, attractions, recreation events, and travel- related services.

## **INTRODUCTION TO CULINARY ARTS**

**GRADES: 9-10 CREDIT: 1**

Introduction to Culinary Arts will emphasize the principles of planning, organizing, staffing, directing, and controlling the management of a variety of food service operations. The course will provide insight into the operation of a well-run restaurant. Introduction to Culinary Arts will provide insight into food production skills, various levels of industry management, and hospitality skills. This is an entry level course for students interested in pursuing a career in the food service industry. This course is offered as a classroom and laboratory-based course.

# Career and Technical Education Course Descriptions

## **CULINARY ARTS**

**GRADE: 10-12 CREDIT: 2**

Culinary Arts begins with the fundamentals and principles of the art of cooking and the science of baking and includes management and production skills and techniques. Students can pursue a national sanitation certification or other appropriate industry certifications. This course is offered as a laboratory-based course.

## **ADVANCED CULINARY ARTS**

**GRADES: 10-12 CREDIT: 2**

Advanced Culinary Arts will extend content and enhance skills introduced in Culinary Arts by in-depth instruction of industry-driven standards in order to prepare students for success in higher education, certifications, and/or immediate employment.

## ***Manufacturing Cluster***

The cluster focuses on planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance, and manufacturing/process engineering.

## **INTRODUCTION TO WELDING**

**GRADES: 9-12 CREDIT: 1**

Introduction to Welding will provide an introduction to welding technology with an emphasis on basic welding laboratory principles and operating procedures. Students will be introduced to the three basic welding processes. Topics include: industrial safety and health practices, hand tool and power machine use, measurement, laboratory operating procedures, welding power sources, welding career potentials, and introduction to welding codes and standards. Introduction to Welding will provide students with the knowledge, skills, and technologies required for employment in welding industries. Students will develop knowledge and skills related to welding and

apply them to personal career development. This course supports integration of academic and technical knowledge and skills. Students will reinforce, apply, and transfer knowledge and skills to a variety of settings and problems. Knowledge about career opportunities, requirements, and expectations and the development of workplace skills will prepare students for future success.

## **WELDING I**

**GRADES: 10-12 CREDIT: 2**

Welding I provides the knowledge, skills, and technologies required for employment in metal technology systems. Students will develop knowledge and skills related to this system and apply them to personal career development. This course supports integration of academic and technical knowledge and skills. Students will reinforce, apply, and transfer knowledge and skills to a variety of settings and problems. Knowledge about career opportunities, requirements, and expectations and the development of workplace skills prepare students for future success. This is taught as a dual credit course through Ranger College.

## **WELDING II**

**GRADES: 9-10 CREDIT: 2**

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

## **WELDING LAB II**

**GRADES: 11-12 CREDIT: 1**

Welding II Lab provides an introduction with an emphasis on basic welding laboratory principles and operating procedures. Topics include: industrial safety and health practices, hand tool and power machine use, measurement, laboratory operating procedures, welding power sources, welding career potentials, and

# Career and Technical Education Course Descriptions

introduction to welding codes and standards. This course provides knowledge, skills, and technologies required for employment in welding industries. Students will develop knowledge and skills related to this system and apply them to personal career development. This course supports integration of academic and technical knowledge and skills. Students will reinforce, apply, and transfer knowledge and skills to a variety of settings and problems.

## ***Human Services Cluster***

This Cluster focuses on preparing individuals for employment in career pathways that relate to families and human needs such as counseling and mental health services, family and community services, personal care services, and consumer services.

### **PRINCIPLES OF HUMAN SERVICES**

**GRADES: 9-12**      **CREDIT: 1**

Principles of Human Services is a laboratory course that will enable students to investigate careers in the Human Services Career Cluster, including counseling and mental health, early childhood development, family and community, personal care, and consumer services high-demand human services careers.

### **DOLLARS AND SENSE**

**GRADES: 11-12**      **CREDIT: .5**

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

### **INTERPERSONAL STUDIES**

**GRADES: 9-12**      **CREDIT: .5**

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

**GRADES: 9-12**      **CREDIT: 1**

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

### **COUNSELING AND MENTAL HEALTH**

**GRADES: 11-12**      **CREDIT: 1**

In Counseling and Mental Health, students model the knowledge and skills necessary to pursue a counseling and mental health career through simulated environments. Students are expected to apply knowledge of ethical and legal responsibilities, limitations, and the implications of their actions. Professional integrity in counseling and mental health care is dependent on acceptance of ethical and legal responsibilities.

## ***Career Development***

### **PROJECT BASED RESEARCH**

**GRADES: 11-12**      **CREDIT: 1**

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

### **CAREER PREPARATION**

**GRADES: 11-12**      **CREDIT: 2**

Career Preparation I provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace. Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.



