Ben Barber

Innovation Academy

Course Description Book

2019-2020

BEN BARBER
INNOVATION ACADEMY

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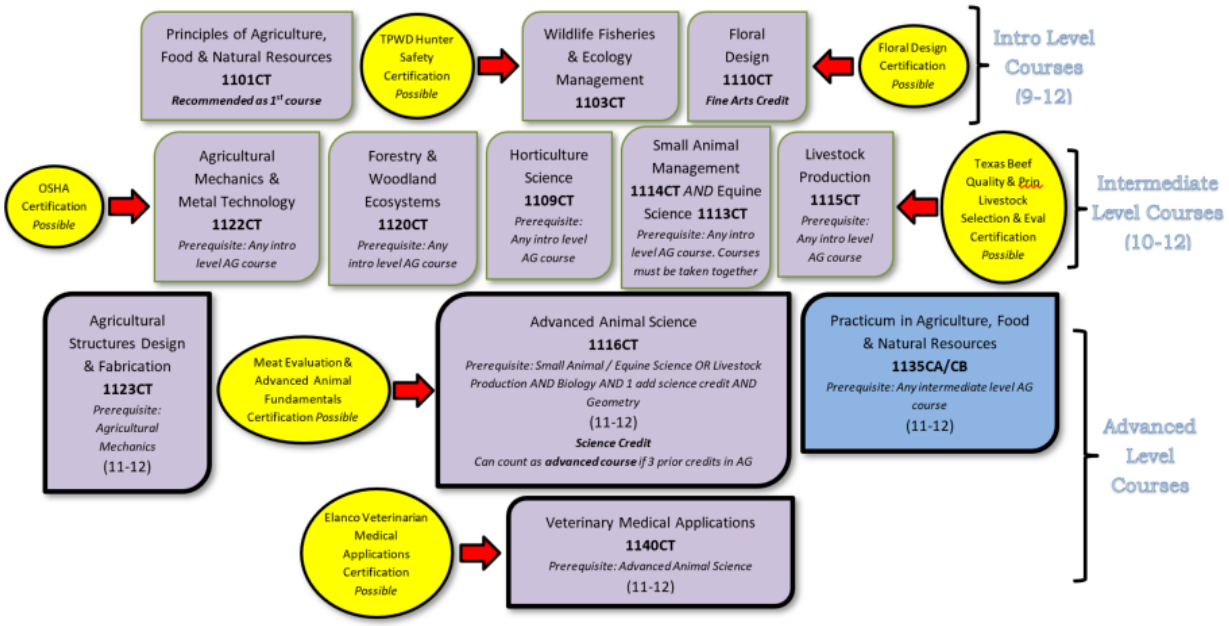
AGRICULTURE, FOOD & NATURAL RESOURCES

Endorsement: Business & Industry

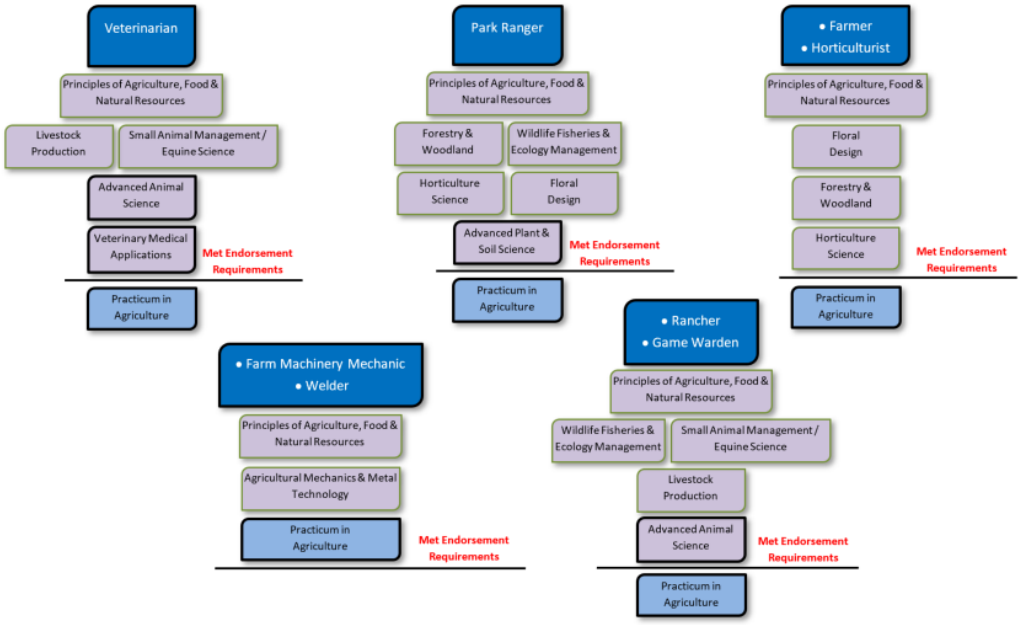


Certification Requirement
The district will pay 100% of the cost of the certification test if students can show mastery by:
Passing a certification practice test
Maintaining an 80+ overall course average at the time of the certification test
If students don't meet the requirements above, they must pay 100% of the cost of the certification test

LEGEND						To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course
Fill Color	Length	Credit	Fill Color	Length	Credit	
	18 weeks	1		HC - 18 weeks	0.5	
	36 weeks	2-3		HC - 36 weeks	1	
	College Course			Advanced Course		

Agriculture, Food & Natural Resources

Recommended Career Pathways



To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course

Principles of Agriculture, Food & Natural Resources

Prerequisite: None
Course: 1101CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

This class will give students an opportunity to explore the various areas of agriculture as they discover how agriculture impacts their lives on a daily basis. The foundation for truly understanding all that agriculture encompasses is laid in this class and additionally students are introduced to important life skills including record keeping, leadership and meeting room procedures. Students must keep an online record of their skills and knowledge about agriculture through an agricultural experience or SAE that acts as an extension of the class to extend student learning.

Student Activities

Students will explore the world of agriculture. Students will learn about different agricultural careers that are related but not limited to farming. They will practice different FFA contests such as Career Developmental Events (CDE) like egg grading and dairy evaluation as well as Leadership Developmental Events (LDE). Students will learn about the evaluation of animals and will take trips to the Ron Whitson Agricultural Science Center to work hands on with animals. They will receive a tour of the greenhouse and can have a hand at keeping it up and growing their own food. This class gives students a taste of everything so that they can find their niche in the agricultural field.

Students in Principles of Agriculture, Food and Natural Resources will have an opportunity to be a part of the largest student-led organization in the nation, The Future Farmers of America. Through the FFA, students will have the opportunity to participate in real-world competitions and leadership contests at the district, state and national level. These competitions allow students access to more than one million dollars in scholarships annually.

Competitions

State Livestock Shows, Leadership Development, Competitions in Chapter Conducting, Ag Issues, Job Interviews, etc., Career Development Events in Ag Products, etc.

Additional Considerations

AG classes travel to Ron Whitson AG Center in Rendon. Students handle animals & plants.

POS: Agriculture, Food & Natural Resources | Endorsement: Business & Industry

Wildlife, Fisheries & Ecology Management

Prerequisite: None
Course: 1103CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Students enrolled in this course will be exposed to careers related to Wildlife, Fisheries and Ecology. The course will focus on game and non-game species and the environmental factors needed to sustain natural resources.

Student Activities

Activities for this course include plant and animal species identification at the Rendon property, fishing techniques, bow and arrow shooting, ecological reclamation, compass reading, and building aquatic species traps. Professionals employed in and individuals associated with a course-related career will be utilized to enhance this class.

Students in Wildlife will have an opportunity to be a part of the largest student-led organization in the nation, The FFA Organization. Through the FFA, the students will have the opportunity to participate in real-world competitions and leadership contests at the district, state and national level. These competitions allow students access to more than one million dollars in scholarships annually.

Competitions

Livestock Shows, Leadership Development Competitions, Career Development Events in Wildlife, etc.

Additional Considerations

AG classes travel to Ron Whitson AG Center during class. Students handle animals in class.

Organizations

Certifications

TPWD Hunter Safety Certification Possible
Student Cost: $15

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Floral Design



Prerequisite: None
Course: 11110CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Floral Design is a fun, hands-on course where students create beautiful, artistic designs using flowers. Students will learn the elements and principles of design and the basics of business involved in running a flower shop and other floral-related industries.

Students will receive a fine arts credit for taking this class.

Student Activities

Activities for students enrolled in this course will include hands-on floral designing using silk and fresh flowers in multiple arrangements, history of floral design, elements and principles of design, plant anatomy, wedding planning and business management strategies of the floral industry.

Competitions

Leadership Development, Competitions, Career Development Events in Floral Design, etc.

Additional Considerations

AG classes travel to Ron Whitson AG Center in Rendon. Students handle plants and use sharp objects.

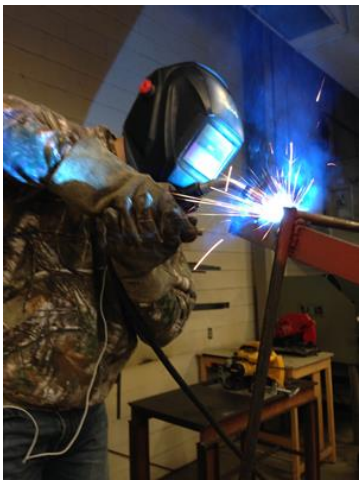
Organizations

Certifications

Floral Design Certification Possible

Student Cost: $30
Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Agricultural Mechanics & Metal Technologies



Prerequisite: Any intro level AG course

Course: 1122CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

Students enrolled in this course will be exposed to careers in agricultural power, structural and technical systems. 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 metalworking techniques.

Student Activities

Activities for this course include hand and power tool operations, electrical wiring, plumbing, carpentry and metalworking techniques. Students will be able to construct numerous projects as they relate to the activities.

Competitions

Students will have the opportunity to join and compete in Career Development Events through the National FFA Organization. Students will be able to construct and exhibit their projects in the Ag Mechanics Contest and compete for scholarships and industry products and equipment.

LDE, CDE, and State Welding Competitions as well as Ag Mechanics Competitions.

Certifications

OSHA Certification Possible
Student Cost: $25

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

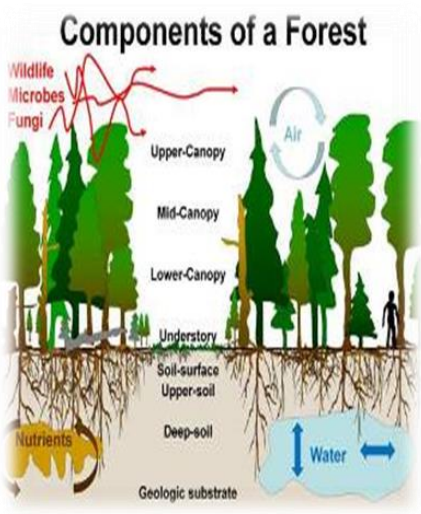
Organizations

Additional Considerations

Students need fine motor skills and mobility. Students handle sharp objects and use dangerous equipment.

POS: Agriculture, Food & Natural Resources | Endorsement: Business & Industry

Forestry & Woodland Ecosystems



Prerequisite: Any intro level AG course

Course: 1120CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

This course examines current management practices for forestry and woodlands. Special emphasis is given to management as it relates to ecological requirements and how these practices impact the environment. It includes exploration of careers associated with the forestry system, tree identification, calculating tree harvest and a study of the forest ecosystem.

Student Activities

Students will be exposed to reading a compass, calculating area in tracks of land, tree identification and soil treatments. Students will travel to the Ag-Science department property at Rendon and identify various native woody plants and take soil samples on the property. Students are encouraged to participate in the Woodlands, Wildlife, Forages and Land career development events through the National FFA Organization.

Competitions

State Livestock Shows, Leadership Development, Competitions, Career Development Events in Forestry, etc.

Organizations

Additional Considerations

Students travel to Ron Whitson AG Center in Rendon regularly. Students handle animals & plants.

Horticulture Science

Prerequisite: Any intro level AG course

Course: 1109CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

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

Student Activities

Students will be immersed in the world of plants with lots of hands-on time in the Greenhouse and Tree Farm. Students will learn how the vegetables, fruits and flowers they use on a daily basis are grown. Students will be working in the greenhouse and participate in a plant sale.

Students in Horticulture Science will have an opportunity to be a part of the largest student-led organization in the nation, The FFA Organization. Through the FFA, the students will have the opportunity to participate in real-world competitions and leadership contests at the district, state and national level. These competitions allow students access to more than one million dollars in scholarships annually.

Competitions

State Livestock Shows, Leadership Development Competitions, Career Development Events in Plant ID, Greenhouse, Tree Farm, Entomology, Nursery Landscape CDE, Cotton Judging CDE, Agronomy CDE

Organizations

Additional Considerations

AG classes travel to Ron Whitson AG Center in Rendon. Students handle plants and soil in class.

Small Animal Management
Equine Science



Prerequisite: Any intro level AG course
Course: 1114CT/1113CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

Small Animal Management is a course that educates and encourages students about management of pets and livestock and career opportunities in the small animal field. This course prepares students for potential careers related to small animal care, including but not limited to: veterinarians, vet techs, animal caretakers, pet breeders and owners, groomers, boarders, etc. This course is designed to be hands-on and includes people/animal interactions. Students will learn about careers related to the field and receive practical training in tasks applicable to any pet owner.

Equine Science is an entry level animal science course that covers topics related to the equine industry. Topics include: anatomy, reproduction, careers, nutrition, grooming, selection, tack and trailer safety.

Small Animal Management and Equine Science must be taken together.

Student Activities

Small Animal covers animal rights and animal welfare, animal uses in society, disease and parasitology, small animal breeds, nutrition, grooming, housing, care, human-animal bond, and much more. There are multiple lab activities, many of which include interactions with live animals. In Equine Science, students will learn and apply safe procedures as they relate to basic grooming, hoof care, saddling and elementary veterinary care.
Students enrolled in these courses will have an opportunity to be a part of the largest student-led organization in the nation, The FFA Organization. Through the FFA, the students will have the opportunity to participate in real world competitions and leadership contests at the district, state and national level. These competitions allow students access to more than one million dollars in scholarships annually.

Competitions

Livestock Shows, Leadership Development Competitions, Career Development Events in Horse Judging, etc.

Additional Considerations

AG classes travel to Ron Whitson AG Center in Rendon. Students handle animals & plants.

Organizations

Livestock Production

Prerequisite: Any intro level AG course

Course: 1115CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

Students will learn about livestock management and animal physiology. This course was developed to teach knowledge and skills related to animal systems and the workplace, career opportunities, entry requirements and industry expectations. Animal species in this course are: beef cattle, dairy cattle, swine, sheep, goats and poultry.

Student Activities

This course will build on the skills learned in Principles of Agriculture. Students will be examining livestock production from the standpoint of the producer and identifying proper management of livestock.

Students in Livestock Production will have an opportunity to be a part of the largest student-led organization in the nation, The FFA Organization. Through the FFA, the students will have the opportunity to participate in real-world competitions and leadership contests at the district, state and national level. These competitions allow students access to more than one million dollars in scholarships annually.

Competitions

Livestock Shows, Leadership Development Competitions, Career Development Events in Livestock Judging, Wood Judging, etc.

Additional Considerations

AG classes travel to Ron Whitson AG Center in Rendon. Students handle animals & plants.

Organizations

Certifications

Texas Beef Quality
Student Cost: $0
Principles of Livestock Selection Certification Possible
Student Cost: $35

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

POS: Agriculture, Food & Natural Resources | Endorsement: Business & Industry

Agricultural Structures Design & Fabrication

Prerequisite: Agricultural Mechanics & Metal Technologies

Course: 1123CT Credits: 1 Length: 18 weeks Placement: 11-12

Course Description

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

Student Activities

Ag Structures covers information and skills in employability skills, facilities design and fabrication, power systems, agricultural structures, metal construction, and the SAE.

Competitions

State Livestock Shows, Leadership Development, Competitions, Career Development

Additional Considerations

AG classes travel to Ron Whitson AG Center in Rendon. Students handle animals & plants.

Advanced Animal Science



Prerequisite: Biology AND 1 additional Science AND Geometry AND Livestock OR Equine Science/Small Animal Management

Course: 11160CT **Credits: 1** **Length: 18 weeks** **Placement: 11-12**

Course Description

To be prepared for careers in the field of animal science, students need to attain academic skills and knowledge, acquire knowledge and skills related to animal systems, and develop knowledge and skills regarding career opportunities, entry requirements and industry standards. To prepare for success, students need opportunities to learn, reinforce, apply and transfer their knowledge and skills in a variety of settings. This course examines the interrelatedness of human, scientific and technological dimensions of livestock production. Instruction is designed to allow for the application of scientific and technological aspects of animal science through field and laboratory experiences.

Students can earn science credit for this course.

Student Activities

This course will build on the skills learned in Animal Science. Students will learn disease management in domesticated animals including treatments such as vaccinations and medications. Emphasis in this course is placed on the inter-relatedness of human, scientific, and technological dimensions of livestock production. Students interested in Veterinary Technician, Veterinarian Medicine or Agriculture Science Education as a career should take this class.

Students in Advanced Animal Science will have an opportunity to be a part of the largest student-led organization in the nation, The FFA Organization. Through the FFA, the students will have the opportunity to participate in real-world competitions and leadership contests at the district, state and national level. These competitions allow students access to more than one million dollars in scholarships annually.

Competitions

Livestock Shows, Leadership Development Competitions, Career Development Events in Veterinary Science, etc.

Additional Considerations

AG classes travel to Ron Whitson AG Center in Rendon. Students handle animals during class.

Organizations

Certifications

Advanced Animal Fundamentals
Certification Possible
Student Cost: $35

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Practicum in Agriculture, Food & Natural Resources



Prerequisite: Any intermediate level AG course
Course: 1135CA/1135CB Credits: 2 Length: 36 weeks Placement: 11-12

Course Description

This course is a continuation of the agriculture career pathway of the student, and a job or internship position is required. The curriculum provides instruction to assist students in practicing communication skills, utilizing listening skills to follow directions, practicing basic mathematics skills as applied to agricultural settings, reading to gain information and performing assignments and tasks as directed.

Student Activities

This course will build on the skills learned in all agricultural science classes. Students will be extend their knowledge and begin to gain experience in the industry of agriculture along their career pathway.

Students will have an opportunity to be a part of the largest student-led organization in the nation, The FFA Organization. Through the FFA, the students will have the opportunity to participate in real-world competitions and leadership contests at the district, state and national level. These competitions allow students access to more than one million dollars in scholarships annually.

Competitions

Livestock Shows, Leadership Development Competitions, Career Development Events

Organizations

Additional Considerations

If a student does not have transportation, opportunities will be limited.

Veterinary Medical Applications



Prerequisite: Advanced Animal Science
Course: 1140CT **Credits: 1** **Length: 18 weeks** **Placement: 11-12**

Course Description

This course is a continuation of the Advanced Animal course but will provide more detailed training in the unlicensed veterinary assistant field. As a part of the curriculum, instruction is provided to assist students in practicing communication skills, utilizing listening skills to follow directions, practicing basic mathematics skills as applied to a veterinary medical setting, and reading to gain information and to perform assignments and tasks as directed. The purpose of Veterinary Medical Applications is to provide an in depth look into the veterinary sciences and seek possible careers in this diverse field of study. We will cover all animal species from large to small animal. This will include basic veterinary terminology, basic veterinary skills, and utilization of various tools. Students interested in Veterinary Technician, Veterinary Medicine or Agriculture Science Education as a career should take this class.

Student Activities

This upper-level course includes, but is not limited to, animal handling and restraint, health and safety, sanitation, surgical preparation, anatomy, physiology, medical terminology, infectious diseases, instrument and equipment identification, vaccine preparation and injection techniques, laws and ethics, and veterinary office procedures.

Students in Veterinary Medical Applications will have an opportunity to be a part of the largest student-led organization in the nation, The FFA Organization. Through the FFA, the students will have the opportunity to participate in real-world competitions and leadership contests at the district, state and national level. These competitions allow students access to more than one million dollars in scholarships annually. Students will also have the opportunity to expand their knowledge beyond the classroom through Supervised Agricultural Experiences (SAE's).

Competitions

Livestock Shows, Leadership Development Competitions, Career Development Events in Veterinary Science, etc.

Additional Considerations

If seeking certification, curriculum cannot be modified. Must get extended vet hours for certification. Students handle sharp objects and travel to the Arlington Shelter regularly.

Organizations

Certifications

Elanco Veterinarian Medical Applications Certification Possible
Student Cost: $35

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Agriculture, Food & Natural Resources Certifications

Name	Course	Provider	Cost
OSHA	Agricultural Mechanics & Metal Technology	CareerSafe Online	Student Pays: $25
The OSHA certification is an online 10 hour course. Students may access the course in class or at home with internet access. The course is broken up into modules with a test at the end of each module. Students must pass with a 70 or above in 3 attempts or less.			
Floral Design Certification	Floral Design	ICEV-Benz School of Floral Design	Student Pays: $30
The Principles of Floral Design Certification endorsed by Benz School of Floral Design requires students to display a thorough understanding of the principles, elements, geometry and basic techniques used in floral design. In addition, students will become associated with the origins and history of floral design as well as be able to identify flowers and floral materials, design and create arrangements and understand the elements used in critiquing and appraising floral designs. The exam for this certification is offered to students during the last week of the course and is administered in the classroom. There are no age restrictions. Students must complete all Floral Design lessons through their ICEV account with a grade of 70% or higher. The students must also pass the final exam with a grade of 70% or higher.			
TPWD Hunter Safety	Wildlife Fisheries & Management	Texas Parks & Wildlife	Student Pays: $15
This certification test is given as the final for the Wildlife Fisheries & Management course. Students must be at least 14 to take the certification test. There is a pretest and practice quizzes on the TPWD website: https://tpwd.texas.gov/education/hunter-education/how-to-get-your-texas-hunter-education-certification. Students must pass the exam with a 70% or higher.			
Principles of Livestock Selection & Evaluation	Livestock Production	ICEV	Student Pays: $35
The Livestock Selection & Evaluation Certification endorsed by the National Collegiate Livestock Coaches Association requires students to identify and analyze livestock breeds and their external anatomy. They will also be expected to show understanding of selection criteria and major factors considered in livestock evaluation. The exam for this certification is offered to students during the last week of the course and is administered in the classroom. There are no age restrictions. Students must complete all Principles of Livestock Selection & Evaluation lessons through their ICEV account with a grade of 70% or higher. The students must also pass the final exam with a grade of 70% or higher.			
Texas Beef Quality	Livestock Production	Texas A&M AgriLife Extension	Student Pays: $0
The program requires everyone involved with beef production to follow regulatory guidelines for product use and to use the Best Management Practices (BMPs), which are based on accepted scientific knowledge, to ensure safety and quality from the producer to the consumer. http://texasbeefquality.com/			
Elanco Veterinarian Medical Applications	Veterinary Medical Applications	iCEV	Student Pays: $35

Students are tested clinical terminology and veterinary terms, demonstrate appropriate animal handling and care skills, vital signs, blood sampling and injection methods and much more. https://www.icevonline.com/student-certifications/veterinary-medical-applications-certification Students must complete all Veterinarian Medical Application lessons through their ICEV account with a grade of 70% or higher. The students must also pass the final exam with a grade of 70% or higher.

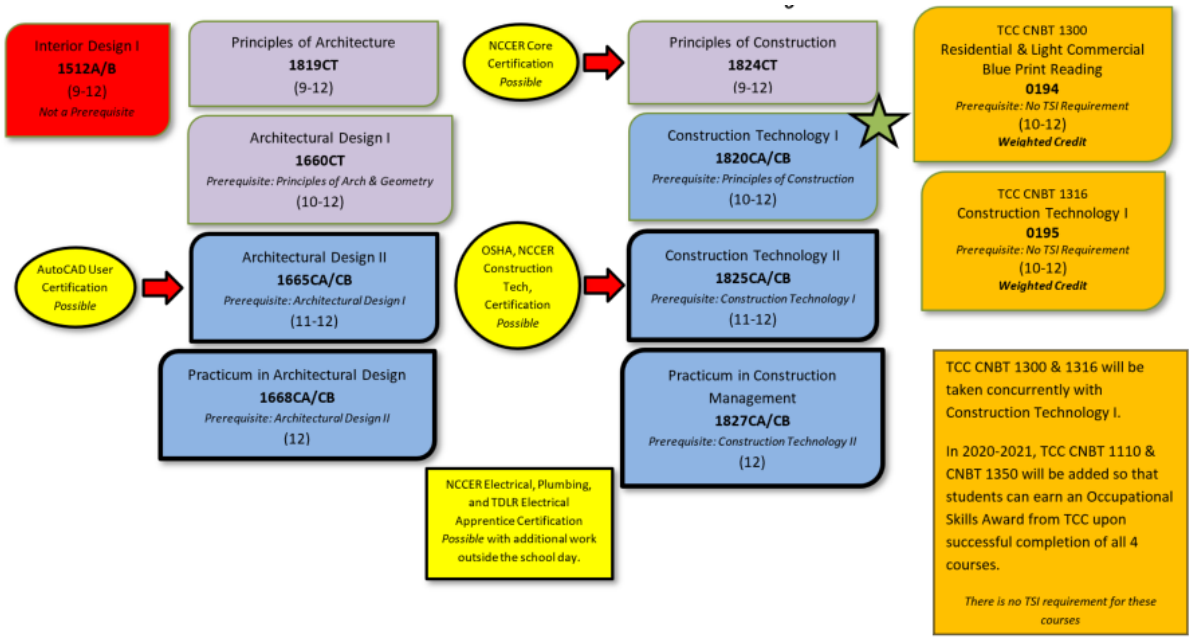
Architecture & Construction

Program of Study

BEN BARBER
INNOVATION ACADEMY

ARCHITECTURE & CONSTRUCTION

Endorsement: Business & Industry



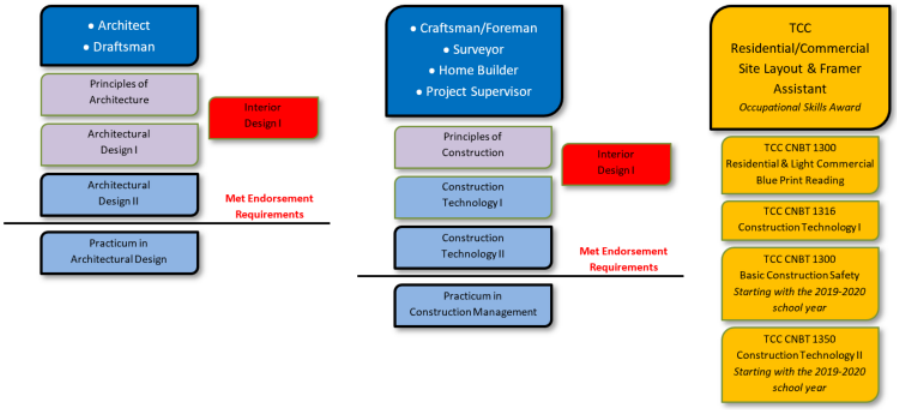
Certification Requirement
The district will pay 100% of the cost of the certification test if students can show mastery by:
Passing a certification practice test
Maintaining an 80+ overall course average at the time of the certification test
If students don't meet the requirements above, they must pay 100% of the cost of the certification test

Certificate of Excellence can be earned for this course.

LEGEND						
Fill Color	Length	Credit	Fill Color	Length	Credit	To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course
	18 weeks	1		HC - 18 weeks	0.5	
	36 weeks	2-3		HC - 36 weeks	1	
	College Course			Advanced Course		

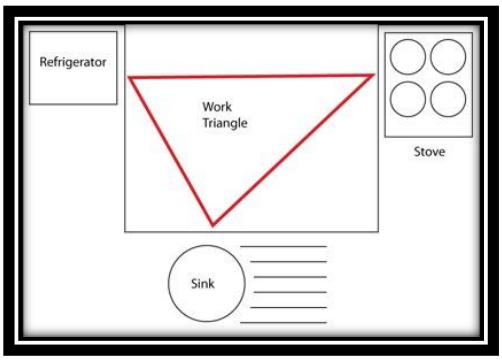
Architecture & Construction

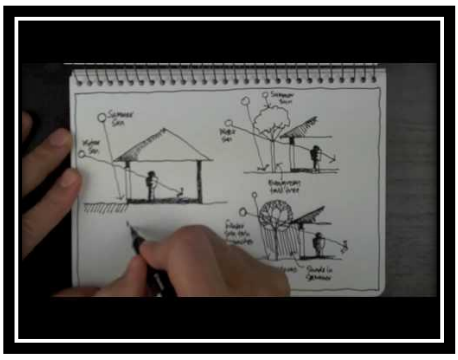
Recommended Career Pathways



To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course

Principles of Architecture





Prerequisite: None

Course: 1819CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Do you like to create things? You can learn to draw in AutoCAD (Automated Computer Aided Design). Learn to use all the architecture tools: drafting table, drawing board, compass, protractor, T-square, French curve and architect's scale. If you like creating houses, landscaping or interior design, you need to enroll in the Principles of Architecture class. Learn to design a floor plan in AutoCAD and Revit (the computer aided design software). Learn how to design residential and commercial blueprints. Students will receive a technology credit by taking this course.

Student Activities

Students will learn about careers in the architecture industry. Students will learn how to become an Architect, construction manager and urban designer. Students will learn about professional skills. Students will learn how the architect industry and quality work are put together. Students will learn how to be team players. Students will learn how to read an architect's scale. Students will learn essential skills like: communication, networking, workplace documents and how to build an architect portfolio. Students will learn about industry safety. Students will complete hands-on drawings in AutoCAD and Revit software. Students' activities will apply towards the AutoCAD/Revit certification.

Organizations

SkillsUSA

SkillsUSA is a partnership of students, teachers and industry working together to ensure America has a skilled workforce.

Principles of Construction



Prerequisite: None
Course:1824CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Principles of Construction is intended to provide an introduction and lay a solid foundation for those students entering the construction or craft skilled areas. The course provides a strong knowledge of construction safety, construction mathematics, common hand and power tools, plus Materials Handling. This course also provides communication and employability skills to assist the student in obtaining and maintaining employment. Certification Modules for each unit of study are obtainable from NCCER. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

Student Activities

Students will work on individual performance tasks identified in the NCCER certification curriculum as well as individual and small group projects utilizing common building materials, blueprints plus hand and power tools to reinforce the curriculum through project-based learning.

Certifications

NCCER Core Certification Possible
Student Cost: $20

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

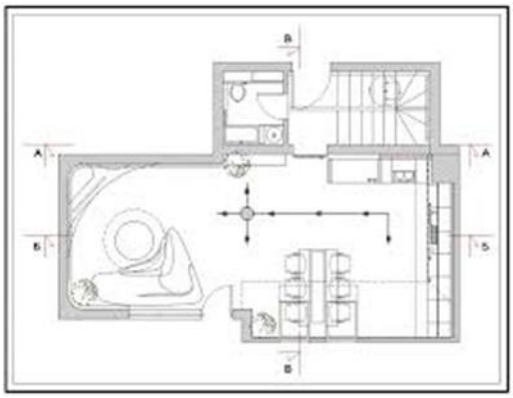
Additional Considerations

Students need fine motor skills and mobility. Students handle sharp objects and use power tools.

If seeking certification, curriculum cannot be modified.

Interior Design

(Home Campus Only)



Prerequisite: None
Course: 1512A/B Credits: 1 Length: 36 weeks Placement: 9-12

Course Description

This laboratory course teaches students to use knowledge and skills related to interior and exterior environments, construction, and furnishings to compete in industry, increase productivity and make wise consumer decisions. This technical course addresses psychological, physiological and sociological needs of individuals by enhancing the environments in which they live and work.

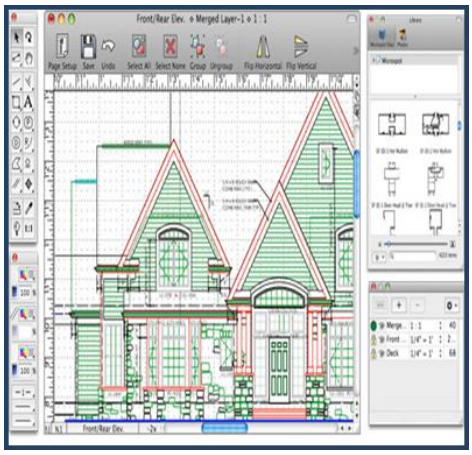
Student Activities

This course includes activities of designing floor plans, arranging furniture, selecting furniture, equipment and accessories using the elements and principles of design during the process. Sketches of various interiors and exteriors will be drawn. Cost analysis and budgeting for interior designs will be calculated.

Student Organization

SkillsUSA
Champions at Work®

Architectural Design I



Prerequisite: Principles of Architecture AND Geometry

Course:1660CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

Do you like to draw? Do you like to make things for your room? Learn to draw in AutoCAD (Automated Computer Aided Design) and learn to use all the architecture tools: drafting table, drawing board, compass, protractor, T-square, French curve and architect's scale. If you like drawing or sketching, you need to enroll in the Architecture Design program. Learn to design a floor plan (rooms in your house) in AutoCAD and learn to make a model of your house.

Student Activities

In class, you will learn to draw letters used by Architects. Students will learn how to use a tape measure to measure rooms, houses and buildings. Students will draw a picture of their parents' houses which is called the floor plan and elevations views. Students will learn how to draw orthographic projections and multi-view drawings using all of the architect's tools. Students will learn to draw two-dimensional drawings on the computer using AutoCAD. The final product in the Architecture Design I class is to draw a floor plan on ¼" graph paper and build a model house using foam board.

Organizations

SkillsUSA is a partnership of students, teachers and industry working together to ensure America has a skilled workforce.

Additional Considerations

Students must have successfully completed Algebra I and Geometry without modification.

Construction Technology I



Prerequisite: Principles of Construction
Course: 1820CA/CB **Credits: 2** **Length: 36 weeks** **Placement: 10-12**

Course Description

The next course in sequence for the Construction Endorsement is Construction Technology, where carpentry is the primary focus. Carpenters construct, erect, install and repair structures and fixtures made from wood and other materials. Skill enhancement projects using hand and power tools develop life-long skills to prepare students to enter the industry or continue their education.

Student Activities

Students will work in small groups on projects that emphasize the skills related to common building materials, hand & power tools, drawings, specs and layout, floor, wall, ceiling & roof systems & framing, building envelope and basic stair layout.

TCC Dual Credit Opportunity

Tarrant County College District

TCC CNBT 1300 Residential & Light Commercial Blue Print Reading & TCC CNBT 1316 Construction Technology I can be taken concurrently with this class. There is no TSI requirement, but students must register and pay tuition by TCC deadline.

Certificate of Excellence

Students can earn a Certificate of Excellence by achieving a specific list of real world skills related to this course. For the list of skills, please visit goo.gl/9VM3a9

Organizations

SkillsUSA is a partnership of students, teachers and industry working together to ensure America has a skilled workforce. SkillsUSA helps each student excel.

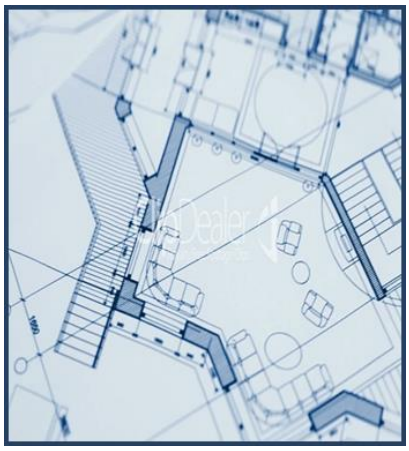
Surveying, Plumbing, Carpentry, Electrical, TeamWorks, Masonry

SkillsUSA

Additional Considerations

Students need fine motor skills and mobility. Students handle sharp objects and use power tools.

Architectural Design II



Prerequisite: Architectural Design I
Course: 1665CA/1665CB **Credits:** 2 **Length:** 36 weeks **Placement:** 11-12

Course Description

In Advanced Architectural Design, students gain advanced 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 or landscape architecture. Advanced Architectural Design includes the advanced knowledge of design, design history, techniques and tools related to the production of drawings, renderings and scaled models for commercial or residential architectural purposes.

Student Activities

Students draw a survey, site, plot, foundation, floor, electrical and roofing plans for their custom residential home design in AutoCAD. Students will design the front, sides and rear elevations views for their residential custom home. Students will also draw interior elevation sectional views of the kitchen and fireplace and will draw windows and door schedules. Students will then draw the construction of the wall and roof framing. The finished product will be used to complete a model of the student's custom residential home using balsa wood and a 3-D construction kit.

Certifications

AutoCAD Certification Possible
Student Cost: $100

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

If seeking certification, curriculum cannot be modified.

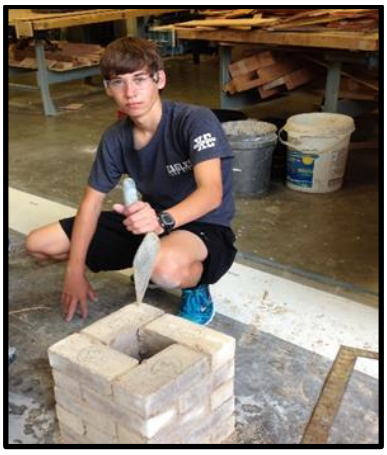
Organizations

SkillsUSA

SkillsUSA is a partnership of students, teachers and industry working together to ensure America has a skilled workforce.

Construction Technology II





Prerequisite: Construction Technology I
Course:1825CA/1825CB Credits: 2 Length: 36 weeks Placement: 11-12

Course Description

This advanced course is designed to prepare students for an entry-level position in the Construction Industry. The course focuses on two major mechanical building trades: Plumbing and Electrical, plus Advanced Framing Systems and Masonry.

Student Activities

Students will work in small teams to construct "live trainers" where they apply carpentry skills to frame/erect their "classroom". They will install all the plumbing for a bathroom, as well as a full breaker panel including 4 circuits of 'live' electrical needs. Their trainer will be inspected as if it were a jobsite under construction. When available, students may travel to Habitat for Humanity jobsites to apply their skills on a future home!

Certifications

NCCER Construction Tech Certification Possible
Student Cost: $20
OSHA Certification Possible
Student Cost: $25

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

If seeking certification, curriculum cannot be modified.

Additional Considerations

Students need fine motor skills and mobility.
If seeking certification, curriculum cannot be modified.

Organizations

SkillsUSA is a partnership of students, teachers and industry working together to ensure America has a skilled workforce. SkillsUSA helps each student excel.

Surveying, Plumbing, Carpentry, Electrical, TeamWorks, Masonry

Practicum in Architectural Design

Prerequisite: Architectural Design II
Course: 1668CA/1668CB Credits: 2 Length: 36 weeks Placement: 12

Course Description

This course is set up for a student pursuing a career in architecture to work in the afternoon and get school credit. The practicum course is a paid or unpaid internship for students participating in the Architecture Design program. A student must have an architecture-related job no later than the first two weeks of class to get credit for the practicum class. Student must adhere to all workplace rules and regulations and have a positive report from the employer.

Student Activities

For students interested in high-tech, fast-paced and lucrative work in the architecture industry, Architecture can not only provide you with a solid education while you are in high school, but also offer you the opportunity of a paid internship under an experienced architect with a local architecture firm. This will provide you with the skills needed to build a great career in the architecture industry.

Organizations

SkillsUSA

SkillsUSA is a partnership of students, teachers and industry working together to ensure America has a skilled workforce. SkillsUSA helps each student excel. Students involved in SkillsUSA can compete in District 4, Texas State and International competitions.

Additional Considerations

If a student does not have transportation, opportunities will be limited.

Practicum in Construction Management



Prerequisite: Construction Technology II
Course: 1827CA/1827CB Credits: 2 Length: 36 weeks Placement: 12

Course Description

This internship course is a senior-level capstone practicum experience that aligns with construction career pathways. The main goal of this program is to provide students with industry experience, networking opportunities and education that supersede the classroom. A student must have a construction-related job no later than the first two weeks of class to get credit for the practicum class. Please note the following important facts pertaining to this course:

- Students must have a valid Texas driver's license and provide their own transportation.
- This course is supervised by an Intern Coordinator in conjunction with an Intern Sponsor.
- Candidates will be evaluated on professionalism, participation, and responsibility.
- Students will present and defend a final project to a panel of experts, meeting the requirements for the Distinguished Achievement Program (DAP).

Additional Considerations

If a student does not have transportation, opportunities will be limited.

Architecture & Construction Certifications

Name	Course	Provider	Cost
NCCER Core	Principles of Construction	National Center for Construction Education & Research	Student Pays: $ 10 BBIA Pays: $ 10
There is no minimum age requirement for this certification and students are tested at the Construction Lab at BBCTA. There are 7 modules to complete and students must perform hands-on applications associated with the modules. Each module has an independent test that is multiple choice with no time limit. Students must fill out registration and sign a release form. Students must successfully pass all 7 module tests and complete all hands-on applications successfully to earn this certification.			
OSHA	Construction Technology II	CareerSafe Online	Student Pays: $ 12.50 BBIA Pays: $ 12.50
The OSHA certification is an online 10 hour course. Students may access the course in class or at home with internet access. The course is broken up into modules with a test at the end of each module. Students must pass with a 70 or above in 3 attempts or less.			
NCCER Construction Technology	Construction Technology II	National Center for Construction Education & Research	Student Pays: $ 10 BBIA Pays: $ 10
Students must have successfully completed NCCER Core before they can begin the NCCER Construction Technology certification. There is no minimum age requirement for this certification and students are tested at the Construction Lab at BBCTA. There are 17 modules to complete and students must perform hands-on applications associated with the modules. Each module has an independent test that is multiple choice with no time limit. Students must fill out registration and sign a release form. Students must successfully pass all 17 module tests and complete all hands-on applications successfully to earn this certification.			
AutoCAD	Architectural Design II	Autodesk	Student Pays: $ 100
Advance your career by becoming an Autodesk AutoCAD Certified User. Whether you're a student or a professional, this software certification will validate your skills, fulfill academic and industry requirements, and boost your design career.			

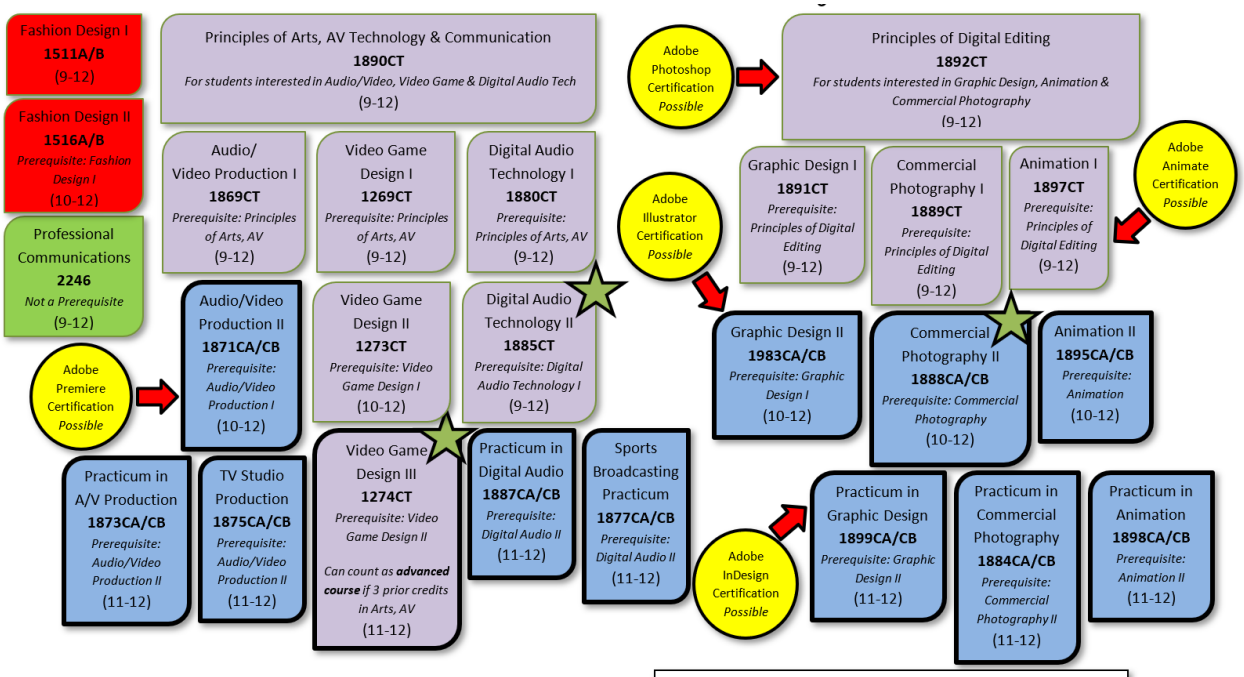
Arts, AV Technology & Communication

Program of Study

BEN BARBER
INNOVATION ACADEMY

ARTS, A/V TECHNOLOGY & COMMUNICATIONS

Endorsement: Business & Industry



Certification Requirement
The district will pay 100% of the cost of the certification test if students can show mastery by:
Passing a certification practice test
Maintaining an 80+ overall course average at the time of the certification test
If students don't meet the requirements above, they must pay 100% of the cost of the certification test

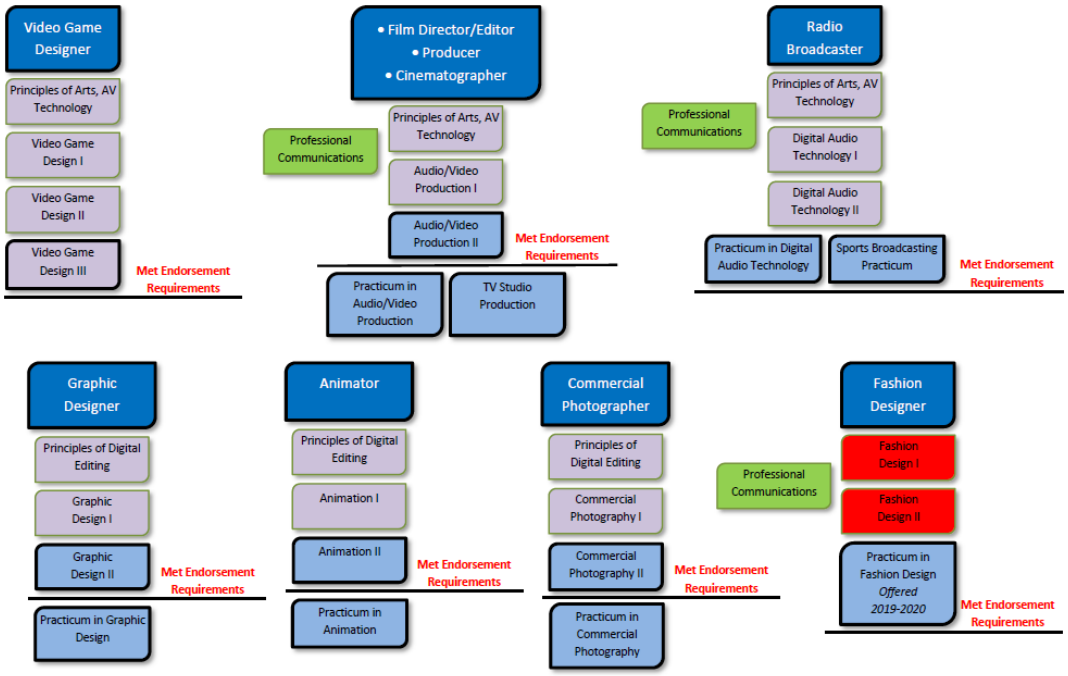
★ Certificate of Excellence can be earned for this course.

LEGEND					
Fill Color	Length	Credit	Fill Color	Length	Credit
	18 weeks	1		HC - 18 weeks	0.5
	36 weeks	2-3		HC - 36 weeks	1
	College Course			Advanced Course	

To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course

Arts, A/V Technology & Communications

Recommended Career Pathways



To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course

Principles of Arts, Audio/Video Technology & Communication



Prerequisite: For students interested in Audio/Video, Video Game & Digital Audio
Course: 1890CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

If you like movies, cartoons, drawing, or creating video games, the Arts/AV cluster is the area you want to study at Ben Barber. The students in this course get the chance to get their feet wet in many different areas covered in this department. You will spend time learning the very basics of graphic design, video game design, and video production. Professional Communication and Ethics will also be covered. This class is the base level class required for any student to move through the Arts/AV and Communication cluster.

Student Activities

This class is an 18-week course where the students will be able to get some hands on experience. Among other projects, students will have the opportunity to create a very basic video game, and a short film. A Class 10 SD card is recommended for the video production portion.

Competitions

SkillsUSA Champions at Work®

After School Clubs

THE LAB CLUB

Principles of Digital Editing



Prerequisite: For students interested in Graphic Design, Animation & Photography
Course: 1892CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Have you ever seen a really beautifully edited photo in a magazine or on the Internet? Do you wish you could make your pictures look that way? Did you know that knowing how to use Photoshop and other similar editing software comes in handy in almost all the different areas of Arts and AV? Principles of Digital Editing is an 18 week course that will allow the students to work through the Adobe Photoshop program. The students will learn everything from adding text, layer editing and photo manipulation. The class will conclude with the students taking the Adobe Photoshop Certification Test.

Student Activities

This class is an 18-week course where the students will work both individually and in small groups as they work through Photoshop modules in preparation for their final certification test. The students will work with a variety of stock photos that are provided by the instructor that will aid them through the creative process. The class projects will prepare them for the commercial photography, graphic design, animation, and video production courses offered at BBCTA. Aspects of digital editing are prevalent in all of the courses in the cluster.

Certifications

Adobe Photoshop Certification Possible

Student Cost: $30
Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Additional Considerations

If seeking certification, curriculum cannot be modified.

Competitions

SkillsUSA Champions at Work

After School

THE LAB CLUB

Fashion Design I
(Home Campus Only)

Prerequisite: None
Course: 1511A/B Credits: 1 Length: 36 weeks Placement: 9-12

Course Description

This laboratory course teaches students to create, design and construct apparel. Students also acquire knowledge and skills related to the fashion and textile industry, marketing and consumption of textiles and apparel. Students will research careers related to the textile and apparel industries.

Organizations

DECA is the CTSO for students enrolled in Business, Marketing or Finance courses.

DECA students have access to:

- Guest speakers
- Field trips to the Cowboys Stadium, Mavs game, Six Flags and MOCK DECA competition

Local, State & Nationwide travel with DECA competitive events

Fashion Design II
(Home Campus Only)



Prerequisite: Fashion Design I
Course: 1516A/1516B Credits: 1 Length: 36 weeks Placement: 10-12

Course Description

Students in Fashion Design II will develop an understanding of the fashion industry with an emphasis on design and construction. Topics of study during the course include:

*History of fashion and the apparel field
*Analyzing global fashion production
*Fashion trends
*Fashion sketching
*Using computer aided techniques to create fashion designs
*International factors that affect fashion designs
*Creation of a fashion portfolio
*Minimum of 4 construction projects

***All materials and supplies will be provided by student**

Student Activities

*Clothing Construction Projects *Field Trips *CAD Fashion Illustration
*Design Portfolio *Personal Fashion Image Analysis

Audio/Video Production I

Prerequisite: Principles of Arts, A/V
Course: 1869CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Interested in making movies? Want to be the next Steven Spielberg? Video Production gives you the opportunity to learn the basics of various aspects of the Film & Television production industry. The Video Production course at Ben Barber starts with the basics of shot composition and camera movement and ends with the student producing an original production to submit it to a state-wide contest. The students will learn the art of storytelling, scriptwriting, storyboarding, shooting and editing on equipment that is the industry standard.

Student Activities

We will complete four large projects during this 18-week course. The first project will help the students get comfortable with the production process, camera operations and editing. The students will get to tell the story of a "Day in the Life" of a subject of their choice. The projects following that will be anything from documentaries, music videos, or even TV sitcom production. During this course, the opportunity for a field trip to different production companies, universities, or other places may occur. Every year, the opportunity to spend time collaborating with other teachers and students will give the students a chance to produce videos for home campuses, athletics, and other Programs here at Ben Barber.

Additional Considerations

If seeking certification, curriculum cannot be modified.

Organizations/ Competitions

SkillsUSA Champions at Work®

Ben Barber Film Club

Video Game Design I

Prerequisite: Principles of Arts, A/V
Course: 1269CT **Credits: 1** **Length: 18 weeks** **Placement: 9-12**

Course Description

Students will learn the basics of video game programming and game program design and will program in Game Maker or Construct 2, utilizing the curriculum to learn computer science concepts. Students will also learn how to work as a team, presentation preparation and delivery, real-world time management and many basic computer and media technology skills.

Student Activities

Students will learn to storyboard game designs and develop games in the Game Maker or Construct 2 language. Students will complete a variety of games and projects to showcase their game development and programming skills. Students will have the opportunity to work in teams in a variety of settings and publish their projects for others to play.