# MISD Graduation Plans and EOC requirements for Students, cont.

Business & Industry Endorsement	STEM Endorsement	Arts & Humanities Endorsement	Public Service Endorsement	Multi-disciplinary Endorsement
<p><b>HOSPITALITY Pathway</b></p> <input type="checkbox"/> Principles of Human Services <input type="checkbox"/> Lifetime, Nutrition & Wellness <input type="checkbox"/> Culinary Arts <input type="checkbox"/> Advanced Culinary Arts <input type="checkbox"/> College Algebra or Pre-Cal <input type="checkbox"/> Anatomy & Physiology <p><b>CONSTRUCTION Pathway</b></p> <input type="checkbox"/> Principles of Ag. <input type="checkbox"/> Construction Mgmt <input type="checkbox"/> Advanced Const. Mgmt. <input type="checkbox"/> Practicum in Const. Mgmt or Project Based Research <input type="checkbox"/> College Algebra or Pre-Cal <input type="checkbox"/> Anatomy & Physiology <p><b>WELDING Pathway</b></p> <input type="checkbox"/> Principles of Ag. <input type="checkbox"/> Intro to Welding (10) <input type="checkbox"/> Welding I <input type="checkbox"/> Welding II and Lab <input type="checkbox"/> College Algebra or Pre-Cal <input type="checkbox"/> Anatomy & Physiology <p><b>FARM MANAGER Pathway</b></p> <input type="checkbox"/> Principles of Ag (9) <input type="checkbox"/> Prof. standards in Agribusiness <input type="checkbox"/> Ag Management <input type="checkbox"/> Equine Science <input type="checkbox"/> Project Based Research or <input type="checkbox"/> College Algebra or Pre-Cal <input type="checkbox"/> Anatomy & Physiology <p><b>VETERINARIAN</b></p> <input type="checkbox"/> Principles of Ag. <input type="checkbox"/> Livestock Production <input type="checkbox"/> Medical Terminology <input type="checkbox"/> Project Based Research <input type="checkbox"/> College Algebra or Pre-Cal <input type="checkbox"/> Anatomy & Physiology	<p><b>STEM – MATH Pathway I</b></p> <input type="checkbox"/> Algebra I <input type="checkbox"/> Geometry <input type="checkbox"/> Algebra II <input type="checkbox"/> College Algebra MATH 1314 <input type="checkbox"/> Statistics MATH 1342 <p><b>STEM – MATH Pathway II</b></p> <input type="checkbox"/> Algebra I <input type="checkbox"/> Geometry <input type="checkbox"/> Algebra II <input type="checkbox"/> Pre-Cal <input type="checkbox"/> College Algebra MATH 1314 <p><b>STEM – SCIENCE Pathway I</b></p> <input type="checkbox"/> Biology <input type="checkbox"/> Chemistry <input type="checkbox"/> Physics <input type="checkbox"/> DC BIOL 1406/1407 Scientific Research & Design <input type="checkbox"/> DC BIOL 2402/2402 Anatomy and Physiology <p><b>STEM – SCIENCE Pathway II</b></p> <input type="checkbox"/> Biology <input type="checkbox"/> Chemistry <input type="checkbox"/> Physics <input type="checkbox"/> Earth & Space Science <input type="checkbox"/> DC BIOL 2402/2402 Anatomy Physiology	<p><b>FINE ARTS Pathway</b></p> <input type="checkbox"/> Art 1 <input type="checkbox"/> Art 2 <input type="checkbox"/> Art 3 <input type="checkbox"/> Art 4 <input type="checkbox"/> College Alg. or Pre-Cal <input type="checkbox"/> Anatomy & Physiology <div data-bbox="615 610 825 991" style="background-color: #cccccc; padding: 10px; text-align: center;"> <p><b>Certifications</b></p> <hr/><hr/><hr/><hr/><hr/><hr/><hr/><hr/> </div>	<p><b>EDUCATION Pathway</b></p> <input type="checkbox"/> Principles of Human Services <input type="checkbox"/> Human Growth &Dev. <input type="checkbox"/> Instructional Practices <input type="checkbox"/> Practicum in Educ.&Training <input type="checkbox"/> College Algebra or Pre-Cal <input type="checkbox"/> Anatomy & Physiology <p><b>COUNSELING Pathway</b></p> <input type="checkbox"/> Principles of Human Services <input type="checkbox"/> Human Growth &Dev. <input type="checkbox"/> Counseling & Men. Health <input type="checkbox"/> Project Based Research <input type="checkbox"/> College Algebra or Pre-Cal <input type="checkbox"/> Anatomy & Physiology <p><b>HEALTH SCIENCE Pathway</b></p> <input type="checkbox"/> Principles of Human Services <input type="checkbox"/> Human Growth &Dev. <input type="checkbox"/> Medical Term. (DC) <input type="checkbox"/> Project Based Research (CNA) <input type="checkbox"/> College Algebra or Pre-Cal <input type="checkbox"/> Anatomy & Physiology	<p><b>DUAL CREDIT Pathway</b></p> <input type="checkbox"/> Physics <input type="checkbox"/> College Alg or Pre-Cal <input type="checkbox"/> Anatomy & Physiology <p> <input type="checkbox"/> Dual Credit 1  <input type="checkbox"/> Dual Credit 2  <input type="checkbox"/> Dual Credit 3  <input type="checkbox"/> Dual Credit 4  <input type="checkbox"/> Dual Credit 5  <input type="checkbox"/> Dual Credit 6  <input type="checkbox"/> Dual Credit 7  <input type="checkbox"/> Dual Credit 8         <ul style="list-style-type: none"> <li>• 4 Credits but 8 classes because most DC courses are .5 HS Credits</li> </ul> </p> <div data-bbox="1153 726 1353 1107" style="background-color: #cccccc; padding: 10px; text-align: center;"> <p><b>Other Courses</b></p> <hr/><hr/><hr/><hr/><hr/><hr/><hr/><hr/> </div>