What's next?

If you want to be a **Game Developer** or **Game Designer** then you should consider taking these courses…

- Video Game Design II
- Video Game Design III
- Graphics Design & Illustration
- Animation
- Computer Programming I/Pre-AP Computer Programming I
- Computer Programming II
- AP Computer Science Principles
- Visit Achieve Texas for more information on careers http://www.achievetexas.org/Information.htm

Organizations/After School/Competitions

- Game Design Club
- Computer Science Students Association
- Business Professionals of America
- FIRST FTC Robotics

Additional Considerations

Strongly recommended that students must have successfully Algebra I and Geometry without modification. Advanced problem solving skills required.

Digital Audio Technology I


Prerequisite: Principles of Arts, A/V
Course: 1880CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Have you ever wanted to be heard by friends and family on your very own radio show? Taking Digital Audio Technology 1, gives you that opportunity, and more. Create your very own radio talk show and play new music you love and listen to everyday. By the end of the class, each student will have over 4 hours of on-air time and your friends and family can listen to you on www.999thewild.net. In addition to being on-air, you will write/record commercials and radio show elements in our professional recording studio. The basics of audio recording will also be learned.

Student Activities

We will complete 3 large projects during the course, one of which will be to create a 10 minute radio drama. This will be like a scripted TV show, without the pictures. Another project will be to produce a 'decades show' live on air. You will be assigned a specific decade, and play the music and talk about the events that happened in that decade. Lastly we will create a 45 minute radio show. It can be about whatever you want, i.e. sports, gossip, news talk, music, etc.

Organizations

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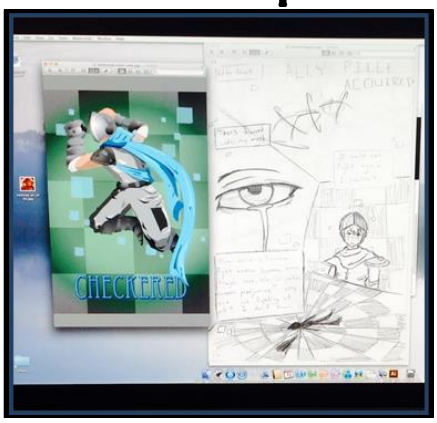
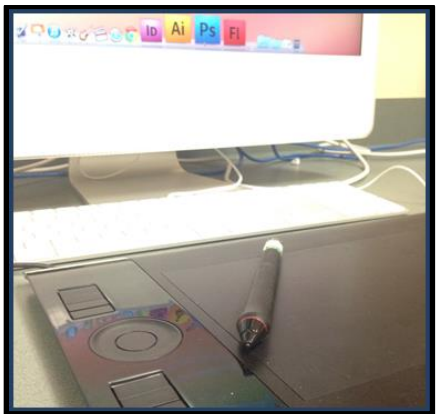
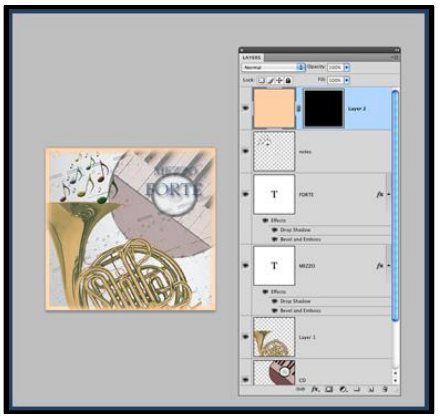
Graphic Design & Illustration I







Prerequisite: Principles of Digital Editing

Course: 1891CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

This class will give students an opportunity to visually express and design creative ideas for an exciting field. Commercial art concepts and design strategies will be explored using design principles and art elements for creating logos, newsletters, ads, and illustrations. Adobe Creative Suites (Photoshop, Illustrator and InDesign) is the software students will learn and use in this class. An online portfolio of student's artwork will be created as a final project. This course meets the one credit technology applications graduation requirement.

Student Activities

Creating logos and printed material for local companies and organizations. Students create designs and signage for district initiatives throughout the school year.
Students in both the Graphic Design and Advanced Graphic Design courses will have the opportunity to be a part of the career tech student organization, Skills USA. Through Skills USA, the students will have the opportunity to compete in real world animation and leadership contests at the district, state and national level.

Competitions

SkillsUSA
Champions at Work

After School

THE LAB
CLUB

Additional Considerations

If seeking certification, curriculum cannot be modified.

Commercial Photography I



Prerequisite: Principles of Digital Editing
Course: 1889CT **Credits: 1** **Length: 18 weeks** **Placement: 9-12**

Course Description

Have you ever seen a really beautiful photo of a landscape or model that you wished you could recreate? Do you enjoy working in the different Adobe Creative Suites like Photoshop? Do you have a camera that you wished you knew what all the buttons did? Well, Look no further! Commercial Photography is a class that will cover the basics in DSLR photography, Wild Life Photography, Flash Photography, Portrait photography, Double exposure, Product photography, Photoshop editing, and also provide insight into the business of photography. The students will get the opportunity to work with different clients, learn how to write contracts to present to clients and make photo release forms, compete in competitions and also explore the abstract creative side of photography.

Students must provide their own DSLR camera.

Student Activities

This class is an 18-week course where the students will learn the basic operations of the camera. Once the students understand the camera, they can then take their pictures into Photoshop and really enhance and improve them. This class will participate in many different campus projects like the Spring and Fall Fashion shows. There will be a project that will allow the students to create a mock photography company and then get the opportunity to work directly with a client on pricing, scheduling and distribution of the final product. Students will also learn how to own and handle their own photography business by learning the importance of contracts, portfolio and versatility. Students will have a lot of work to put in their portfolio and show clients by the end of this class.

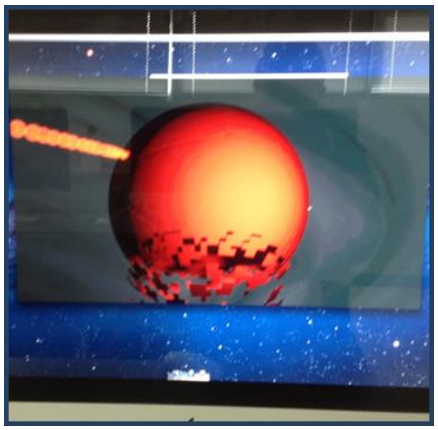
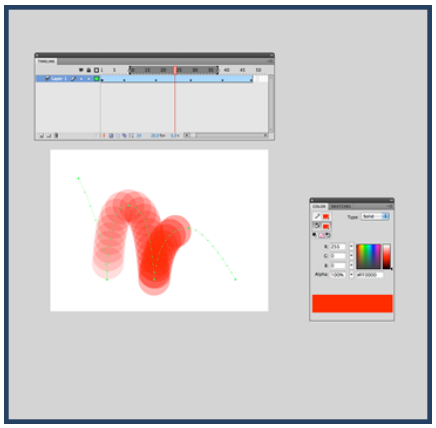
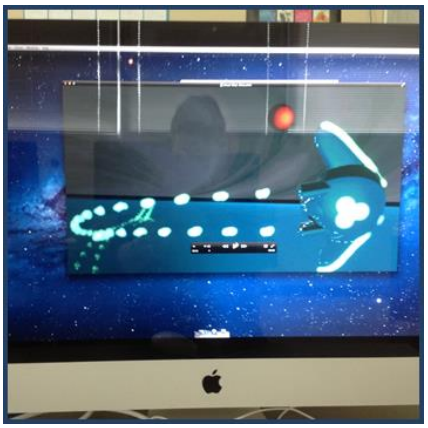
Competitions

SkillsUSA Champions at Work®

Additional Considerations

If seeking certification, curriculum cannot be modified.

Animation I

Prerequisite: Principles of Digital Editing
Course: 1897CT **Credits: 1** **Length: 18 weeks** **Placement: 9-12**

Course Description

If you like watching cartoons and animation, then this class may be for you. Animation is a growing art form providing careers in entertainment, advertising, and other markets where a strong visual impact is warranted. Basic design principles of animation will be used for creating and drawing storyboards, developing characters, and writing storylines. You will be making, editing, and importing sounds into animations to create interest. A variety of animation techniques and applications will be practiced. Adobe Flash, ToonBoom, and 3D animation software will be explored. A final DVD of all animations will be made as a final digital portfolio.

Student Activities

Create animations for school groups and organizations as well as district initiatives. Students in both the Animation and Advanced Animation courses will have the opportunity to be a part of the career tech student organization, Skills USA. Through Skills USA, the students will have the opportunity to compete in real world animation and leadership contests at the district, state and national level.

Certifications

Adobe Animate Certification Possible

Student Cost: $30
Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Competitions

SkillsUSA
Champions at Work®

Additional Considerations

If seeking certification, curriculum cannot be modified.

Professional Communications

(Home Campus only)

Prerequisite: None
Course: 2246 Credits: 0.5 Length: 18 weeks Placement: 9-12

Course Description

Professional Communications is a new and exciting way for students to earn their speech credit; required for graduation. Students will learn how to communicate effectively, overcome their fear of speaking in public, enhance their leadership skills, and fine tune their presentation techniques using the latest technology. One of the number one things employers look for in a quality candidate is strong written and verbal communication skills and creativity. This course will utilize the latest trends in technology and provide you with the opportunity to enhance your skills and become a competitive candidate for college or the workplace.

Student Activities

Students will apply their technology skills by designing creative projects and learn how to communicate effectively using the latest trends. This course is ideal for students who want to expand their leadership skills and enhance their commitment to student organizations.

Organizations

SkillsUSA

SkillsUSA is a partnership of students, teachers and industry working together to ensure America has a skilled workforce. SkillsUSA helps each student excel. Students involved in SkillsUSA can compete in District 4, Texas State

Audio/Video Production II



Prerequisite: Audio/Video Production I
Course: 1871CA/CB Credits: 2 Length: 36 weeks Placement: 10-12

Course Description

Expanding upon what was taught in Video Production, the Advanced Video Production students will get the opportunity to take their productions to the next level. The expectations of the projects go up, the production quality is increased and the amount of eyes that see your work is dramatically increased. The Advanced class has their work shown off in numerous different ways including public presentation, online galleries, and contests/film festivals. The pre-requisite for this course is Principles of Arts/AV and Communication and also Video Production.

Student Activities

We will complete numerous different projects in the 36-week course. We always begin the year with a project to get our hands back on the camera and refresh our editing skills. This project incorporates all the different aspects that are taught in the first year of Video Productions. Once we get through the first projects, students are given some freedom on the following projects, as long as they stay within the given guidelines. Every project in this course is eligible to be submitted to numerous different film festivals (including South By Southwest) or contest such as Skills USA. Field Trips and Guest Speakers are also taken advantages of if the opportunity comes up during the semester. The advanced students also take on the responsibility of producing senior videos for the home campuses as well.

Certifications

Adobe Premiere Certification Possible

Student Cost: $30
Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Additional Considerations

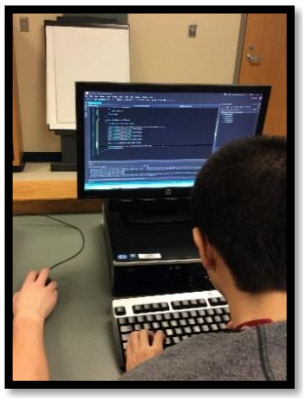
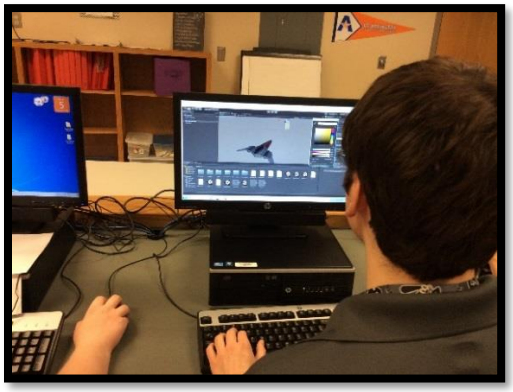
Night & weekend responsibilities.
Ben Barber Film Club

Competitions

SkillsUSA Champions at Work®

Students have opportunity to work with MISD athletic department for all sporting events at both Vernon Newsom and RLA stadium as well as events at The Performing Arts Center

Video Game Design II


Prerequisite: Video Game Design I

Course: 1273CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

Students will dive into the inner workings of a fully functional role-playing game (RPG) by customizing playable characters, items, maps, and chests and eventually applying customizations by altering and enhancing the core game code. Students will work in the Visual Studio C#, XNA Game Studio or Unity.

Student Activities

Students will apply programming skills in C#, XNA or Unity environments. Student will design, and implement game art and features. Students will design a variety of games and a completed project to showcase their game design and programming skills. Students will have the opportunity to work in teams in a variety of settings and publish their projects for others to play or view.

What's next?

If you want to be a **Game Developer or Game Designer**, then you should all consider taking these courses…

- Video Game Design III
- Computer Programming I/Pre-AP Computer Programming I
- Computer Programming II
- AP Computer Science Principles
- Animations
- Graphics Design and Illustration

Visit Achieve Texas for more information on careers
http://www.achievetexas.org/Information.htm

Organizations/After School/Competitions

- Game Design Club
- Computer Science Students Association
- Business Professionals of America
- FIRST FTC Robotics

Additional Considerations

Students must have successfully completed Video Game Design I, Algebra I and Geometry without modification. Advanced problem solving skills required.

POS: Arts, A/V Technology & Communications | Endorsement: Business & Industry

Digital Audio Technology II


Prerequisite: Digital Audio Technology I
Course: 1885CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Taking what was learned during Digital Audio Technology I, you will now be an 'employee' of 99.9 The Wild. You will interview for positions and be 'hired' based on skills and experience. Students will run the entire radio station, from scheduling shows, running the website, producing their own shows, talking with local businesses to get commercials and the overall flow of the station. Students will also DJ elementary and middle school dances as well as live remote broadcasts at local events.

Student Activities

Taking what was learned during Radio I, you will now be an 'employee' of 99.9 The Wild. You will interview for positions and be 'hired' based on skills and experience. Students will run the entire radio station, from scheduling shows, running the website, producing their own shows, talking with local businesses to get commercials and the overall flow of the station. Students will also DJ elementary and middle school dances as well as live remote broadcasts at local events.

Certificate of Excellence

Students can earn a Certificate of Excellence by achieving a specific list of real world skills related to this course. For the list of skills, please visit goo.gl/9VM3a9

After School

Radio Broadcasting Club
DJ Live Events

Competitions

SkillsUSA Champions at Work

POS: Arts, A/V Technology & Communications | Endorsement: Business & Industry

Graphic Design & Illustration II

Prerequisite: Graphic Design & Illustration I

Course: 1893CA/CB Credits: 2 Length: 36 weeks Placement: 10-12

Course Description

This class will give students an opportunity to visually express and design creative ideas for an exciting field. Commercial art concepts and design strategies will be explored using design principles and art elements for creating logos, newsletters, ads, and illustrations. Adobe Creative Suites (Photoshop, Illustrator and InDesign) is the software students will learn and use in this class. An online portfolio of student's artwork will be created as a final project. This course meets the one credit technology applications graduation requirement.

Student Activities

Creating logos and printed material for local companies and organizations. Students create designs and signage for district initiatives throughout the school year.
Students in both the Graphic Design and Advanced Graphic Design courses will have the opportunity to be a part of the career tech student organization, Skills USA. Through Skills USA, the students will have the opportunity to compete in real world animation and leadership contests at the district, state and national level.

Certifications

Adobe Illustrator Certification Possible

Student Cost: $30
Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Additional Considerations

If seeking certification, curriculum cannot be modified.

Competitions

SkillsUSA
Champions at Work

After School

THE LAB
CLUB

Commercial Photography II

Prerequisite: Commercial Photography I
Course: 1888CA/CB Credits: 2 Length: 36 weeks Placement: 10-12

Course Description

Want to take those pictures that you took last year to the next level? What to learn what it takes to run a successful photography business? How do I get people to see my pictures? Learn all that and more in the second level course, Advanced Commercial Photography. This course requires the students provide their own DSLR camera and will working solely in the digital photography world. No film cameras. If taking pictures is something you are passionate about get involved in this course.

Student Activities

This class is a 18-week course where the students will add on to what they learned in Commercial Photography learn the basic operations of the camera. The students will learn advanced photography and editing techniques both in the studio setting as well as outdoors. One major component of this advanced class is to get the students ready to pursue a career in photography, they will learn more in depth the ins and outs of running a business.

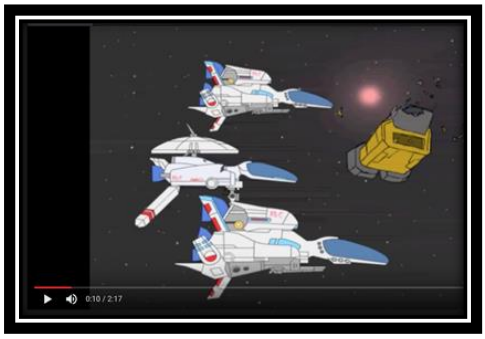
Competitions

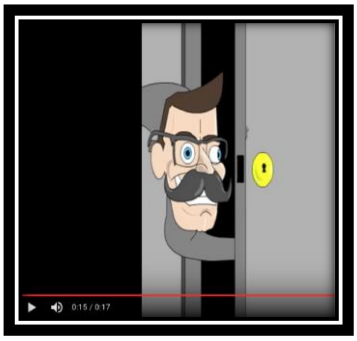
Certificate of Excellence

Students can earn a Certificate of Excellence by achieving a specific list of real world skills related to this course. For the list of skills, please visit goo.gl/9VM3a9

SkillsUSA Champions at Work

Animation II





Prerequisite: Animation I
Course: 1895CA/CB **Credits:** 2 **Length:** 36 weeks **Placement:** 10-12

Course Description

This class will provide students the opportunity to expand their skills and creativity, allowing students to compare various styles of animation. Developing characters, storyboards, and environments will be part of the course. Sound and audio effects will be created, imported, and edited for special effects. The process of assembling and rendering scenes in 3D animation will be explored and edited in video editing software. Students will travel through the creative animation process and choose a final 2D or 3D animation for a final animation project. Students will compile an online portfolio of all their projects. This course meets the one credit technology applications graduation requirement.

Student Activities

Create animations for school groups and organizations as well as district initiatives. Students in both the Animation and Advanced Animation courses will have the opportunity to be a part of the career tech student organization, Skills USA. Through Skills USA, the students will have the opportunity to compete in real world animation and leadership contests at the district, state and national level.

Additional Considerations

If seeking certification, curriculum cannot be modified.

Competitions

SkillsUSA
Champions at Work®

Practicum in Audio/Video Production



Prerequisite: Audio/Video Production II
Course: 1873CA/1873CB **Credits:** 2 **Length:** 36 weeks **Placement:** 11-12

Course Description

The most advanced level of the Video Production program is the practicum course. These students are in the class for 36 weeks and are responsible for some of the most important projects that come through our program. The Practicum students work directly with clients from the district and industry to gain experience and build their portfolio.

Student Activities

The Practicum student will have the opportunity to work on projects as the department is asked for services. With requests ranging from athletic banquet videos to program recruiting videos, these students gain valuable industry experience working with real-world clients. Over the course of the semester the students are required to produce a film to be submitted to film festivals or Skills USA. Clients in this class in the past have included Mansfield Methodist Hospital, Leadership Mansfield, Mansfield Chamber of Commerce and other community members. This class will take a field trip to two local universities that offer outstanding programs in the Radio, Television and Film program of study.

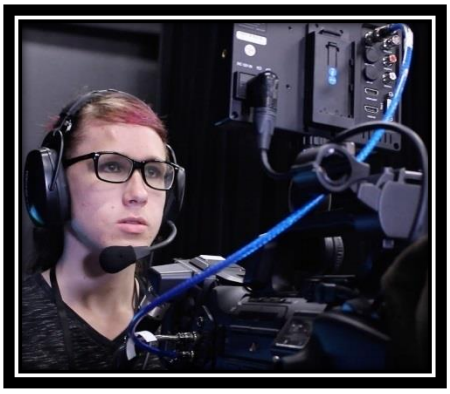
Additional Considerations

Students must provide their own transportation and complete independent internship including nights and weekend responsibilities.

Competitions

SkillsUSA
Champions at Work®

TV Studio Production



Prerequisite: Audio/Video Production II
Course:1875CA/1875CB Credits: 2 Length: 36 weeks Placement: 11-12

Course Description

If you are the student who comes through the program and has a passion for journalism or news, the News Studio Production course is a perfect fit for you. At Ben Barber, we have a full functioning TV studio. The students in this class learn the ins and outs of the news production industry and are responsible for the BBN, or Ben Barber News, which airs weekly around the district. The students are responsible for the entire production from newsgathering to anchoring to technical crew.

Student Activities

If you are the student who comes through the program and has a passion for journalism or news, the News Studio Production course is a perfect fit for you. At Ben Barber, we have a full functioning TV studio. The students in this class learn the ins and outs of the news production industry and are responsible for the BBN, or Ben Barber News, which airs weekly around the district. The students are responsible for the entire production from newsgathering to anchoring to technical crew.

Additional Considerations

If a student does not have transportation, opportunities will be limited.

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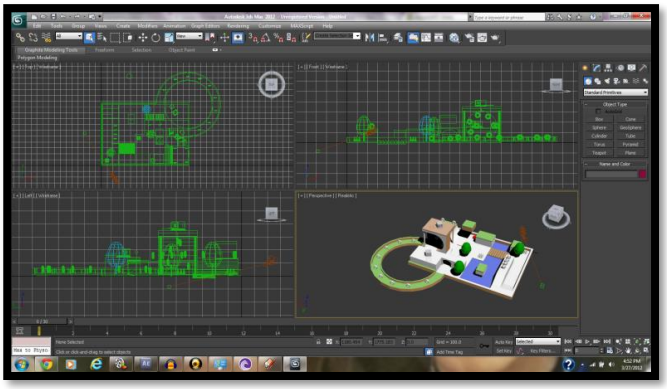
Competitions

SkillsUSA
Champions at Work®

Video Game Design III



Prerequisite: Video Game Design II

Course: 1274CT Credits: 1 Length: 18 weeks Placement: 11-12

Course Description

This course gives students the opportunity to dive further into game development in a mobile environment and provide them with the real world processes and systems used in the creation of games and simulations. Students will work in the Android and Java environments.

Student Activities

Students will develop games for the Android mobile environment. Students will learn how to program in the Java programming environment. Students will have the opportunity to work as an individual and as a part of a team to complete a working mobile gaming application.

Certificate of Excellence

Students can earn a Certificate of Excellence by achieving a specific list of real world skills related to this course. For the list of skills, please visit goo.gl/9VM3a9

Additional Considerations

Students must have successfully completed Video Game Design II, Algebra I and Geometry without modification. Advanced problem solving skills required.

Organizations/After School/Competitions

- Game Design Club
- Computer Science Students Association
- Business Professionals of America
- First FTC Robotics

Practicum in Digital Audio

Prerequisite: Digital Audio Technology II
Course: 1887CA/1887CB Credits: 2 Length: 36 weeks Placement: 11-12

Course Description

This is the most advanced course in the Radio Broadcasting program. Students will still oversee the running of the radio station, as well as complete projects that are needed throughout the district and community. These students will gain real world industry experience, and have a demo reel upon completion of the class.

Student Activities

Radio III students are given the opportunity and encouraged to participate in community outreach programs such as Toys for Tots, DJ'ing dances and other remote broadcasts. We will take field trips to local radio stations and have people from the radio industry in as guest speakers. All of the things we do on air will be streamed through our website so that friends and family have an opportunity to listen live.

Additional Considerations

Students must provide their own transportation and complete independent internship including nights and weekend responsibilities.

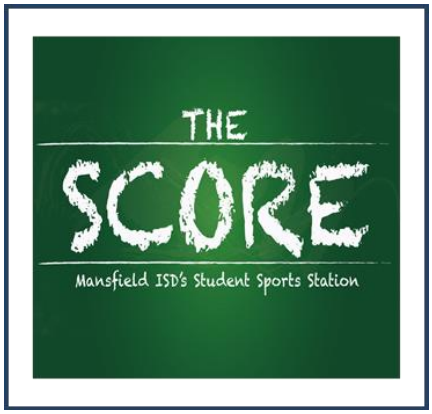
Competitions

SkillsUSA Champions at Work

After School

Radio Broadcasting Club
DJ Live Events

Sports Broadcasting Practicum



Prerequisite: Digital Audio Technology II
Course:1877CA/1877CB Credits: 2 Length: 36 weeks Placement: 11-12

Course Description

Do you love sports and wish you could talk about it every day? Sports Broadcasting is the class for you. We cover the local high school teams, create our own sports radio shows to highlight local, regional, national sports teams, and provide the daily sports updates for the radio station. The Basics of the 'Big 3'(Baseball, Basketball, Football) are also discussed. At the end of the year you will be able to put all of your work on a demo CD to keep.

Student Activity

We will cover local high school games interviewing coaches and players to put together packages for the radio station. Sports talk shows will be produced and aired at least once per week on the radio station. The radio station is streamed online so that friends and family will have a chance to listen to your shows. There is also an opportunity to talk with local sports personalities.

Competitions

SkillsUSA
Champions at Work®

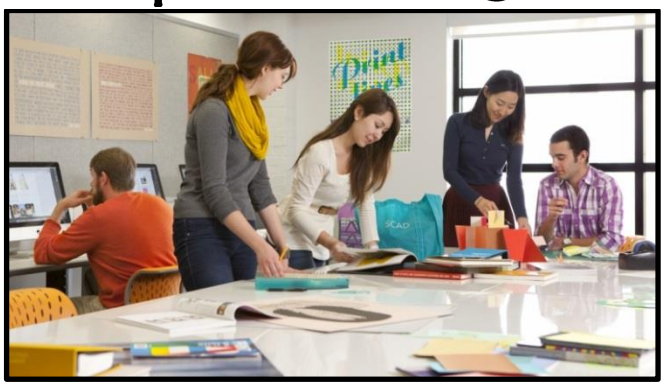
After School

Radio Broadcasting Club
DJ Live Events

Additional Considerations

Students must provide their own transportation and complete independent internship including nights and weekend responsibilities.

Practicum in Graphic Design



Prerequisite: Graphic Design & Illustration II
Course: 1899CA/1899CB Credits: 2 Length: 36 weeks Placement: 11-12

Course Description

This class will give students an opportunity to visually express and design creative ideas for an exciting field. Commercial art concepts and design strategies will be explored using design principles and art elements for creating logos, newsletters, ads, and illustrations. Adobe Creative Suites (Photoshop, Illustrator and InDesign) is the software students will learn and use in this class. An online portfolio of student's artwork will be created as a final project. This course meets the one credit technology applications graduation requirement.

Student Activities

Creating logos and printed material for local companies and organizations. Students create designs and signage for district initiatives throughout the school year.
Students in both the Graphic Design and Advanced Graphic Design courses will have the opportunity to be a part of the career tech student organization, Skills USA. Through Skills USA, the students will have the opportunity to compete in real world animation and leadership contests at the district, state and national level.

Additional Considerations

If a student does not have transportation, opportunities will be limited.

Competitions

SkillsUSA
Champions at Work®

Certifications

Adobe InDesign Certification Possible

Student Cost: $30
Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

If seeking certification, curriculum cannot be modified.

Practicum in Commercial Photography



Prerequisite: Commercial Photography II
Course: 1884CA/1884CB Credits: 2 Length: 36 weeks Placement: 11-12

Course Description

This class is the most advanced level of the Commercial Photography program in the practicum course. These students are in the class for 36 weeks and are responsible for some of the most important photography projects that come through our program. The Practicum students will be working directly with clients from the district and people in the photography industry to gain experience and build their portfolio.

Student Activities

The Practicum student will have the opportunity to work on projects as the department is asked for its services. This includes doing photography projects for the Ben Barber/Frontier High School, Mansfield ISD, and Photography business in the Mansfield/Arlington area and beyond. Projects range from sport campaign photography to working with big/small business to help provide quality photographs for their social media/websites. These students gain valuable industry experience working with real-world clients. Over the course of the semester the students are required develop their websites/portfolio and submit their work to photography competitions and/or participate in the Skills USA Competition. This class will take a field trip to two local universities to see what these schools have to offer. Students will also take a field trip to a creative agency that works with brands doing photography work and learn from them.

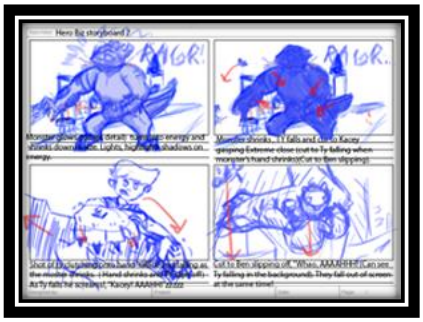
Additional Considerations

If a student does not have transportation, opportunities will be limited.

Competitions

SkillsUSA Champions at Work®

Practicum in Animation



Prerequisite: Animation II

Course:1898CA/1898CB Credits: 2 Length: 36 weeks Placement: 11-12

Course Description

Students will have the opportunity to express their creativity and technical skills in this course through independent projects. Having learned the basics of animation, students will be able to define their special interest using 2D and or 3D animation. A final digital portfolio is required of each student as a means of helping the student gain employment in an internship requiring these creative and specific skills in the work place. Real world employment skills and professionalism is demonstrated and taught in the classroom, as these are the expectation in the work place.

Student Activities

Students will apply a sequence of knowledge and application they have acquired from previous classes. They will create and maintain a digital portfolio demonstrating completed animations and examples of graphics they have created using applications such as Adobe Photoshop and Adobe Illustrator. Students will research topics of interest and create scripts, plot elements, and storyboards that will support a story, concept, or passion for a specific topic and audience that they will animate. This project will be used for presentation to a panel of teachers and advisors from businesses in related fields who provide positive feedback, giving students a sense of professionalism from outside business sources. Students meet regularly as a team, and establish strategies and objectives they find useful to help and assist each other throughout their creative process and project.

Additional Considerations

If a student does not have transportation, opportunities will be limited.

Competitions

SkillsUSA Champions at Work®

Arts, AV Technology & Communications Certifications

Name	Course	Provider	Cost
Adobe Photoshop	Principles of Digital Editing	Certiport	Student Pays: $ 30 BBIA Pays: $ 30
Students can take the Adobe Photoshop certification test at Ben Barber during the last week of the Principles of Digital Editing course. There are no age restrictions on this certification exam. The exam is twofold. Students will be asked multiple choice questions on setting project requirements, identifying design elements when preparing images and understanding Photoshop. Students will also be required to demonstrate elements of Photoshop and exhibit the ability to work in the program to manipulate and publish images.			
Adobe Illustrator	Graphic Design & Advanced Graphic Design	Certiport	Student Pays: $ 30 BBIA Pays: $ 30
Students can take the Adobe Illustrator certification test at Ben Barber during the last week of the Graphic Design & Advanced Graphic Design courses. There are no age restrictions on this certification exam. The exam is twofold. Students will be asked multiple choice questions on setting project requirements, identifying design elements when preparing graphics and understanding Illustrator. Students will also be required to demonstrate elements of Illustrator and exhibit the ability to work in the program to create, archive, export and publish graphics.			
Adobe InDesign	Graphic Design & Advanced Graphic Design	Certiport	Student Pays: $ 30 BBIA Pays: $ 30
Students can take the Adobe InDesign certification test at Ben Barber during the last week of the Graphic Design & Advanced Graphic Design courses. There are no age restrictions on this certification exam. The exam is twofold. Students will be asked multiple choice questions on setting project requirements, identifying design elements when preparing page layouts and understanding InDesign. Students will also be required to demonstrate elements of InDesign and exhibit the ability to work in the program to create page layouts, and archive, export and publish layouts.			
Adobe Animate	Animation & Advanced Animation	Certiport	Student Pays: $ 30 BBIA Pays: $ 30
Students can take the Adobe Animate certification test at Ben Barber during the last week of the Animation & Advanced Animation courses. There are no age restrictions on this certification exam. The exam is twofold. Students will be asked multiple choice questions on setting project requirements, identifying interactive media design elements and understanding Animate Professional Interface. Students will also be required to demonstrate elements of			

Animate and exhibit the ability to work in the program to build and evaluate interactive media elements.			
Adobe Premiere	Audio/Video Production II	Certiport	Student Pays: $ 30 BBIA Pays: $ 30
Students can take the Adobe Flash certification test at Ben Barber during the last week of the Animation & Advanced Animation courses. There are no age restrictions on this certification exam. The exam is twofold. Students will be asked multiple choice questions on setting project requirements, identifying design elements when preparing video and understanding the Adobe Premiere Pro Interface. Students will also be required to demonstrate elements of Premiere and exhibit the ability to work in the program to edit video sequences and export video.			

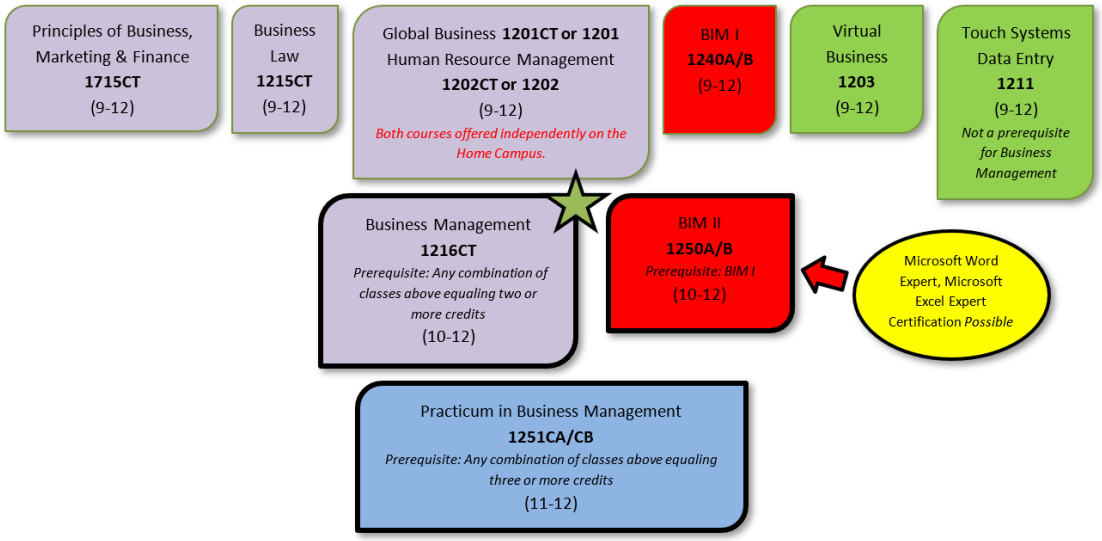
Business Management & Administration

Program of Study

BEN BARBER
INNOVATION ACADEMY

BUSINESS MANAGEMENT & ADMINISTRATION

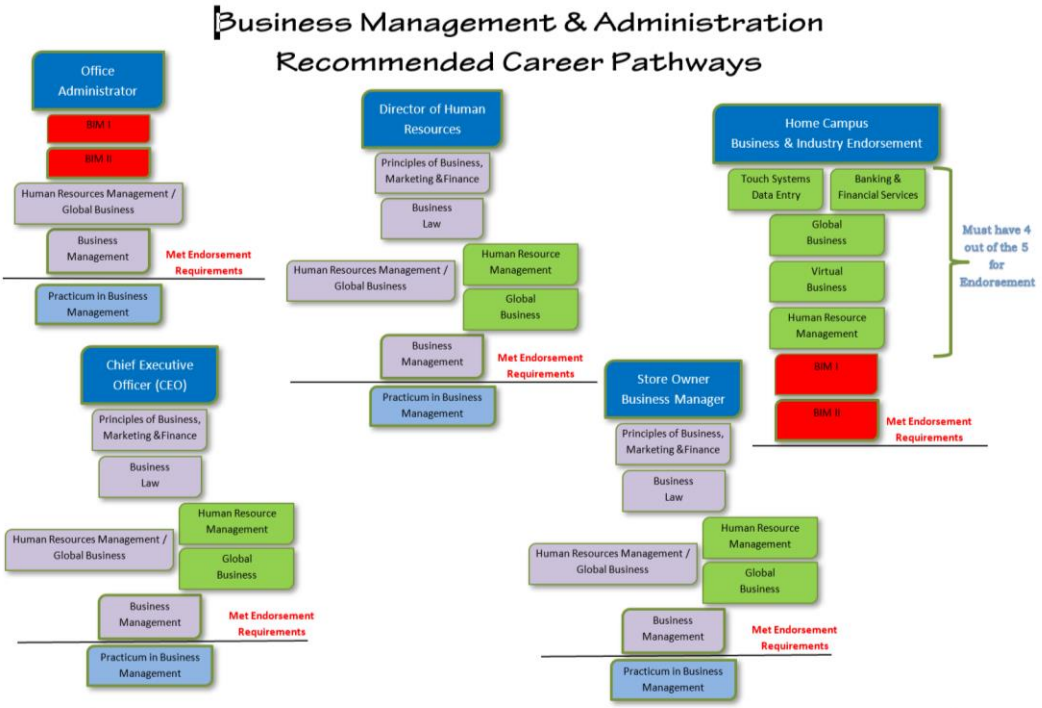
Endorsement: Business & Industry



Certification Requirement
The district will pay 100% of the cost of the certification test if students can show mastery by:
Passing a certification practice test
Maintaining an 80+ overall course average at the time of the certification test
If students don't meet the requirements above, they must pay 100% of the cost of the certification test

★ Certificate of Excellence can be earned for this course.

LEGEND						To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course
Fill Color	Length	Credit	Fill Color	Length	Credit	
	18 weeks	1		HC - 18 weeks	0.5	
	36 weeks	2-3		HC - 36 weeks	1	
	College Course			Advanced Course		



Principles of Business, Marketing & Finance



Prerequisite: None
Course: 17150T Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Ever had a great product or service idea? Ever wanted to create a business plan but not known where to start? Well, your time is now! Come join Principles of BMF for a real-world business planning and development simulation. You can share your idea or create new ones with a team of students. Then, you'll have the chance to present your idea to a panel of industry professionals and investment bankers. Ready, set, come on down!

Topics of study include: forms of business ownership, ethics, marketing, finance and roles of government in business.

Student Activities

ABC's "Shark Tank" simulation with industry professionals

Completion of a business plan by the end of the course

Business consulting with a team of students

Organizations

DECA is the CTSO for students enrolled in Business, Marketing or Finance courses.

DECA students have access to:

- Guest speakers
- Field trips to the Cowboys Stadium, Mavs game, Six Flags and MOCK DECA competition
- Local, State & Nationwide travel with DECA competitive events

Texas DECA Site

Business Law



Prerequisite: None
Course: 1215CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Have you always dreamed of being a lawyer?

Did you know:

- Although written over 200 years ago, the Constitution is certainly the most influential legal document in existence. Since its creation some two hundred years ago, over one hundred countries around the world have used it as a model for their own.
- You will sign hundreds, if not thousands of contracts in your life.
- "Ignorance of the law excuses no man." – John Selden

If you want to be a learn more about the law, then you should enroll in Business Law!

Topics of study include: U.S. Constitution, the court system, criminal law, contracts, ethics, law careers and courtroom procedures.

Student Activities

Course-long class competition among law firms
Classroom debates about current issues
Mock trials in the Ben Barber courtroom
Find out what it takes to pursue a career in the law field
DECA Competitions

Organizations

DECA is the CTSO for students enrolled in Business, Marketing or Finance courses.

DECA students have access to:

- Guest speakers
- Field trips to the Cowboys Stadium, Mavs game, Six Flags and MOCK DECA competition
- Local, State & Nationwide travel with DECA competitive events

Texas DECA Site

Global Business / Human Resources Management


Prerequisite: None **Credits:** 1 **Length:** 18 weeks
Course: 1201/1201CT & 1202/1202CT **Placement:** 9-12

Course Description

Have you ever wanted to travel or live in another country? Do you think there are the same stores, malls, banks, or restaurants? Do know what percentage of your *stuff* is made in other countries? Do you know how all that *stuff* gets to our country? Do you wonder what regulations or permissions are needed to sell or operate businesses in other countries? Well, Global Business is the class for you. Not only will these questions be answered, but we will explore other topics related to business around the world.

Topics of study include: cultural influence on Global Business, government and Global Business, structures of international businesses and importing and exporting.

Have you applied for your first job? Do you want to know more about the job application process? Are you curious about payroll classifications? Are you ready to learn about being a successful employer and/or employee?

Topics of study include: resume writing, job applications, cover letters, the interview process, payroll processes for employees, training of employees, job performance evaluations and work safety.

These courses are offered combined at Ben Barber for a full credit, but separately on the home campuses for a 0.5 credit each.

Organizations

DECA is the CTSO for students enrolled in Business, Marketing or Finance courses.

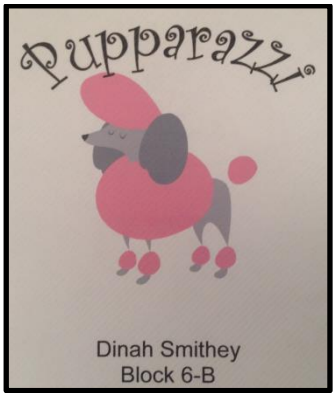
DECA students have access to:

- Guest speakers
- Field trips to the Cowboys Stadium, Mavs game, Six Flags and MOCK DECA competition
- Local, State & Nationwide travel with DECA competitive events

Texas DECA Site

Business Information Management I

(Home Campus Only)



Prerequisite: None
Course: 1240A/B **Credits: 1** **Length: 36 weeks** **Placement: 9-12**

Course Description

Are you "computer literate?"

Can you easily use the computer for the following tasks?

- Type a report for school or work.
- Prepare a personal budget or statistical charts that show the financial condition of a business.
- Design a flyer or advertisement.
- Create informative presentations.

If you need these skills or need to improve them, Business Information Management I (BIM I) is the course for you. Sign up today to prepare yourself with skills that you will use over a lifetime!

Topics of study include: introduction of Microsoft Word, Excel, PowerPoint, and Access.

Student Activities

Training for industry recognized certifications: Microsoft Office Specialist in MS Word, Excel & PowerPoint
Creating a fall or Halloween drawing
Creating a business plan for a candy company
Creating a presentation over any subject of your choosing

Organizations

DECA is the CTSO for students enrolled in Business, Marketing or Finance courses.

DECA students have access to:

- Guest speakers
- Field trips to the Cowboys Stadium, Mavs game, Six Flags and MOCK DECA competition
- Local, State & Nationwide travel with DECA competitive events

Texas DECA Site

Virtual Business

(Home Campus Only)

Prerequisite: None
Course: 1203 Credits: 0.5 Length: 18 weeks Placement: 9-12

Course Description

Got a great idea for an online business?

Did you know?

- E-Commerce generates $1.2 million revenue every 30 seconds.
- Entrepreneurs in their twenties are called "millennipreneurs".
- There are government grants for starting your own small business.

If any of these facts intrigue you, then Virtual Business is for you. After completing this course, you will be able to identify steps needed to locate customers, set fees, and develop client contracts as you perform the necessary steps in starting your own business. You will also be able to design a web page for your business.

Topics of study include: starting and growing a virtual business office, online and off-line marketing, pricing, billing, and collection procedures, legal and tax issues, recordkeeping, business decision making, and project management skills.

Student Activities

Identify entrepreneur skills, qualities, and traits.
Become proficient with html and css coding for designing pages.
Dialogue with entrepreneurial professional guest panelists.
Write a business plan for an online business.

Organizations

DECA is the CTSO for students enrolled in Business, Marketing or Finance courses.

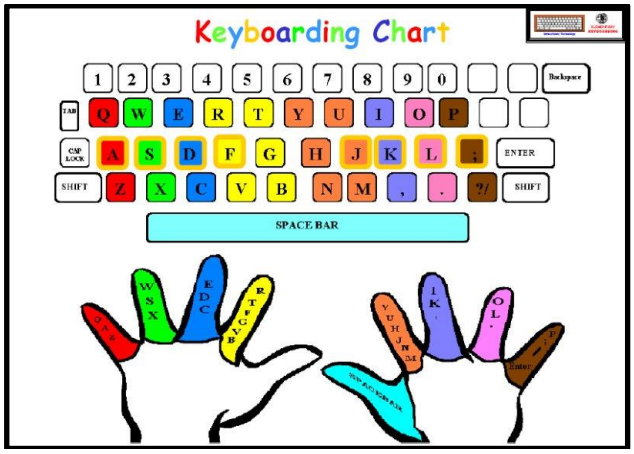
DECA students have access to:

- Guest speakers
- Field trips to the Cowboys Stadium, Mavs game, Six Flags and MOCK DECA competition
- Local, State & Nationwide travel with DECA competitive events.

Texas DECA Site

Touch System Data Entry

(Home Campus Only)



Prerequisite: None
Course: 1211 Credits: 0.5 Length: 18 weeks Placement: 9-12

Course Description

This keyboarding course will enhance students' reading, writing, computing, communication and reasoning skills in the business environment. Students apply technical skills to address business applications of emerging technologies.

Organizations

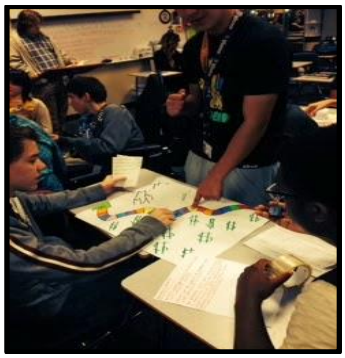
DECA is the CTSO for students enrolled in Business, Marketing or Finance courses.

DECA students have access to:

- Guest speakers
- Field trips to the Cowboys Stadium, Mavs game, Six Flags and MOCK DECA competition
- Local, State & Nationwide travel with DECA competitive events

Texas DECA Site

Business Management

Prerequisite: Any combo of intro level business courses equaling 2 or more credits
Course: 1216CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

Are you interested in pursuing a career in Management or Administration?

Have you ever wondered?

- Why are some leaders more successful than others?
- Why do some businesses thrive while similar ones fail?
- How do companies hire and retain top employees?
- What makes employees tick?
- How does attitude *really* affect job performance?

If you answered yes, then you should enroll in Business Management! Come learn how to be an effective manager that no employee ever resents or forgets!

Topics of study include: forms of business ownership, business and its environment, Production and Marketing Management, Information Systems, and Human Resources Management.

Student Activities

Dr. Seuss's "The Lorax" Movie review: Capitalism at its best!
Business skits, role play and case studies
Business planning
Emerging technology research

Organizations

DECA is the CTSO for students enrolled in Business, Marketing or Finance courses.
DECA students have access to:

- Guest speakers
- Field trips to the Cowboys Stadium, Mavs game, Six Flags and MOCK DECA competition
- Local, State & Nationwide travel with DECA competitive events

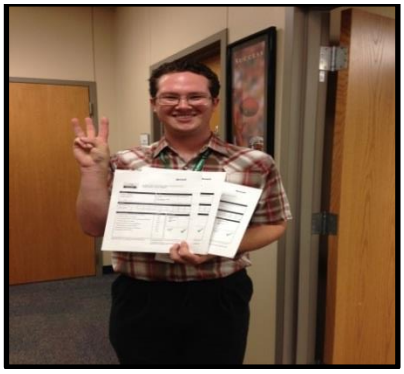
Certificate of Excellence

Students can earn a Certificate of Excellence by achieving a specific list of real world skills related to this course. For the list of skills, please visit goo.gl/9VM3a9

Business Information Management II

(Home Campus Only)





Prerequisite: BIM I
Course: 1250A/B Credits: 1 Length: 36 weeks Placement: 10-12

Course Description

Are your computer skills "certifiable?"

Can you easily use the computer for the following tasks?

- Type a report for school or work.
- Prepare a personal budget or statistical charts that show the financial condition of a business.
- Design a brochure, flyer or advertisement.
- Create informative presentations.

If you need these skills or need to improve them, Business Information Management II (BIM II) is the course for you. Sign up today to prepare yourself with skills that you will use over a lifetime!

Topics of study include: intensive review of Microsoft Word, Excel and PowerPoint, DUCT Tape project, college brochure production, vacation budget preparation, and ABC booklet development.

Student Activities

Training for industry recognized certifications: Microsoft Office Specialist in MS Word, Excel & PowerPoint
Marketing campaign for DUCT Tape projects
Developing children's ABC booklets
Designing college brochures, informational flyers, advertisements, etc.
Preparing vacation budgets for one week

Certifications

Microsoft Word & Excel Certification Possible

Student Cost: $96 a piece
Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Texas DECA Site

Practicum in Business Management

Prerequisite: Any combo of business courses equally 3 or more credits
Course: 1251CA/1251CB Credits: 2 Length: 36 weeks Placement: 11-12

Course Description

This course is designed to give students supervised practical application of previously studied knowledge and skills. Students will apply technical skills to address business applications of emerging technologies. Students will incorporate a broad base of knowledge that includes legal, managerial, marketing, financial, ethical and international dimensions of business to make appropriate business decisions on the job.

Student Activities

Students will be required to find an internship opportunity either at the school store or on a job site. Students will attend classes at Ben Barber at least once per week.

Organizations

DECA is the CTSO for students enrolled in Business, Marketing or Finance courses.

DECA students have access to:

- Guest speakers
- Field trips to the Cowboys Stadium, Mavs game, Six Flags and MOCK DECA competition
- Local, State & Nationwide travel with DECA competitive events

Texas DECA Site

Additional Considerations

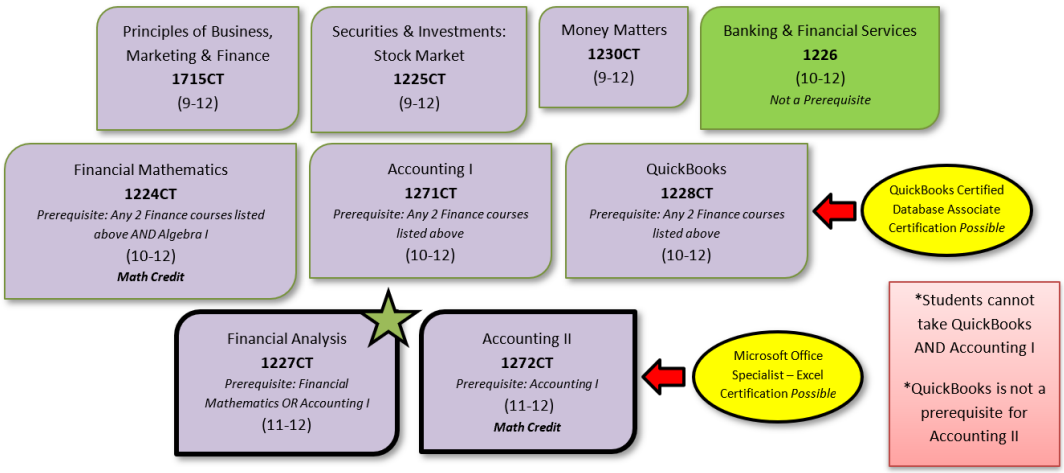
If a student does not have transportation, opportunities will be limited.

Finance

Program of Study

FINANCE

Endorsement: Business & Industry



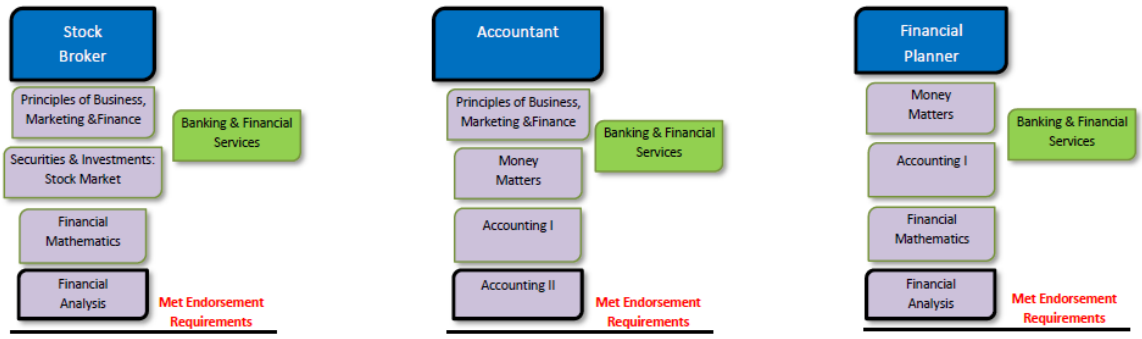
Certification Requirement
The district will pay 100% of the cost of the certification test if students can show mastery by:
Passing a certification practice test
Maintaining an 80+ overall course average at the time of the certification test
If students don't meet the requirements above, they must pay 100% of the cost of the certification test

Certificate of Excellence can be earned for this course.

LEGEND						
Fill Color	Length	Credit	Fill Color	Length	Credit	To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course
	18 weeks	1		HC - 18 weeks	0.5	
	36 weeks	2-3		HC - 36 weeks	1	
	College Course			Advanced Course		

Finance

Recommended Career Pathways



To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course

Principles of Business, Marketing & Finance



Prerequisite: None
Course: 17150CT Credits: 1 Length: 18 Weeks Placement: 9-12

Course Description

Ever had a great product or service idea? Ever wanted to create a business plan but not known where to start? Well your time is now! Come join Principles of BMF for a real world business planning and development simulation. You can share your idea or create new ones with a team of students. Then, you'll have the chance to present your idea to a panel of industry professionals and investment bankers. Ready, set, come on down!

Topics of study include: forms of business ownership, ethics, marketing, finance and roles of government in business.

Student Activities

ABC's "Shark Tank" simulation with industry professionals

Completion of a business plan by the end of course

Business consulting with a team of students

Organizations

DECA is the CTSO for students enrolled in Business, Marketing or Finance courses.

DECA students have access to:

- Guest speakers
- Field trips to the Cowboys Stadium, Mavs game, Six Flags and MOCK DECA competition

Local, State & Nationwide travel with DECA competitive events

Texas DECA Site

Securities & Investments: Stock Market


Prerequisite: None
Course: 1225CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Do you want to make money while you sleep?

Did you know:

- The first stock market began under a tree back in the late 1700s.
- As of May 2013, the New York Stock Exchange is the world's largest stock exchange by market capitalization of its listed companies at $16.613 trillion.
- Investing is not at hard as it sounds.

If you want to be a millionaire, then you should enroll in Securities and Investments. Come learn how to set yourself up for life!

Topics of study include: stocks, bonds, mutual funds, securities fraud, investor protection, real estate as an investment, and financial careers.

Student Activities

Class competition based on value of virtual stock market purchases

Play Stock Market Tycoon board game to learn the ups and downs of the stock market

Manage a $100,000 portfolio with an investment group and compete against other student groups

Learn about securities fraud cases like Martha Stewart and Mark Cuban's insider trading cases

DECA Competitions

Organizations

DECA is the CTSO for students enrolled in Business, Marketing or Finance courses.

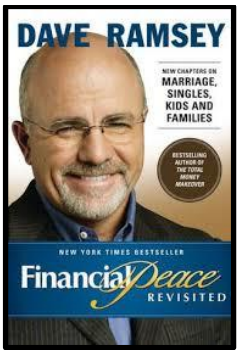
DECA students have access to:

- Guest speakers
- Field trips to the Cowboys Stadium, Mavs game, Six Flags and MOCK DECA competition

Local, State & Nationwide travel with DECA competitive events

Texas DECA Site

Money Matters



Prerequisite: None
Course: 1230CT **Credits: 1** **Length: 18 weeks** **Placement: 9-12**

Course Description

Do you have what it takes to live on your own?

Did you know that:

- About 57% of public four-year college students graduated with debt?
- The average student loan balance for all age groups is $24,301?
- The average person spends over 86,000 hours at work over the course of their lifetime?
- The average credit card debt per U.S. adult is $4,878?

In Money Matters, you learn about the importance of finding a career you'll love, how to make the most of your money, and how not to spend more than you make.

Topics of study include: career investigation, saving and investing, credit, budgeting, and insurance.

Student Activities

Learn to live on your own and manage your finances with the "Welcome to the Real World" Project

Interview a person with an unusual job and share what you've learned with the class

Learn about the dangers of credit through Dave Ramsey's "Financial Peace" program

DECA Competitions

Organizations

DECA is the CTSO for students enrolled in Business, Marketing or Finance courses.

DECA students have access to:

- Guest speakers
- Field trips to the Cowboys Stadium, Mavs game, Six Flags and MOCK DECA competition

Local, State & Nationwide travel with DECA competitive events

Texas DECA Site

Banking & Financial Services

(Home Campus Only)

Prerequisite: None
Course: 1226 **Credits: 0.5** **Length: 18 weeks** **Placement: 10-12**

Course Description

Do you really think money grows on trees?

Have you ever wondered:

- How banks make money?
- The difference between a bank and a credit union?
- What it takes to qualify for a car loan?

If so, this is the class for you! You can learn about the businesses that help us with our money in our community.

Topics of study include: origins of money and banking, types of financial services, investing, and services provided by investment companies.

Organizations

DECA is the CTSO for students enrolled in Business, Marketing or Finance courses.

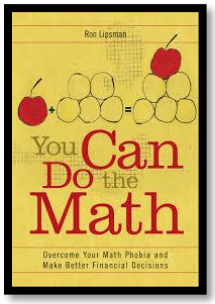
DECA students have access to:

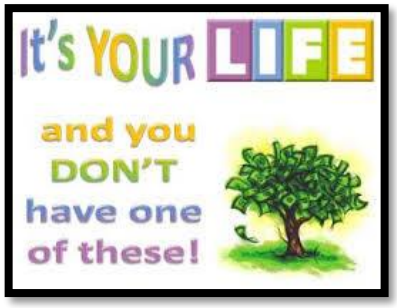
- Guest speakers
- Field trips to the Cowboys Stadium, Mavs game, Six Flags and MOCK DECA competition

Local, State & Nationwide travel with DECA competitive events

Texas DECA Site

Financial Mathematics





Prerequisite: A combination of any 2 intro level Finance courses AND Algebra I
Course: 1224CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

Learn how to manage your money, rather than letting your money manage you.

Did you know?

1. Nineteen people become victims of identity theft every minute.
2. The number of jobs in the finance industry are growing at a fast rate and pay almost twice as much as the median average wage.
3. Your credit score can affect your career, where you live, and your love life.

In Financial Math, you learn about financial topics that matter in your life. This is a math class where you learn things that you will really use.

Topics of study include: employee pay statements, federal taxes, the costs of housing, credit, vehicle purchase vs. lease, investments, insurance, retirement, and budgeting.

This course can count for Math Credit

Student Activities

Learn to fill out your own tax returns.
Become proficient in Microsoft Office Excel.
Prepare a financial sales presentation or consultation for a customer in need of financial advice over a specific financial topic.
DECA Competitions

Organizations

DECA is the CTSO for students enrolled in Business, Marketing or Finance courses.

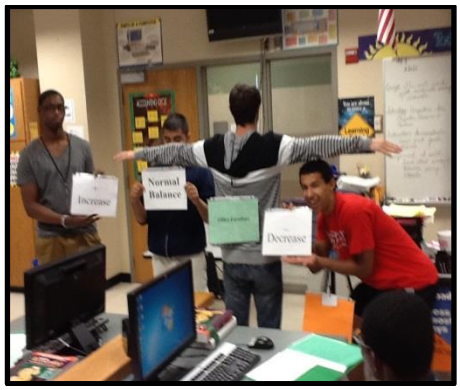
DECA students have access to:

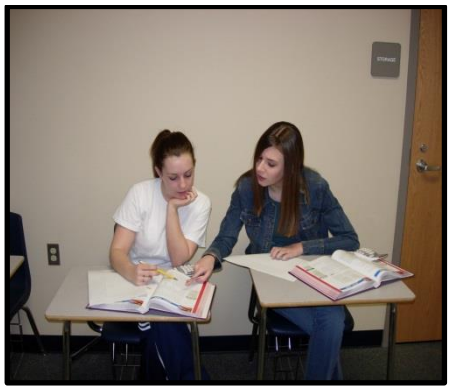
- Guest speakers
- Field trips to the Cowboys Stadium, Mavs game, Six Flags and MOCK DECA competition

Local, State & Nationwide travel with DECA competitive events

Texas DECA Site

Accounting I





Prerequisite: A combination of any 2 intro level Finance courses

Course: 1271CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

Are you interested in majoring in business or owning your own business someday?

Did you know that:

- The FBI, the Dallas Cowboys, Texas Rangers, movie producers, musical artists, corporations and nonprofit organizations need Accountants.
- Accounting is the No. 2 job market.
- Accountants can make lots of money and enjoy many adventures.

If these facts interest you, then you should enroll in Accounting I. Come learn about the endless possibilities for jobs, travel and adventures in the field of Accounting.

Students cannot take Accounting I AND QuickBooks

Student Activities

Human T Accounts

Playing Monopoly to learn the Accounting Cycle

Accounting for Sole Proprietorships, Partnerships and Corporations

Accounting Career Exploration

UIL and DECA Competitions

Organizations

DECA is the CTSO for students enrolled in Business, Marketing or Finance courses.

DECA students have access to:

- Guest speakers
- Field trips to the Cowboys Stadium, Mavs game, Six Flags and MOCK DECA competition

Local, State & Nationwide travel with DECA competitive events

Texas DECA Site

QuickBooks

Prerequisite: Any 2 Finance courses
Course: 1228CT Credits: 1 Length: 18 Weeks Placement: 10-12

Course Description

Do you need help tracking the sales, expenses, and profits for your business?

QuickBooks is a comprehensive tool for managing small business finances more effectively. This course will take students with no prior knowledge of computerized accounting to a stage where they can confidently use accounting terminology, the fundamental accounting equation, and basic steps in the accounting cycle as they perform day-to-day operations with QuickBooks. At the end of the course all students will be prepared for the opportunity to earn the Intuit QuickBooks Certification.
Students cannot take Accounting I AND QuickBooks

Student Activities

Explore QuickBooks Navigation and Settings
Perform QuickBooks Transactions
Record Customer Information and Sales
Record Vendor Information and Expenses
Maintain Inventory Records
Track Employee Record and Issue Payroll
Print Analytical Reports
Prepare for the QuickBooks Certification Test
Take the QuickBooks Certification Test

Certification

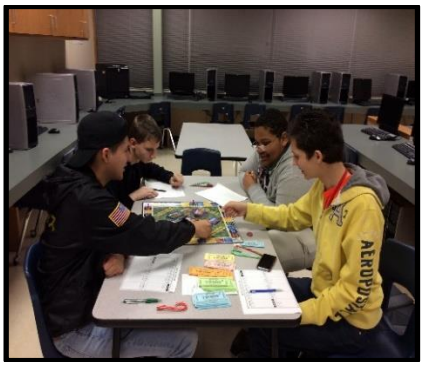
QuickBooks Certification Possible

Student Cost: $150

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Texas DECA Site

Financial Analysis

Prerequisite: Financial Mathematics OR Accounting I
Course: 1227CT Credits: 1 Length: 18 weeks Placement: 11-12

Course Description

Are you fascinated with numbers? Does the world of finance intrigue you?

Does the idea of managing a financially successful business pique your interest?

If so, this is the class for you! You can learn to evaluate what it takes for a business to be financially sound.

Topics of study include: evaluating performance in areas such as income, profitability, liquidity, working capital, debt, cash flow, etc.

Student Activities

Field Trip to a major financial corporation

Guest Speakers from financial services from the local community

Present a financial analysis of a company to a panel of industry professionals

DECA Competitions

Certificate of Excellence

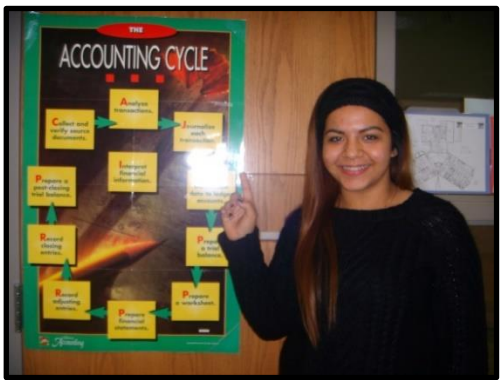
Students can earn a Certificate of Excellence by achieving a specific list of real world skills related to this course. For the list of skills, please visit goo.gl/9VM3a9

Texas DECA Site

Organizations

DECA is the CTSO for students enrolled in Business, Marketing or Finance course

Accounting II



Prerequisite: Accounting I

Course: 1272CT Credits: 1 Length: 18 weeks Placement: 11-12

Course Description

Are you interested in a career in Accounting?

Students continue the investigation of the field of accounting, including how it is impacted by industry standards as well as economic, financial, technological, international, social, legal and ethical factors. Students reflect on this knowledge as they engage in various managerial and cost accounting activities. Students formulate and interpret financial information for use in management decision-making

Topics of study include: accounting cycle, review of debits and credits, managerial accounting, financial statements, and financial analysis.

Students will receive a math credit for taking this class.

Student Activities

Corporate Accounting, Managerial Accounting, Financial Statement Analysis
Accounting Career Exploration
UIL and DECA Competitions

Certification

Microsoft Office Specialist - Excel Certification Possible

Student Cost: $96

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Texas DECA Site

Organizations

DECA is the CTSO for students enrolled in Business, Marketing or Finance course

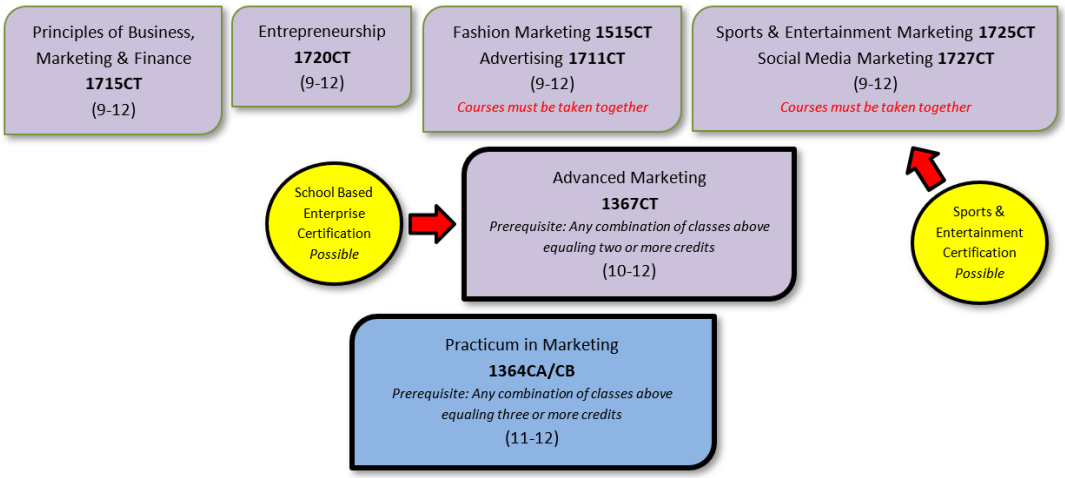
Marketing

Program of Study

BEN BARBER
INNOVATION ACADEMY

MARKETING

Endorsement: Business & Industry

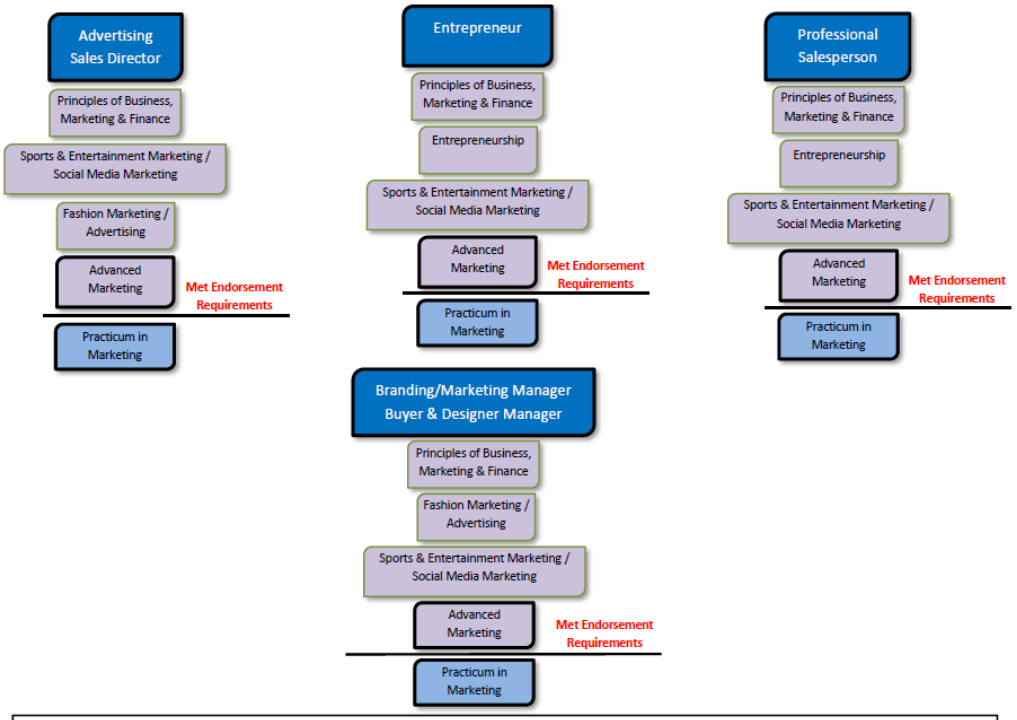


Certification Requirement
The district will pay 100% of the cost of the certification test if students can show mastery by:
Passing a certification practice test
Maintaining an 80+ overall course average at the time of the certification test
If students don't meet the requirements above, they must pay 100% of the cost of the certification test

LEGEND						To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course
Fill Color	Length	Credit	Fill Color	Length	Credit	
	18 weeks	1		HC - 18 weeks	0.5	
	36 weeks	2-3		HC - 36 weeks	1	
	College Course			Advanced Course		

Marketing

Recommended Career Pathways



To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course

Principles of Business, Marketing & Finance



Prerequisite: None
Course: 17150CT **Credits:** 1 **Length:** 18 weeks **Placement:** 9-12

Course Description

Ever had a great product or service idea? Ever wanted to create a business plan but not known where to start? Well your time is now! Come join Principles of BMF for a real world business planning and development simulation. You can share your idea or create new ones with a team of students. Then, you'll have the chance to present your idea to a panel of industry professionals and investment bankers. Ready, set, come on down!

Topics of study include: forms of business ownership, ethics, marketing, finance and roles of government in business.

Student Activities

ABC's "Shark Tank" simulation with industry professionals

Completion of a business plan by the end of course

Business consulting with a team of students

Organizations

DECA is the CTSO for students enrolled in Business, Marketing or Finance courses.

DECA students have access to:

- Guest speakers
- Field trips to the Cowboys Stadium, Mavs game, Six Flags and MOCK DECA competition

Local, State & Nationwide travel with DECA competitive events

Texas DECA Site

Entrepreneurship



Prerequisite: None
Course: 1720CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Do you want to be your own boss?

Do you want to run your own business someday and be your own boss? Well then, you need to enroll in Entrepreneurship! Many BBCTA students have started their own businesses while in high school or when they went to college using the information learned in this course.

The Entrepreneurship program prepares students to conceive, develop and launch new ventures and to turn innovative ideas into products that can be brought into the marketplace. The topics of importance include the financial, legal and marketing aspects of a start-up business.

Topics of study include: identifying business opportunities, communication skills, entrepreneurs in a market economy, types of ownership, and business plans.

Student Activities

Business Plan
The Barber Shoppe
Famous Entrepreneur Project
Portfolio
Laws and Regulations Project

Organizations

DECA is the CTSO for students enrolled in Business, Marketing or Finance courses.

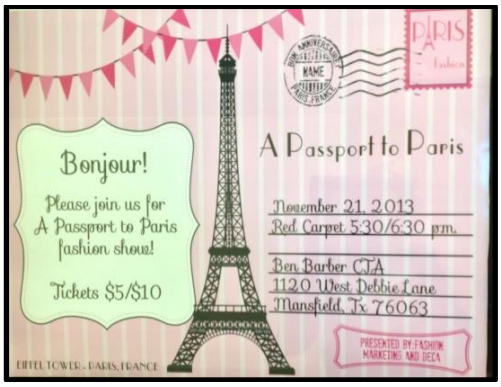
DECA students have access to:

- Guest speakers
- Field trips to the Cowboys Stadium, Mavs game, Six Flags and MOCK DECA competition

Local, State & Nationwide travel with DECA competitive events

Texas DECA Site

Fashion Marketing / Advertising



Prerequisite: None
Course: 1515CT & 1711CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Do you like to shop? Are you creative? Do you love fashion?
Did you know that:

- Over 4 million people in the U.S. are employed in the fashion industry.
- The U.S. is the largest importer of garments in the world.
- Fashion week in New York City generates approximately $20 million into the country's economy.

If these facts interest you, come learn more about the fashion industry in our Fashion Marketing course! This course focuses on the integration of the fashion marketing concepts, practices and applications, and facilitates the development of a marketing/merchandising plan. Through a case study approach, students analyze opportunities regarding merchandise positioning, brand imagery, targeting and segmentation of apparel and other fashion products.

Are you creative and like to create products to sell?
Did you know that:

- The average revenue for an Advertising Agency in the U.S. is $48 billion a year.
- The total number of people employed by the Advertising Industry in the U.S. is 462,300.

If these facts interest you and you are creative, then you should enroll in Advertising and Sales Communication. Come learn about the endless possibilities for careers in the advertising and marketing industries.
Fashion Marketing and Advertising must be taken together.

Organizations

DECA is the CTSO for students enrolled in Business, Marketing or Finance courses.

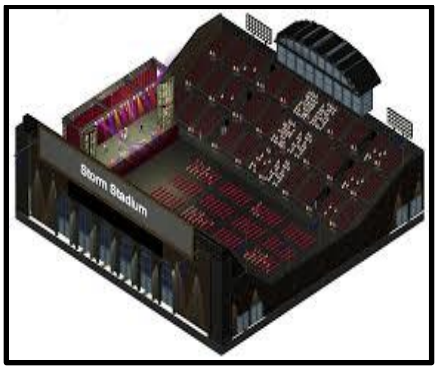
DECA students have access to:

- Guest speakers
- Field trips to the Cowboys Stadium, Mavs game, Six Flags and MOCK DECA competition

Local, State & Nationwide travel with DECA competitive events

Texas DECA Site

Sports & Entertainment Marketing / Social Media Marketing



Prerequisite: None
Course: 1725CT & 1727CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Are you interested in majoring in business/marketing?

Have you ever wondered about the marketing strategies of a….

- Movie theatre, concert, sports team, TV show, game show or amusement park?
- Professional athlete or actor/actress?

Have you ever wanted to own your own sports franchise and/or concert? If so, you have an opportunity through our Virtual Sports game which will allow you to…

- Select the best location of your stadium, set ticket prices, promotions, advertising, staffing, concessions and many more functions!

If any of these questions interest you, then you should enroll in Sports and Entertainment Marketing. We will also do many projects that involve creating logos, brochures, flyer, social media and web designs.

Sports & Entertainment Marketing and Social Media Marketing must be taken together.

Organizations

DECA is the CTSO for students enrolled in Business, Marketing or Finance courses.

DECA students have access to:

- Guest speakers
- Field trips to the Cowboys Stadium, Mavs game, Six Flags and MOCK DECA competition

Local, State & Nationwide travel with DECA competitive events

Certifications

Sports & Entertainment
Student Cost: $0

Follow BBIA's Twitter

@benbfhs

Advanced Marketing



Prerequisite: Any combination of Marketing courses equaling 2 or more credits
Course: 1367CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

Are you ready to compete in our fast paced ever-changing world?
Marketing is that dynamic force that helps drive business around the world.

Marketing is :

- Focused on the customer (Target Market)
- The four P's (Product, Price, Place & Promotions)
- Planning an actionable marketing plan with strategies
- Creating a profit while making customers happy

All businesses, organizations and people need **MARKETING** so their customers or voters or prospective employers know about them. Without the proper **MARKETING,** a product will just sit on a shelf, a doctor will not have patients, an organization will not attract members or raise money for their cause, a politician will not have a great campaign, and a candidate for a job will not know about **MARKETING** themselves. DECA participation is highly recommended.

Student Activities

Create a Job Fair Create a Career Interview Portfolio
Produce a Fashion Show
Manage The Barber Shoppe
DECA
Mall Rotations

Organizations

DECA is the CTSO for students enrolled in Business, Marketing or Finance courses.

Certifications

School Based Enterprise

Student Cost: $0 BBIA: $0

Practicum in Marketing


Prerequisite: Any combination of Marketing courses equaling 3 or more credits
Course: 1364CA/1364CB Credits: 2 Length: 36 weeks Placement: 11-12

Course Description

Are you ready to compete in our fast paced ever-changing world?
Marketing is that dynamic force that helps drive business around the world.

Marketing is :

- Focused on the customer (Target Market)
- The four P's (Product, Price, Place & Promotions)
- Planning an actionable marketing plan with strategies
- Creating a profit while making customers happy

All businesses, organizations and people need **MARKETING** so their customers or voters or prospective employers know about them. Without the proper **MARKETING** a product will just sit on a shelf, a doctor will not have patients, an organization will not attract members or raise money for their cause, a politician will not have a great campaign, and a candidate for a job will not know about **MARKETING** themselves. DECA participation is highly recommended.

Student Activities

Create a Job Fair Create a Career Interview Portfolio
Produce a Fashion Show
Manage The Barber Shoppe
DECA
Internships

Organizations

DECA is the CTSO for students enrolled in Business, Marketing or Finance courses.

DECA students have access to:

- Guest speakers
- Field trips to the Cowboys Stadium, Mavs game, Six Flags and MOCK DECA competition

Local, State & Nationwide travel with DECA competitive events

Additional Considerations

If a student does not have transportation, opportunities will be limited.

Marketing Certifications

Name	Course	Provider	Cost
Sports & Entertainment	Sports & Entertainment Marketing	Virtual Business High School by Knowledge Matters	Student Pays: $ 15 BBIA Pays: $ 15
Students must participate in simulation activities in the following categories: Ticket pricing, stadium staffing, ingress & egress, parking, concessions, sponsorships, promotion with social and traditions media, promoting a band, player management and sports & entertainment mogul. The simulations will take from 12 to 22 hours to complete.			
School Based Enterprise	Advanced Marketing Practicum in Marketing	Virtual Business High School by Knowledge Matters	Student Pays: $ 15 BBIA Pays: $ 15
Students must participate in simulation activities in the following categories: Trend research, design, buying, pricing & markdowns, retail location, window display & merchandising, staffing & sales strategies, social media promotions, fashion financials, turnaround and fashion mogul. The simulations will take from 12 to 22 hours to complete.			

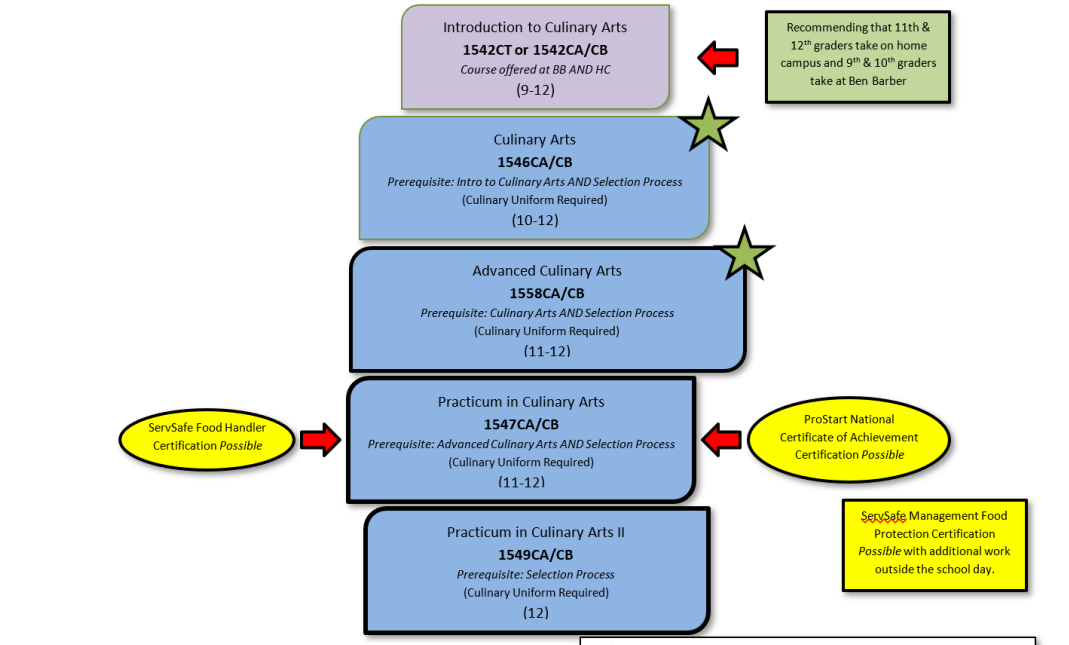
Hospitality & Tourism

Program of Study

BEN BARBER
INNOVATION ACADEMY

HOSPITALITY & TOURISM

Endorsement: Business & Industry



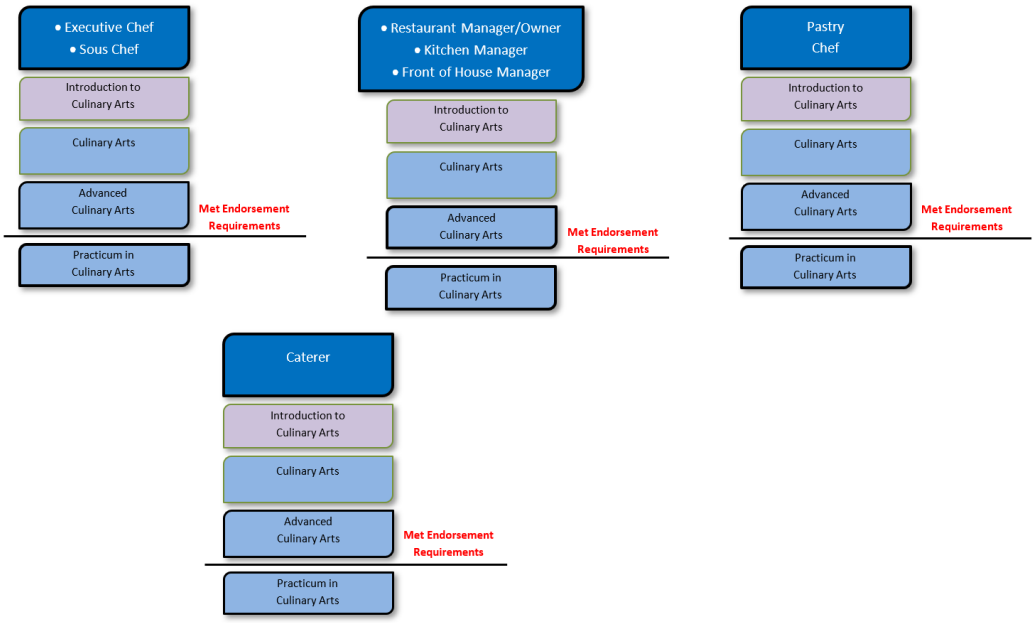
Certification Requirement
The district will pay 100% of the cost of the certification test if students can show mastery by:
Passing a certification practice test
Maintaining an 80+ overall course average at the time of the certification test
If students don't meet the requirements above, they must pay 100% of the cost of the certification test

Certificate of Excellence can be earned for this course.

LEGEND						
Fill Color	Length	Credit	Fill Color	Length	Credit	To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course
	18 weeks	1		HC - 18 weeks	0.5	
	36 weeks	2-3		HC - 36 weeks	1	
	College Course			Advanced Course		

Hospitality & Tourism

Recommended Career Pathways



To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course

Introduction to Culinary Arts

Prerequisite: Recommend that 11th & 12th take at HC. 9th & 10th take at BB
Course: 1542CT or 1542A-B Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Begin Your Culinary or Baking Journey by Learning Basic Kitchen Skills and Exploring Culinary Careers!

Introduction to Culinary Arts will introduce students to the commercial kitchen and allow them to learn how fun and exciting food can be as a career! Students will learn and practice basic knife skills, measuring skills, and how to follow a recipe through weekly practice. Students will also learn and practice basic food safety and sanitation skills. In class, students will research famous chefs throughout history and explore the many careers available in the culinary world. This is an entry level course for students interested in pursuing a career in the foodservice industry.

Student Activities

"Chefography"
Fun Food Labs
Cooking Challenges
Culinary Career Exploration

"After Hours" Fun

Culinary Arts Club

Catering & Community Service Opportunities

Additional Considerations

Students need fine motor skills and mobility. Students handle sharp objects and commercial kitchen equipment.

Culinary Arts

Prerequisite: Intro to Culinary Arts AND Selection Process
Course: 1546CA/CB Credits: 2 Length: 36 weeks Placement: 10-12

Students will be required to purchase a $50 culinary uniform.

Course Description

Ready to Wear the Uniform? Ready to Join the Team? If So, We're Ready to UP YOUR CULINARY GAME!

Culinary Arts will take you through basic principles and techniques of both cooking and baking. Students will follow ProStart curriculum in both the classroom and the kitchen as they master basic moist and dry heat cooking methods, along with basic mixing and baking methods. Students will also have the opportunity to earn the ServSafe Food Handler Certification.

Student Activities

Basic Meat, Fish & Poultry Fabrication
Advanced Knife Skills
Dry & Moist Heat Cooking Methods
Introduction to Baking Techniques: Cookies, Quick Breads, Pies, Cakes

"After Hours" Fun

Culinary Arts Club
Regional & State Competitions
Catering & Community Service Opportunities

Certificate of Excellence

Students can earn a Certificate of Excellence by achieving a specific list of real world skills related to this course. For the list of skills, please visit goo.gl/9VM3a9

Additional Considerations

Students need fine motor skills and mobility.
Students handle sharp objects and high temperature ingredients daily.
Certification curriculum cannot be modified.

Advanced Culinary Arts



Prerequisite: Culinary Arts AND Selection Process
Course: 1558CA/CB Credits: 2 Length: 36 weeks Placement: 11-12

Students will be required to use their previously purchased culinary uniform.

Course Description

So NOW are you addicted to cooking?

I mean, are you ***REALLY*** into cooking?
Now that you can work your way around the kitchen ***"like buttah"…***let's kick it up a notch!
Your next 36 weeks includes learning how to caramelize to perfection,
create the best crosshatch marks on the planet, and present beautiful plates like a champ!

Student Activities

Chocolate Work
Garnishing, Plating, & Presentation
Advanced Cake Decorating
Advanced Cooking Methods
Regional Cuisines

"After Hours" Fun

Catering & Community Service Opportunities!

Certificate of Excellence

Students can earn a Certificate of Excellence by achieving a specific list of real world skills related to this course. For the list of skills, please visit goo.gl/9VM3a9

Additional Considerations

Students need fine motor skills and mobility. Students handle sharp objects. Certification curriculum cannot be modified. Reading & Math comprehension required.

Practicum in Culinary Arts

Prerequisite: Advanced Culinary Arts AND Selection Process
Course: 1547CA/1547CB Credits: 2 Length: 36 weeks Placement: 11-12

Course Description

Savvy's is Ready for YOU! Are YOU Ready for Savvy's?
If your answer is "Yes, Chef!"…grab your chef coat and come on down!

Practicum in Culinary Arts will put your kitchen skills to the test, while adding the principles of planning, organizing, and managing a variety of food service operations. The course will provide daily insight into the operation of a well-run restaurant. Practicum students will use food production skills, various levels of industry management, and hospitality skills as they work catering events and operate our restaurant, Savvy's Bistro. This is a course is a must for students who are planning to attend culinary school or pursue a career in the foodservice industry.

Student Activities

Operate Savvy's Bistro!
Host, Operate Carry Out or be a Server
Be an Executive Chef, Sous Chef, line cook, Pastry Chef or Garde Manger
Run a Professional Kitchen

"After Hours" Fun

Culinary Arts Club
Spring "CHOPPED!" Competition
Catering & Community Service Opportunities

Certifications

ProStart National Certification of Achievement Possible
Student Pays: $18
ServSafe Food Handler Certification Possible
Student Pays: $8

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Additional Considerations

Students need fine motor skills and mobility. Students handle sharp objects. Certification curriculum cannot be modified. Reading & Math comprehension required.

Practicum in Culinary Arts II

Prerequisite: Practicum in Culinary Arts AND Selection Process
Course: 1549CA/1549CB Credits: 2 Length: 36 weeks Placement: 11-12

Course Description

Want to Own Your Own Restaurant?
Move on up the culinary ladder and add kitchen management and advanced prep skills to your tool belt. See what it takes to get Savvy's ready to open its doors every day!

Student Activities

Prep for Savvy's Bistro and learn kitchen management skills

Prep for and operate Savvy's Express

Participate in local & state culinary competitions

Create New Items to Sell

Additional Considerations

Students need fine motor skills and mobility. Students handle sharp objects. Students required to have ServSafe certification prior to enrolling in class.

"After Hours" Fun

Culinary Competition Club
Catering & Community Service Opportunities!
As a Culinary Arts student, you can gain valuable experience ***and*** earn extra credit working our awesome catering events.

Hospitality & Tourism Certifications

Name	Course	Provider	Cost
ServSafe Food Handlers	Culinary Arts & Practicum in Culinary Arts	ServSafe – National Restaurant Association	Student Pays: $8
Students enrolled in Culinary Arts and Practicum in Culinary Arts will complete five sections on Basic Food Safety, Personal Hygiene, Cross-contamination & Allergens, Time & Temperature and Cleaning & Sanitation. Students must successfully complete these sections before the certification test will be available. There are no age requirements for this exam.			
ProStart National Certificate of Achievement	Practicum in Culinary Arts	National Restaurant Association	Student Pays: $ 18
To earn the ProStart National COA, a student must pass "The Foundations of Restaurant Management and Culinary Arts" Level 1 and Level 2 exams, document 400 hours of work experience and demonstrate proficiency on more than 50 workplace competencies. Work experience can come from paid jobs, school-based enterprises or relevant volunteer work.			

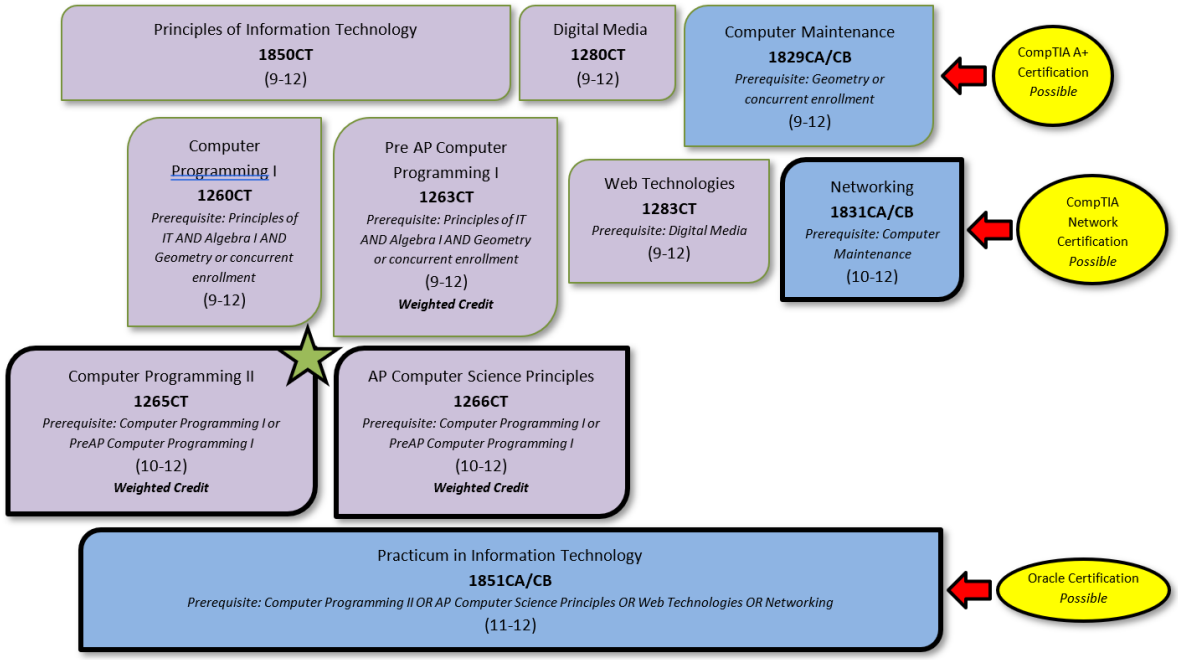
Information Technology

Program of Study

BEN BARBER
INNOVATION ACADEMY

INFORMATION TECHNOLOGY

Endorsement: Business & Industry



Certification Requirement
The district will pay 100% of the cost of the certification test if students can show mastery by:
Passing a certification practice test
Maintaining an 80+ overall course average at the time of the certification test
If students don't meet the requirements above, they must pay 100% of the cost of the certification test

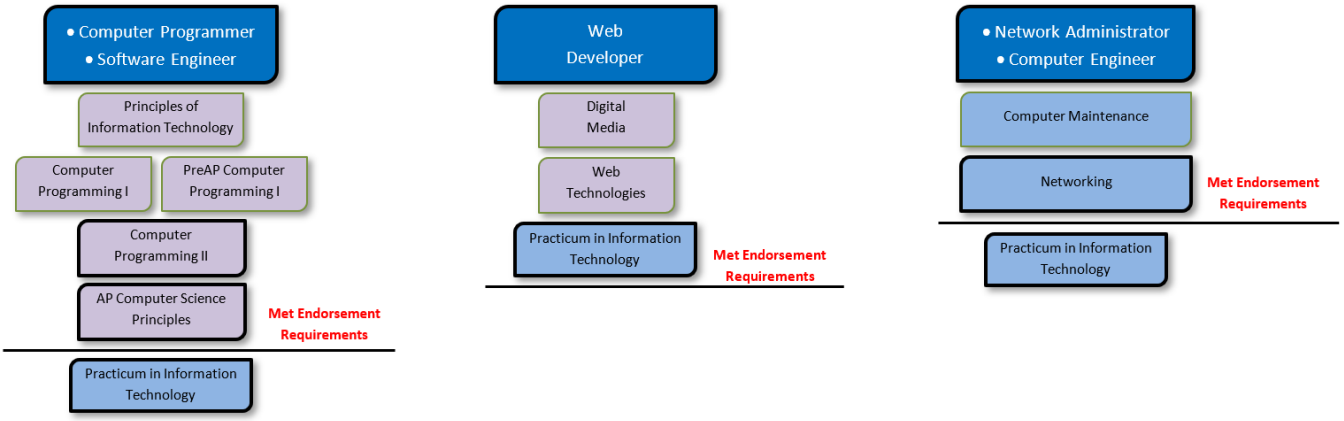
Certificate of Excellence can be earned for this course.

LEGEND					
Fill Color	Length	Credit	Fill Color	Length	Credit
	18 weeks	1		HC - 18 weeks	0.5
	36 weeks	2-3		HC - 36 weeks	1
	College Course			Advanced Course	

To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course

Information Technology

Recommended Career Pathways



To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course

Principles of Information Technology

Prerequisite: None
Course: 1850CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Students will learn about a variety of IT concepts including computer software, computer hardware, careers in IT, and how to prepare and give presentations. Students will practice beginning computer programming skills with a visual programming environment called "Scratch".

Student Activities

Students will create and design programs, games, and promotional ads. They will create documents such as resumes, PowerPoint type presentations, business cards and spreadsheets. Students will learn about computer hardware and operating systems and prepare presentations about careers in IT.

What's next?

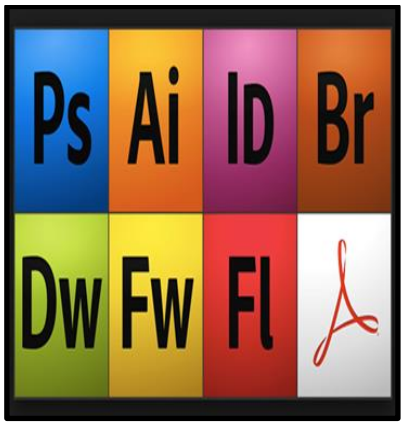
If you want to be a **Software Engineer, Game Developer, Computer Programmer, Web Developer, Mobile App Designer or IT Administrator** then you should consider taking these courses…

- Computer Programming I/Pre-AP Computer Programming I
- Computer Programming II
- AP Computer Science Principles
- Practicum in Information Technology
- Video Game Design I, II, III
- Web Technologies
- Visit Achieve Texas for more information on careers http://www.achievetexas.org/Information.htm

Organizations/After School/Competitions

- Computer Science Students Association
- Game Design Club
- Business Professionals of America
- UIL Computer Science
- FIRST FTC Robotics

Digital Media

Prerequisite: None
Course: 1280CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Digital Media is a course that helps students interested in information technology develop advanced skills in designing, importing and manipulating text, graphics, audio and video used in presentations, multimedia productions and desktop publication for high school students. Visit Achieve Texas for more information on careers
http://www.achievetexas.org/Information.htm

Student Activities

Are you ready to be challenged, to test your creativity, to do things you only imagined? In Digital Media, students will experience a variety of creative projects using audio and video tools and Adobe Creative Suite software including Photoshop, InDesign, Illustrator, Fireworks, Acrobat Professional and Dreamweaver. The course culminates in an extensive portfolio that will showcase students' digital media creations.

What's next?

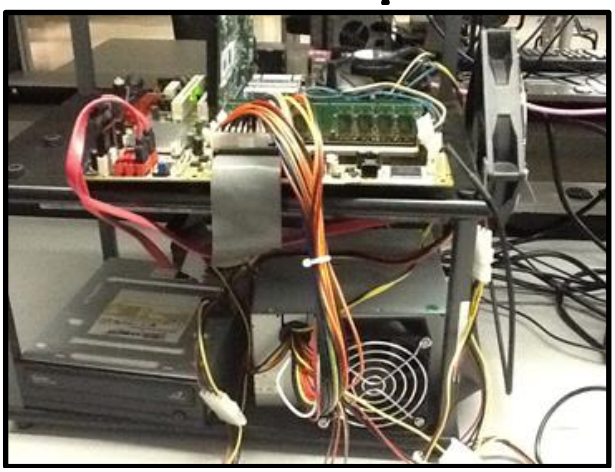
If you want to be a **Software Engineer**, **Game Developer**, **Computer Programmer**, **Web Developer**, **Mobile App Developer** then you should consider taking these courses…

- Web Technologies
- Computer Programming I/Pre-AP Computer Programming I
- Computer Programming II
- AP Computer Science Principles
- Practicum in Information Technology
- Visit Achieve Texas for more information on careers
  http://www.achievetexas.org/Information.htm

Organizations/After School/Competitions

- Computer Science Students Association
- Game Design Club
- Business Professionals of America
- UIL Computer Science
- FIRST FTC Robotics

Computer Maintenance



Prerequisite: Geometry or concurrent enrollment

Course: 1829CA/CB Credits: 2 Length: 36 weeks Placement: 9-12

Course Description

Computers (including smart phones, tablets and other mobile devices) are increasingly being used for communications, operations, security and leisure. Computer Maintenance covers the selection of hardware, troubleshooting both hardware and operating systems, and basic networking. Visit Achieve Texas for more information on careers at: http://www.achievetexas.org/Information.htm

Student Activities

- Students will build and troubleshoot system hardware and operating systems.
- Students participate in community service projects such as providing a video game room at a Christmas party for underprivileged children.
- Students have the opportunity to participate in SkillsUSA.

Additional Considerations

Students must have successfully completed Geometry without modification. Students need fine motor skills and mobility.

Certifications

CompTIA A+ Certification Possible

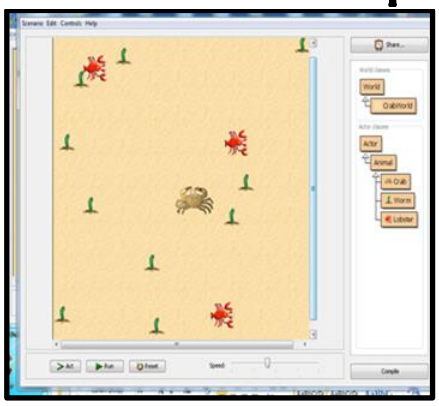
Student Cost: $205

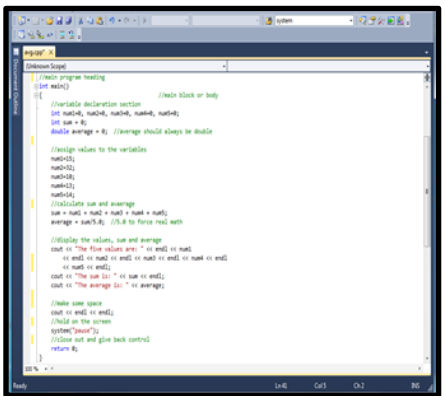
Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

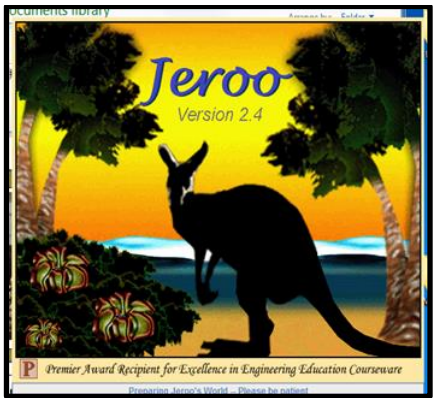
SkillsUSA Champions at Work

SkillsUSA is a partnership of students, teachers and industry working together to ensure America has a skilled workforce with over 300,000 members

Computer Programming I







Prerequisite: Principles of IT AND Geometry or concurrent enrollment
Course: 1260CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

In this hands-on course environment, students will learn the fundamentals of computer science and computer programming utilizing a high-level language such as C++ or Java. Students will learn programming methodologies, algorithm development, problem solving skills, and the ethical and social considerations for the appropriate use of computer software and hardware throughout the course.

Student Activities

Students will use the computer to create, test, and evaluate programs and games. Students will do mostly hands-on activities to learn and use the design process, analyze problems and create programming algorithms, and make unique projects in a variety of graphical environments.

What's next?

If you want to learn more about programming and careers in computer science then you should consider taking these courses:

- Computer Programming II
- AP Computer Science Principles
- Practicum in Information Technology
- Web Technologies
- Video Game Design I, II, III
- Visit Achieve Texas for more information on careers http://www.achievetexas.org/Information.htm

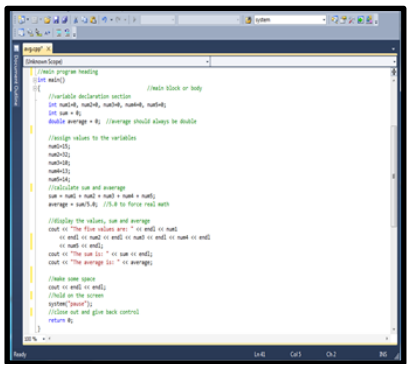
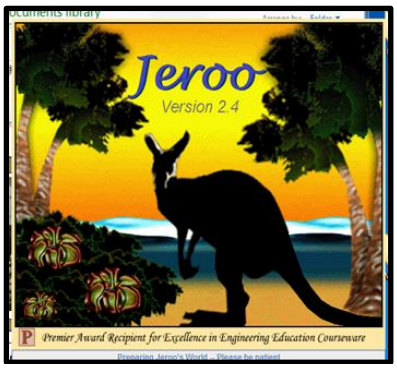
Organizations/After School/Competitions

- Computer Science Students Association
- Game Design Club
- Business Professionals of America
- UIL Computer Science
- FIRST FTC Robotics

Additional Considerations

Students must have successfully completed Algebra I and Geometry without modification.

Pre-Advanced Computer Programming I

Prerequisite: Principles of IT AND Geometry or concurrent enrollment
Course: 1263CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

In this hands-on course environment, students will learn the fundamentals of computer science utilizing a high-level language such as C++ or Java. Students will learn programming methodologies, algorithm development, problem solving skills, and the ethical and social considerations for the appropriate use of computer software and hardware throughout the course. This is a fast-paced honors course where students will design and implement projects individually and with peer teams.

Student Activities

Students will use the computer to create, test and evaluate programs and games. Students will do mostly hands-on activities to learn and use the design process, analyze problems and create programming algorithms, and make unique projects in a variety of graphical environments.

What's next?

If you want to be a **Software Engineer**, **Game Developer**, **Computer Programmer**, **Web Developer, Mobile App Develop** then you should consider taking these courses…

- Computer Programming II
- AP Computer Science Principles
- Practicum in Information Technology
- Video Game Design I, II, III
- Web Technologies
- Visit Achieve Texas for more information on careers http://www.achievetexas.org/Information.htm

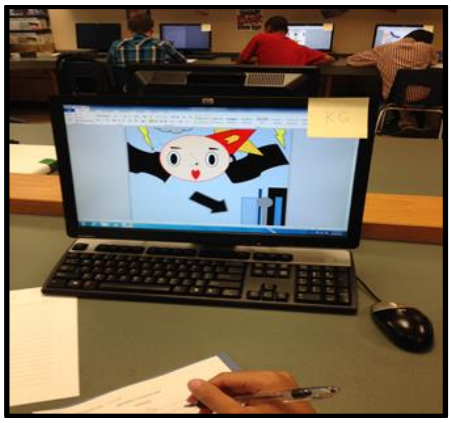
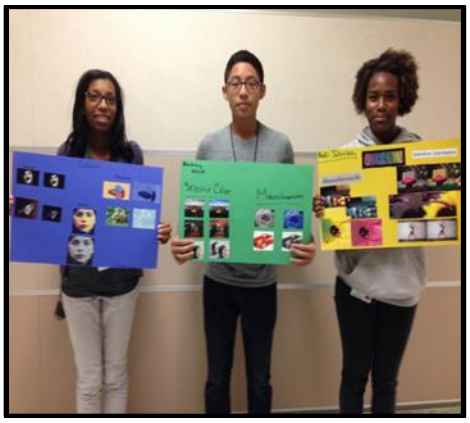
Organizations/After School/Competitions

- Computer Science Students Association
- Game Design Club
- Business Professionals of America
- UIL Computer Science
- First FTC Robotics

Additional Considerations

Students must have successfully completed Algebra I and Geometry without modification.

Web Technologies


Prerequisite: Digital Media
Course: 1283CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Appropriate graphical and website design, layout and analysis skills will be emphasized throughout the course as students develop simple web pages using HTML, CSS, Javascript, PHP and Dreamweaver. Students will create, manipulate and animate images and objects to enhance websites they develop.

Student Activities

Gallery walks of student work. Students will edit photos with the free application of GIMP. Student will create simple web pages using HTML, CSS, Javascript, PHP and Dreamweaver.

What's next?

If you want to be a **Software Engineer, Game Developer, Computer Programmer, Web Developer, Mobile App Developer** then you should consider taking these courses…

- Computer Programming II
- AP Computer Science Principles
- Practicum in Information Technology
- Video Game Design I, II, III
- Web Technologies
- Visit Achieve Texas for more information on careers http://www.achievetexas.org/Information.htm

Organizations/After School/Competitions

Computer Science Students Association

- Computer Science Students Association
- Business Professionals of America
- UIL Computer Science
- FIRST FTC Robotics

Networking

Prerequisite: Computer Maintenance
Course: 1831CA/CB Credits: 2 Length: 36 weeks Placement: 10-12

Course Description

The world is more digitally connected every day. Computers, smartphones, tablets, GPS systems and satellite communications systems all use telecommunications networks. Smart houses and remote access cars are also on the net. This class will cover designing subnets, maintaining security and firewalls and other network basics. Visit Achieve Texas for more information on careers http://www.achievetexas.org/Information.htm

Student Activities

- Students will design, connect and troubleshoot networks and servers.
- Students participate in community service projects such as providing a video game room at a Christmas party for underprivileged children.
- Students have the opportunity to compete in SkillsUSA.

What's next?

Consider these courses to further enhance your skills:

- Computer Maintenance
- Robotics I
- PLTW Engineering
- Video Game Design I, II, III
- Web Technologies
- Visit Achieve Texas for more information on careers: http://www.achievetexas.org/Information.htm

Competitions

SkillsUSA Champions at Work

Certifications

CompTIA Network Certification Possible

Student Cost: $319

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Computer Programming II

Prerequisite: Computer Programming I or Pre-Advanced Computer Programming I
Course: 1265CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

Students will use the JAVA language to create programs for games and classic algorithms while learning intermediate, college-level object-oriented programming concepts. Students will have the opportunity to participate in a variety of extra-curricular and contest activities.

Students can potentially earn college credit by taking the AP Computer Science A Exam.

Student Activities

Students will learn to develop programs in the JAVA programming language and will complete a variety of labs and projects to showcase the programming skills and algorithms learned. Students will have the opportunity to work and compete in teams in a variety of settings and students will be prepared to take the AP CS A exam and receive college credit for the course in the spring.

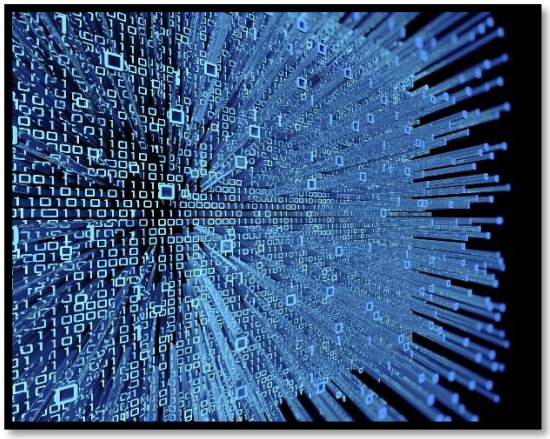
Certificate of Excellence

Students can earn a Certificate of Excellence by achieving a specific list of real world skills related to this course. For the list of skills, please visit goo.gl/9VM3a9

Organizations/After School/Competitions

- Computer Science Students Associations
- Game Design Club
- Business Professionals of America
- UIL Computer Science
- FIRST FTC Robotics

AP Computer Science Principles



Prerequisite: Computer Programming I OR PreAP Computer Programming I
Course: 1266CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

This course will introduce students to the foundational concepts of computer science where students will also get an opportunity to explore how computing and technology can impact the world. The course focuses on creatively solving problems and real-world applications.

Student Activities

Students will work with data, programs and gain a better understanding of the internet and cybersecurity. Students will analyze problems and artifacts, create computational artifacts and communicate and collaborate as part of a team.

What's next?

Consider these courses to further enhance your skills:

- Video Game Design I, II, III
- Web Technologies
- Computer Maintenance
- Robotics
- PLTW Engineering
- Visit Achieve Texas for more information on careers
  http://www.achievetexas.org/Information.htm

Organizations/After School/Competitions

- Computer Science Students Association
- Game Design Club
- Business Professionals of America
- UIL Computer Science
- FIRST FTC Robotics

Practicum in Information Technology

Prerequisite: Computer Programming II OR AP Computer Science Principles OR Web Technologies OR Networking
Course: 1851CA/1851CB Credits: 2 Length: 36 weeks Placement: 11-12

Course Description

This personalized, independent study course will allow students interested in pursuing a career in information technology opportunities for advanced learning beyond the classroom environment. Students will engage in a variety of industry-relevant experiences such as competition and or product innovation, classroom teaching opportunities, and advanced topics research and development.

Student Activities

Students will propose, design, create, evaluate, and present a variety of advanced projects involving technology and IT skills based on personal interest. Students may have the opportunity to participate in skills contests, work on projects for outside clients, and/or have an internship. Students will prepare an electronic portfolio and resume to showcase their projects.

Certifications

Oracle Certification Possible

Student Cost: $125

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Additional Consideration

If a student does not have transportation, opportunities will be limited.

Organizations/After School/Competitions

- Computer Science Students Association
- Game Design Club
- Business Professionals of America
- UIL Computer Science
- FIRST FTC Robotics

Information Technology Certifications

Name	Course	Provider	Cost
CompTIA A+	Computer Maintenance	CompTIA	Student Pays: $ 205
Candidates are better prepared to troubleshoot and problem solve. Technicians understand a wide variety of issues ranging from networking and operating systems to mobile devices and security. A+ supports the ability to connect users to the data they need to do their jobs regardless of the devices being used. https://certification.comptia.org/home			
CompTIA Network	Networking	CompTIA	Student Pays: $ 319
Students will know how to design and implement functional networks, configure, manage, and maintain essential network devices. They will use devices such as switches and routers to segment network traffic and create resilient networks and identify benefits and drawbacks of existing network configurations. https://certification.comptia.org/home			
Oracle	Practicum in Information Technology	Oracle University	Student Pays: $ 125
An Oracle Certification helps build a sense of trust with current and future employers that you can perform the job. Global companies are looking to hire experts they can trust. • 65% of respondents in a recent Pearson VUE Value of IT Survey reported receiving positive impact on their professional image and reputation • 75% of certification holders surveyed said they've experienced greater demand for their skills since getting certified. • The Oracle Certification badge gets up to 6x more views on your LinkedIn Profile which could lead to promising job opportunities. https://education.oracle.com/certification			

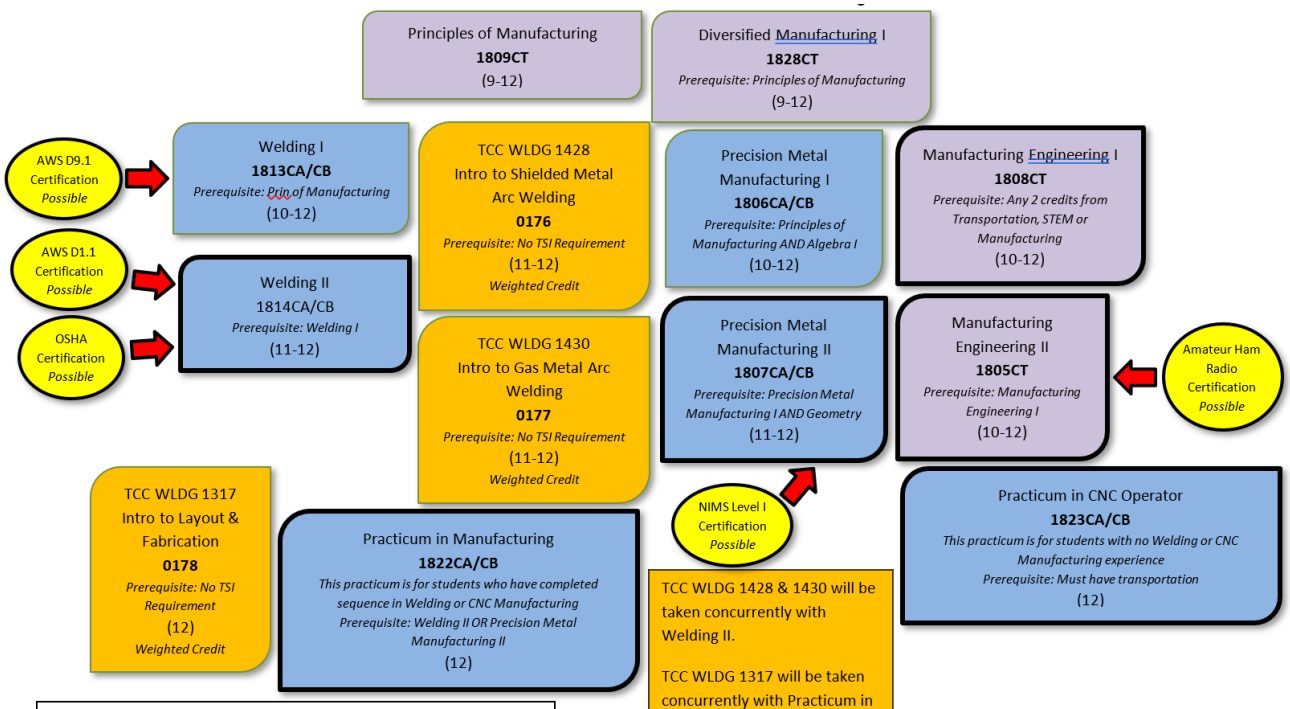
Manufacturing

Program of Study

BEN BARBER
INNOVATION ACADEMY

MANUFACTURING

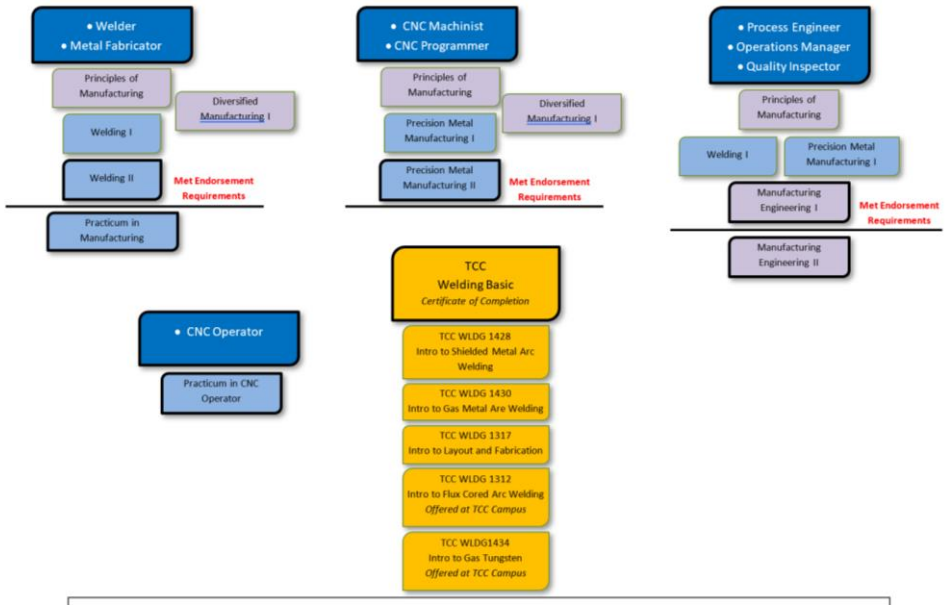
Endorsement: Business & Industry



Certification Requirement
The district will pay 100% of the cost of the certification test if students can show mastery by:
Passing a certification practice test
Maintaining an 80+ overall course average at the time of the certification test
If students don't meet the requirements above, they must pay 100% of the cost of the certification test

LEGEND						To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course
Fill Color	Length	Credit	Fill Color	Length	Credit	
	18 weeks	1		HC - 18 weeks	0.5	
	36 weeks	2-3		HC - 36 weeks	1	
	College Course			Advanced Course		

Manufacturing
Recommended Career Pathways



To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course

Principles of Manufacturing



Prerequisite: None
Course: 1809CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

In Principles of Manufacturing, students gain knowledge and skills in the application, design, production, and assessment of products, services, and systems. Knowledge and skills in the proper application of principles of manufacturing, the design of technology, the efficient production of technology, and the assessment of the effects of manufacturing production technology prepare students for success in the modern world. Students gain an understanding of career opportunities available in manufacturing and what employers require to gain and maintain employment in these careers.

Student Activities

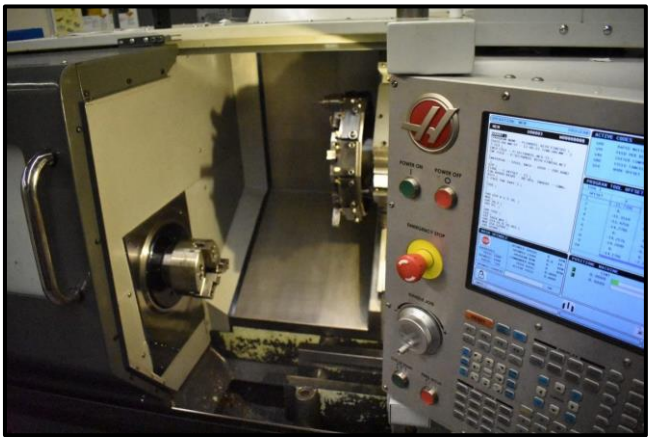
Students will be instructed in the following areas:

- Shop safety
- Measurement
- Reading and interpreting working drawings
- Hand Tools – names and use
- Shielded Metal Arc Welding
- Cutting with an Oxy-Acetylene torch
- Working individually and in groups
- Power tools – names and use

Organizations/After School/Competition

SkillsUSA is a partnership of students, teachers and industry working together to ensure America has a skilled workforce.

Diversified Manufacturing I



Prerequisite: Principles of Manufacturing

Course: 1828CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

In Diversified Manufacturing I, students gain knowledge and skills in the application, design, production, and assessment of products, services, and systems and how those knowledge and skills are applied to manufacturing. The study of manufacturing systems allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings in a manufacturing setting. Diversified Manufacturing I allows students the opportunity to understand the process of mass production by using a wide variety of materials and manufacturing techniques. Knowledge about career opportunities, requirements, and expectations and the development of skills prepare students for workplace success. Students will be expected to design a project, develop a process plan, develop a budget, and ultimately build their projects.

Student Activities

Students will develop the processes needed to complete a project such as initiate, plan, execute, monitor and control, and close. Students will learn and develop these skills using different types of materials such as wood, plastic, and metal. The tools that they will be using will include welders, milling machines, turning machines, 3D printer, and more. Some of the projects students will put into mass production may include fire pits, dice theme rings, puzzles and projects for actual customers like building parts for NASA HUNCH. All of these skills are meant to further the knowledge and skills and prepare them for real world practices seen in industry.

Additional Considerations

Students need fine motor skills and mobility. Students handle sharp objects and use dangerous equipment. If seeking certification, curriculum cannot be modified.

Organizations/After School/Competition

SkillsUSA is a partnership of students, teachers and industry working together to ensure America has a skilled workforce.

Welding I



Prerequisite: Principles of Manufacturing
Course: 1813CA/CB Credits: 2 Length: 36 weeks Placement: 10-12

Course Description

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

Student Activities

Students will be instructed in advanced skills in the following areas:

- Shielded Metal Arc Welding (SMAW)
- Gas Metal Arc Welding (GMAW)
- Flux Cored Arc welding (FCAW)
- Gas Tungsten Arc Welding (GTAW)
- Oxy-Acetylene cutting and welding
- Plasma cutting
- Project design and fabrication
- Working individually and in groups
- Employability and careers in Manufacturing
- Academic skills used in Welding

Certifications

AWS D9.1 Certification Possible

Student Cost: $84
Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Additional Considerations

Students need fine motor skills and mobility. Students handle sharp objects and use dangerous equipment. If seeking certification, curriculum cannot be modified.

Organizations/After School/Competition

SkillsUSA

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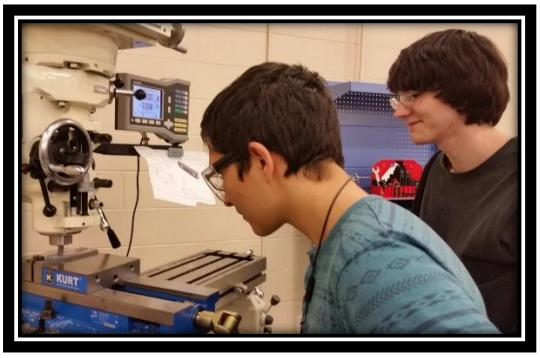
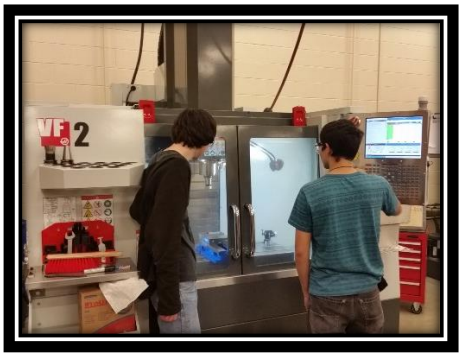
Precision Metal Manufacturing I





Prerequisite: Principles of Manufacturing AND Algebra 1
Course: 1806CA/CB Credits: 2 Length: 36 weeks Placement: 10-12

Course Description

Precision Metal Manufacturing provides the knowledge, skills, and technologies required for employment in metal technology systems. This course may also address a variety of materials in addition to metal such as plastics, ceramics, and wood. Students develop knowledge of the concepts and skills related to these systems to apply them to personal and career development. This course supports integration of academic and technical knowledge and skills. Students will learn to use equipment such as manual lathes and milling machines as well as larger CNC machines to create parts and objects.

Student Activities

Students will be instructed in the following areas:

- Machine Safety
- Precision Measurement
- Machine Tools
- Milling Operations
- Lathe Operations
- Use of materials from steel to aluminum to plastics.

Organizations/After School/Competition

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Manufacturing Engineering I

Prerequisite: Any 2 credits from Manufacturing, Transportation OR STEM
Course: 1808CT **Credits:** 1 **Length:** 18 weeks **Placement:** 10-12

Course Description

In Manufacturing Engineering, students gain knowledge and skills in the application, design, production, and assessment of products, services, and systems and how those knowledge and skills are applied to manufacturing. Knowledge and skills in the proper application of Manufacturing Engineering, the design of technology, efficient manufacturing technology, and the assessment of the effects of production technology prepare students for success in the global economy. The main project for this class will be to manufacture a solar car for the Solar Challenge.

Student Activities

Students will be instructed in advanced skills in the following areas:

- Shielded Metal Arc Welding (SMAW)
- Gas Metal Arc Welding (GMAW)
- Flux Cored Arc welding (FCAW)
- Gas Tungsten Arc Welding (GTAW)
- Oxy-Acetylene Cutting and Welding
- Plasma Cutting
- Project Design and Fabrication
- Working individually and in groups
- Employability and Careers in Manufacturing

Organizations/After School/Competition

SkillsUSA is a partnership of students, teachers and industry working together to ensure America has a skilled workforce.

Additional Considerations

Students need fine motor skills and mobility. Students handle sharp objects and use dangerous equipment. If seeking certification, curriculum cannot be modified.

Welding II



Prerequisite: Welding I
Course: 1814CA/1814CB Credits: 2 Length: 36 weeks Placement: 11-12

Course Description

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

Student Activities

Students will be instructed in advanced skills in the following areas:

- Shielded Metal Arc Welding (SMAW)
- Gas Metal Arc Welding (GMAW)
- Flux Cored Arc welding (FCAW)
- Gas Tungsten Arc Welding (GTAW)
- Oxy-Acetylene cutting and welding
- Plasma cutting
- Project design and fabrication
- Working individually and in groups
- Employability and careers in Manufacturing
- Academic skills used in Welding

Certifications

AWS D1.1 Certification Possible
Student Cost: $84
OSHA Certification Possible
Student Cost: $24
Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Additional Considerations

Students need fine motor skills and mobility. Students handle sharp objects and use dangerous equipment. If seeking certification, curriculum cannot be modified.

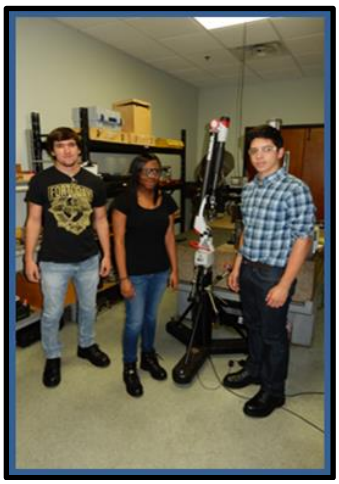
TCC Dual Credit Opportunity

Tarrant County College District

TCC WLDG 1428 Introduction to Shielded Metal Arc Welding AND TCC 1430 Introduction to Gas Metal Arc Welding can be taken concurrently with this class. There is no TSI requirement, but students must register and pay tuition by TCC deadline.

Precision Metal Manufacturing II






Prerequisite: Precision Metal Manufacturing I AND Geometry
Course: 1807CA/1807CB Credits: 2 Length: 36 weeks Placement: 11-12

Course Description

Precision Metal Manufacturing II will provide students the knowledge, skills, and technologies required for employment in precision machining. This course is designed to provide necessary skills for machining in a real-world setting. This course will address a variety of materials through project based learning, manufactured with materials such as plastics, ceramics, wood, and metals. Students will develop knowledge of the concepts and skills related to these systems to apply them to personal and career development. This course is designed to provide entry-level employment for the student or articulated credit integration into a community college and dual credit with a community college with completion of the advanced course. Students will have the opportunity to advance their skills on equipment such as manual lathes and milling machines. They will also work more in depth with CNC machines to create parts and projects. Students will develop skills in areas such as fixture building, computer aided manufacturing software, design, blueprint reading, and G and M code identification and programming.

Student Activities

- **Advanced Precision measurement processes**
- **Milling projects** such as Jenga sets, tic tac toe boards, Sign plates, 1-2-3 blocks, 3-D milling operations, and personal projects.
- **Lathe projects** such as Brass hammers, nut crackers, and chess sets
- **CAM- Computer Aided Manufacturing** – Personal designed and manufactured projects

Certifications

NIMS Level I Certification Possible
Student Cost: $75

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Organizations/After School/Competition

SkillsUSA

Manufacturing Engineering II

Prerequisite: Manufacturing Engineering I

Course: 1805CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

In Manufacturing Engineering Technology II, students will gain knowledge and skills in the application, design, production, and assessment of products, services, and systems and how those knowledge and skills are applied to manufacturing. The study of Manufacturing Engineering Technology II will allow students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings. The main project for this class will be designing and building a new solar car chassis.

Student Activities

Students will be instructed in advanced skills in the following areas:

- Shielded Metal Arc Welding (SMAW)
- Gas Metal Arc Welding (GMAW)
- Flux Cored Arc welding (FCAW)
- Gas Tungsten Arc Welding (GTAW)
- Oxy-Acetylene Cutting and Welding
- Plasma Cutting
- Project Design and Fabrication
- Working individually and in groups
- Employability and Careers in Manufacturing

Certifications

Amateur Ham Radio

Student Cost: $15

Additional Considerations

Students need fine motor skills and mobility. Students handle sharp objects and use dangerous equipment. If seeking certification, curriculum cannot be modified.

Organizations/After School/Competition

SkillsUSA

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Practicum in Manufacturing



Prerequisite: Welding II OR Precision Metal Manufacturing II
Course: 1822CA/1822CB Credits: 2 Length: 36 weeks Placement: 12

Course Description

Practicum in Manufacturing is designed to give students supervised practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the manufacturing cluster.

Student Activities

Students will be instructed in advanced skills in the following areas:

- Shielded Metal Arc Welding (SMAW)
- Gas Metal Arc Welding (GMAW)
- Flux Cored Arc welding (FCAW)
- Gas Tungsten Arc Welding (GTAW)
- Plasma cutting
- Project design and fabrication
- Working individually and in groups
- Employability and careers in Manufacturing

Additional Considerations

Students must provide their own transportation and complete independent internship. If seeking certification, curriculum cannot be modified.

TCC Dual Credit Opportunity

Tarrant County College District

TCC WLDG 1317 Introduction to Layout & Fabrication can be taken concurrently with this class. There is no TSI requirement, but students must register and pay tuition by TCC deadline.

Practicum in CNC Operator

Prerequisite: Must be a senior with transporation

Course: 1823CA/1823CB Credits: 2 Length: 36 weeks Placement: 12

Course Description

Students will learn about precision measurement, tooling, CNC operations, basic offset changes and basic programming with the focus on operating the mill and lathe machine. The purpose of this course is to prepare students to join the workforce as a CNC operator.

Student Activities

The manufacturing industry is booming with a huge shortage of qualified CNC operators. Students in this course will work onsite with manufacturing community partners after the students learn basic skills in the machine shop at Ben Barber. Students will learn about each company and prospective employers will learn a student's abilities on the job.

Additional Considerations

Students need fine motor skills and mobility. Students handle sharp objects and use dangerous equipment. If seeking certification, curriculum cannot be modified.

Students must have transportation to participate in this class

Organizations/After School/Competition

SkillsUSA

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Manufacturing Certifications

Name	Course	Provider	Cost
OSHA	Principles of Manufacturing	CareerSafe Online	Student Pays: $ 25
The OSHA certification is an online 10 hour course. Students may access the course in class or at home with internet access. The course is broken up into modules with a test at the end of each module. Students must pass with a 70 or above in 3 attempts or less.			
NIMS Level I	Precision Metal Manufacturing II	NIMS	Student Pays: $ 75
NIMS credentials are earned by students, trainees, apprentices, employees, and military personnel nationwide and around the world. By earning NIMS credentials, these individuals secure a competitive edge when applying for jobs because they have demonstrated that their skills meet the industry established standards. And NIMS credentials never expire. https://www.nims-skills.org/			
American Ham Radio	Manufacturing Engineering	ARRL Amateur Radio	Student Pays: $ 15
This Technician class license is the entry-level license of choice for most new ham radio operators. Earning the Technician license requires passing one examination totaling 35 questions on radio theory, regulations and operating practices. The license gives access to all Amateur Radio frequencies above 30 megahertz, allowing these licensees the ability to communicate locally and most often within North America. This certification is required to participate in the Solar Car race each summer.			
AWS D9.1 AWSD1.1	Welding I Welding II	American Welding Society	Student Pays: $ 84
One of the best ways to advance your welding career is by earning a specialized certification. This opens up opportunities for more money, leadership roles and higher-level career challenges. https://www.aws.org/certification/			

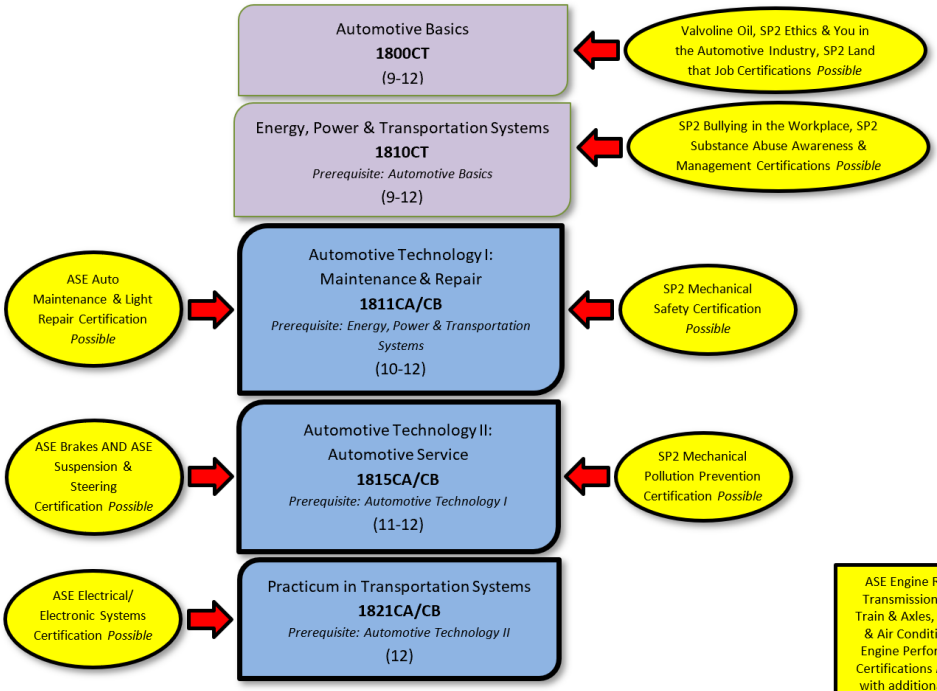
Transportation, Distribution & Logistics

Program of Study

BEN BARBER
INNOVATION ACADEMY

TRANSPORTATION, DISTRIBUTION & LOGISTICS

Endorsement: Business & Industry



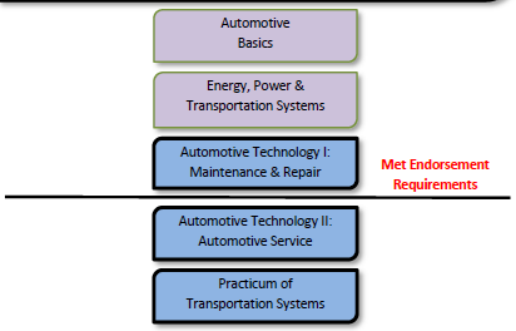
Certification Requirement
The district will pay 100% of the cost of the certification test if students can show mastery by:
Passing a certification practice test
Maintaining an 80+ overall course average at the time of the certification test
If students don't meet the requirements above, they must pay 100% of the cost of the certification test

LEGEND						To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course
Fill Color	Length	Credit	Fill Color	Length	Credit	
	18 weeks	1		HC - 18 weeks	0.5	
	36 weeks	2-3		HC - 36 weeks	1	
	College Course			Advanced Course		

Transportation, Distribution & Logistics

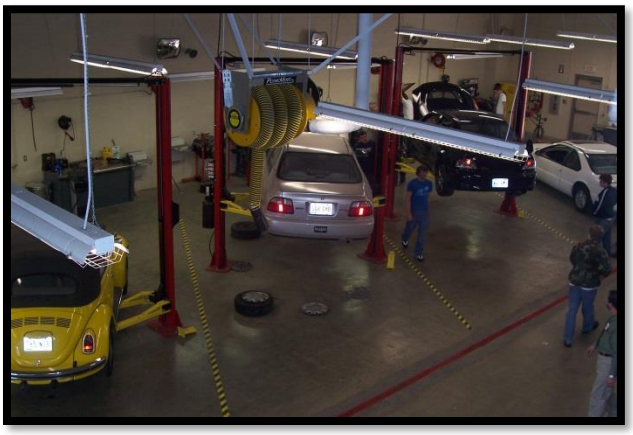
Recommended Career Pathways

- Automotive Mechanic
- Service Manager
- Vehicle Inspector
- Motorcycle Technician
- Heavy Truck Technician
- Service Technician
- Body Repair Technician
- Diesel Technician
- Marine Technician
- Small Engine Technician



To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course

Automotive Basics



Prerequisite: None
Course: 1800CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

This is the first class leading to an entry level position in repairing cars. The students will be introduced to careers in the automotive industry, safety, measuring skills, plus hand and power tools. Minor maintenance and light repair procedures in an automotive shop are also introduced.

Student Activities

Students will be working with tires and wheels, measuring tools and will perform preventative maintenance procedures and brakes theory.

Student must wear safety glasses and proper clothing

Certification

Valvoline Oil, SP2 Ethics & You in the Automotive Industry and SP2 Land That Job Certification Possible
Student Cost: $0

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Additional Considerations

Students need fine motor skills and mobility. Students handle tools. If seeking certification, curriculum cannot be modified.

Organizations/After School/Competition

SkillsUSA

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Automotive Club

Energy, Power & Transportation Systems

Prerequisite: Automotive Basics
Course: 1810CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Student must have successfully completed Automotive Basics before beginning this course. Student will study basic automotive brakes, suspension/steering systems, and maintenance and light repair. Class will consist of a mixture of class work and shop work to introduce the student to the world of an Automotive Technician.

Student Activities

Student will use shop supplied tools and parts to do brake jobs, suspension repair and replacement, tire and wheel service, wheel balancing, oil changes, plus maintenance and light repair. Students are encouraged to bring in their own vehicles for service and only have to supply their own parts and supplies.
Student must wear safety glasses, proper clothing and buy an Automotive work shirt for this class.

Certification

SP2 Bullying in the Workplace
SP2 Substance Abuse Awareness
Student Cost: $0

Additional Considerations

Students need fine motor skills and mobility. Students handle sharp objects and use dangerous equipment. If seeking certification, curriculum cannot be modified.

Organizations/After School/Competition

SkillsUSA

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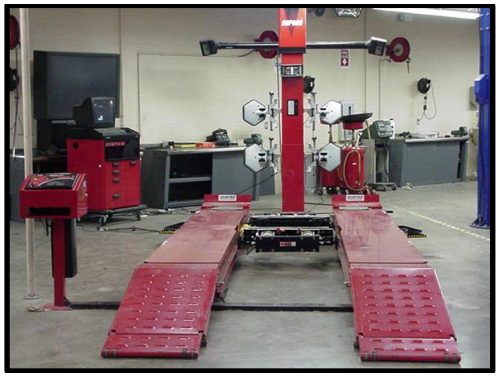
Automotive Club

Automotive Technology I: Maintenance & Repair



Prerequisite: Energy, Power & Transportation Systems
Course: 1811CA/1811CB **Credits:** 2 **Length:** 36 weeks **Placement:** 10-12

Course Description

This course is set up to prepare the student for an entry level position in the Automotive Technology field. The course covers the following areas: Brakes, Suspension and Steering, Engine Repair, Engine Performance, Manual Drive Train and Axles, Automatic Transmission and Transaxles, Air Conditioning and Heat, and Electricity and Electronics.

Student Activities

Students will be working on vehicles in BBCTA shop facility. This shop is set up like an Automotive Dealership. The shop has safety rules that must be followed to include safety glasses. Students at times will be allowed to work on their own vehicles. We also have donation vehicles and trainers that will be used to teach the student how successfully complete automotive repairs.

Student must wear safety glasses, proper clothing and buy an Automotive work shirt for this class.

Certifications

SP2 Mechanical Certification Possible
Student Cost: $0

ASE Auto Maintenance & Light Repair Certification Possible
Student Cost: $30

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Organizations/After School/Competition

SkillsUSA

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Automotive Club

Additional Considerations

Students need fine motor skills and mobility. Students handle sharp objects and use dangerous equipment. If seeking certification, curriculum cannot be modified.

Automotive Technology II: Automotive Service

Prerequisite: Automotive Technology I

Course: 1815CA/1815CB Credits: 2 Length: 36 weeks Placement: 11-12

Course Description

This is the advanced course set up to prepare the student for an entry level position in the Automotive Technology field. The course covers the following areas: Brakes, Suspension and Steering, Engine Repair, Engine Performance, Manual Drive Train and Axles, Automatic Transmission and Transaxles, Air Conditioning and Heat, and Electricity and Electronics.

Student Activities

Students will be working on vehicles in BBCTA shop facility. This shop is set up like an Automotive Dealership. The shop has safety rules that must be followed to include safety glasses. Students at times will be allowed to work on their own vehicles. We also have donation vehicles and trainers that will be used to teach the student how successfully complete automotive repairs.

Student must supply safety glasses, proper clothing and buy an Automotive work shirt for this class.

Certifications

SP2 Mechanical Pollution Prevention Certification Possible
Student Cost: $0

ASE Brakes & ASE Suspension & Steering Certification Possible
Student Cost: $30

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Additional Considerations

Students need fine motor skills and mobility. Students handle sharp objects and use dangerous equipment. If seeking certification, curriculum cannot be modified.

Organizations/After School/Competition

SkillsUSA

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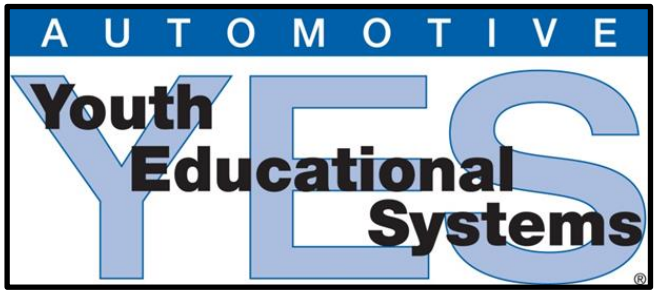
Automotive Club

Practicum in Transportation, Distribution & Logistics



Prerequisite: Automotive Technology II

Course: 1821CA/1821CB Credits: 2 Length: 36 weeks Placement: 12

Course Description

This course is set up for a student who wants to work in the afternoon and get school credit. The practicum course is a paid or unpaid internship for students participating in the Automotive Technology courses. A student must have an Automotive Technology related job no later than the first 2 weeks of class to get credit for a Practicum class. Student must adhere to all workplace rules and regulations and have a positive report from employer.

Student Activities

If you're interested in high-tech, fast-paced and lucrative work in the automotive service industry, AYES can not only provide you with a solid education while you are in high school, but also offer you the opportunity of a paid internship under a senior technician at a local automotive service employer. This will provide you with the skills needed to build a great career.

Student must wear safety glasses, proper clothing and buy an Automotive work shirt for this class.

Certifications

ASE Brakes & ASE Suspension & Steering Certification Possible

Student Cost: $30

Additional Considerations

If seeking certification, curriculum cannot be modified. If a student does not have transportation, opportunities will be limited.

Organizations/After School/Competition

SkillsUSA

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Automotive Club

Transportation Certifications

Name	Course	Provider	Cost
Valvoline Oil	Automotive Basics	Valvoline	Student Pays: $ 0 BBIA Pays: $ 0
This certification test is taken online and given during class time. Students must watch an instructional video and then answer related questions. Students earn the certification by successfully completing the test.			
ASE Student Certifications	Automotive Technology I, Automotive Technology II, Practicum in Transportation	ASE	Student Pays: $ 15 each BBIA Pays: $ 15 each
For a $ 30 fee, students can take any or all of the following test: Engine Repair, Transmission, Drive Train & Axles, Suspension & Steering, Brakes, Electrical/Electronic Systems, Heating & Air Conditioning, Engine Performance, Auto Maintenance & Light Repair. Tests are taken online and during class time. For additional information, visit http://www.asestudentcertification.com/			
SP2	Automotive Basics, Energy, Power & Transportation Systems, Automotive Technology I & Automotive Technology II	SP2	Student Pays: $ 0 each BBIA Pays: $ 0 each
Students can take any or all of the following tests: Ethics & You in the Automotive Industry, Land that Job, Bullying in the Workplace, Substance Abuse Awareness & Management, Collison Safety, Collison Pollution Prevention, Mechanical Safety and Mechanical Pollution Prevention. Tests are taken online and during class time. For additional information, visit https://sp2.org/site/			

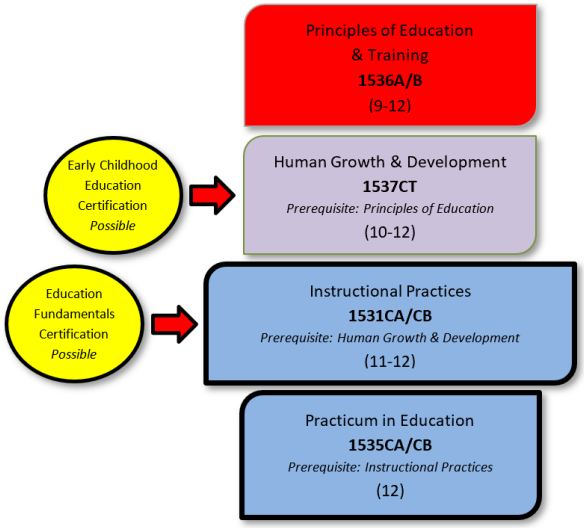
Education & Training

Program of Study

BEN BARBER
INNOVATION ACADEMY

EDUCATION & TRAINING

Endorsement: Public Services

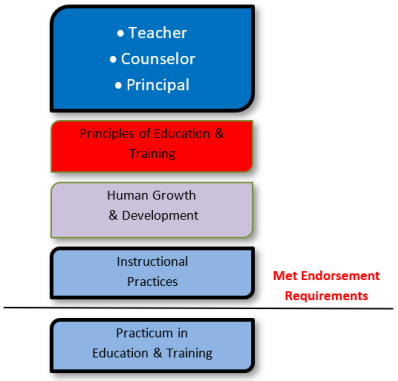


Certification Requirement
The district will pay 100% of the cost of the certification test if students can show mastery by:
Passing a certification practice test
Maintaining an 80+ overall course average at the time of the certification test
If students don't meet the requirements above, they must pay 100% of the cost of the certification test

LEGEND						To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course
Fill Color	Length	Credit	Fill Color	Length	Credit	
	18 weeks	1		HC - 18 weeks	0.5	
	36 weeks	2-3		HC - 36 weeks	1	
	College Course			Advanced Course		

Education & Training

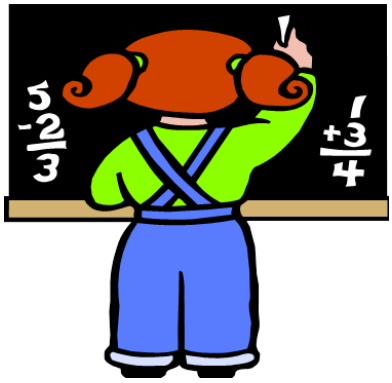
Recommended Career Pathways



To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course

Principles of Education & Training

(Home Campus Only)



Prerequisite: None
Course: 1536A/B Credits: 1 Length: 36 weeks Placement: 9-12

Course Description

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

Student Activities

The Education and Training career cluster equips students with:

- core academic skills
- employability skills
- job specific technical skills

Organizations/After School/Competition

Texas Association of Future Educators
TAFE
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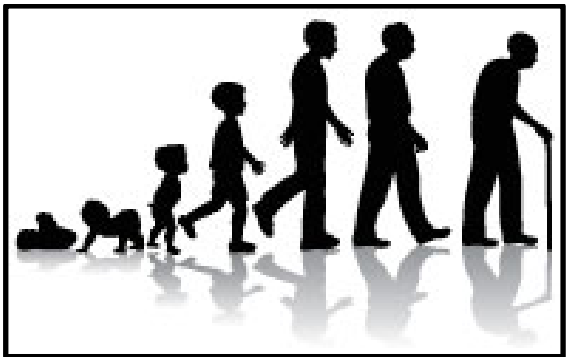
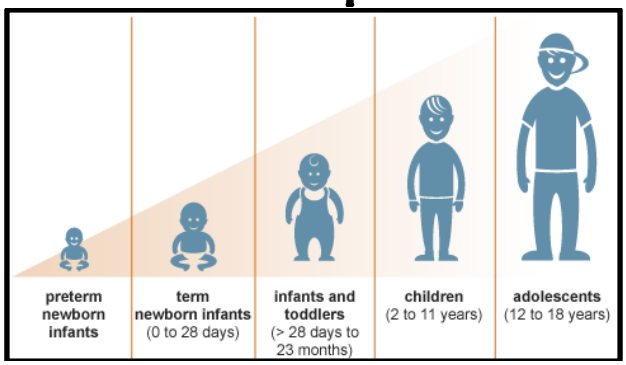
Since 1984

POS: Education & Training | Endorsement: Public Services

Human Growth & Development





Prerequisite: Principles of Education

Course: 1537CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

In this course, students will study an examination of human development across the lifespan with an emphasis on research, theoretical perspectives, and common physical, cognitive, emotional and social development milestones.

Student Activities

The Education and Training career cluster equips students with:

- core academic skills
- employability skills
- job specific technical skills
- research skills
- real-world application

Certification

Early Childhood Education
Certification Possible
Student Cost: $20

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

If seeking certification, curriculum cannot be modified.

Organizations/After School/Competition

Texas Association of Future Educators
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Instructional Practice



Prerequisite: Human Growth & Development
Course: 1531CA/1531CB Credits: 2 Length: 36 weeks Placement: 11-12

Course Description

This program provides an internship experience for students considering a career in education. Students may be placed in classrooms grades Pre-K through Grade 12. Internships will take place at schools within the MISD district and will be assigned based on the student's interest and career goals. Since students will be functioning directly in a teaching environment, it is imperative to exhibit a high academic standard and professional behavior. Students must provide their own transportation and proof of insurance. No exceptions. Students will meet at Ben Barber.

Student Activities

Students participate in activities related to their internship site such as class programs, Open House and after school activities. This includes attending field trips with the class when possible. Possible destinations could be the zoo, museums, and performances at the Center.

Organizations/After School/Competition

Texas Association of Future Educators
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"The Hope for Tomorrow"
Since 1984

Certification

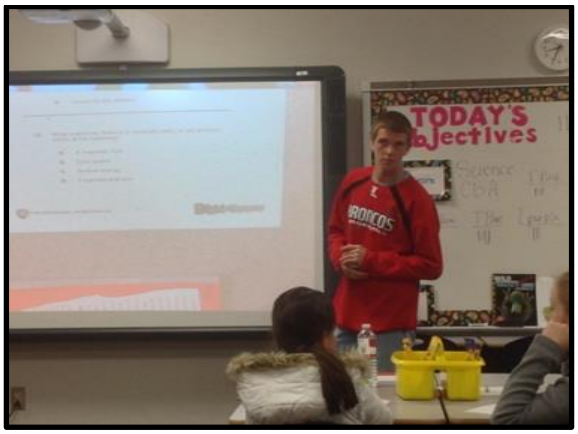
Education Fundamentals Certification Possible
Student Cost: $20

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Additional Considerations

Students must provide their own transportation

Practicum in Education & Training



Prerequisite: Instructional Practices
Course: 1535CA/1535CB Credits: 2 Length: 36 weeks Placement: 12

Course Description

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 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. Students must provide their own transportation and proof of insurance. No exceptions. Students will meet at Ben Barber.

Student Activities

Students participate in activities related to their internship site such as class programs, Open House and after school activities. This includes attending field trips with the class when possible. Possible destinations could be the zoo, museums, and performances at the Center.

Additional Considerations

Students must provide their own transportation.

Organizations/After School/Competition

Texas Association of Future Educators
TAFE
"The Hope for Tomorrow"
Since 1984

Education Certifications

Name	Course	Provider	Cost
Early Childhood Education	Human Growth & Development	Early Childhood Teacher	Student Pays: $ 35
This certification is appropriate to validate achievement of competencies related to early childhood education. It is useful in a broad range of education and employment settings, such as secondary and post-secondary education, community-based education programs, and employer-based human resource and staff development programs and advantaged to utilize a gold-standard, computer-based testing platform format that provides for valid and reliable competency measurement, and a reporting mechanism for data-driven program improvement, accountability, and individual remediation and acceleration. https://www.aafcs.org/credentialing-center/pre-pac/portfolio/ece			
Education Fundamentals	Instructional Practices	American Association of Family & Consumer Sciences	Student Pays: $ 20
This certification is useful in a broad range of education and employment settings, such as secondary and post-secondary education, community-based education programs, and employer-based human resource and staff development programs and advantaged to utilize a gold-standard, computer-based testing platform format that provides for valid and reliable competency measurement, and a reporting mechanism for data-driven program improvement, accountability, and individual remediation and acceleration. https://www.aafcs.org/credentialing-center/pre-pac/portfolio/education-fundamentals			

Human Services

Program of Study

BEN BARBER
INNOVATION ACADEMY

HUMAN SERVICES

Endorsement: Public Services

Principles of Human Services **1505A/B** (9-12)

Child Development **1520A/B** (9-12)

Interpersonal Studies **1517** (9-12)

Dollars & Sense **1220** (10-12)

Lifetime Nutrition & Wellness **1513** (9-12)

Counseling & Mental Health **1514A/B**
Prerequisite: Any Human Services intro courses equally 3 or more credits
(10-12)

LEGEND						To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course
Fill Color	Length	Credit	Fill Color	Length	Credit	
	18 weeks	1		HC - 18 weeks	0.5	
	36 weeks	2-3		HC - 36 weeks	1	
	College Course			Advanced Course		

Human Services

Recommended Career Pathways

- Psychologist
- Case Worker
- Counselor

Principles of Human Services

Interpersonal Studies

Lifetime Nutrition & Wellness

Dollars & Sense

Child Development

Counseling & Mental Health

Met Endorsement Requirements

To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course

Principles of Human Services
(Home Campus Only)

Prerequisite: None
Course: 1505A/B Credits: 1 Length: 36 weeks Placement: 9-12

Course Description

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

Student Activities

The Human Services career cluster equips students with:

- core academic skills
- employability skills
- job specific technical skills

POS: Human Services | Endorsement: Public Services

Child Development
(Home Campus Only)



Prerequisite: None
Course: 1520A/B Credits: 1 Length: 36 weeks Placement: 9-12

Course Description

This course addresses skills related to child growth and development from pregnancy through school-age. Students will identify healthy behaviors during pregnancy, understand the birthing process, and identify the physical, emotional, social, and intellectual development of children at various stages of life.

Student Activities

Students will have an opportunity to take home a mechanical baby to simulate the care of a newborn infant and create skits to act out parenting and child development scenarios.

Interpersonal Studies

(Home Campus Only)



Prerequisite: None

Course: 1517 Credits: 0.5 Length: 18 weeks Placement: 9-12

Course Description:

Interpersonal studies examines how the relationship 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.

Student Activities:

The Human Services career cluster equips students with the following knowledge and skills:

Career Development
Adult Life Planning
Establish healthy relationships
Family structures & Dynamics
Resources for Family Crisis

POS: Human Services | Endorsement: Public Services

Dollars & Sense

(Home Campus Only)

Prerequisite: None

Course: 1220 Credits: 0.5 Length: 18 weeks Placement: 10-12

Course Description

This laboratory course teaches students to make informed choices that promote sound financial decisions. Instruction addresses goal setting, household budgeting, banking including checking accounts, savings and savings accounts, credit and credit cards, insurance, investing and major purchases.

Student Activities

This course includes activities such as setting up and maintaining a household budget, comparing types of financial institutions and accounts, selecting and proper use of credit cards, maintaining a satisfactory credit history and score, choosing appropriate insurance, and planning major purchases.

POS: Human Services | Endorsement: Public Services

Lifetime Nutrition & Wellness

(Home Campus Only)

Prerequisite: None
Course: 1513 Credits: 0.5 Length: 18 weeks Placement: 9-12

Course Description

This laboratory course teaches students to make informed choices that promote nutrition and wellness throughout the life cycle. Instruction addresses nutritional needs of individuals, menu planning, special dietary needs, food costs and budgeting, food safety and sanitation procedures, food handling, and basic food preparation procedures.

Student Activities

This course includes body mass index calculations, height/weight measurements, and cooking labs that focus on healthy food preparation.

POS: Human Services | Endorsement: Public Services

Counseling & Mental Health
(Home Campus Only)

Prerequisite: Any Human Services courses equally 3 or more credits
Course: 1514A/B Credits: 1 Length: 36 weeks Placement: 10-12

Course Description

Students will interact with each other through role play and modeling to understand the roles of counselor and client. Students will study the legal and ethical issues involved in the counseling field and the importance of professionalism and unconditional positive regard when dealing with clients who live with life changing mental health diagnoses.

Student Activities

Topics covered in this course:

- Study the language and vocabulary of counseling and mental health
- Research verbal and nonverbal communication skills
- Research career options and the preparation necessary for employment in mental health
- Study the ethical behavior standards and legal responsibilities related to mental health
- Students will learn how to maintain a safe environment to prevent hazardous situations including abuse

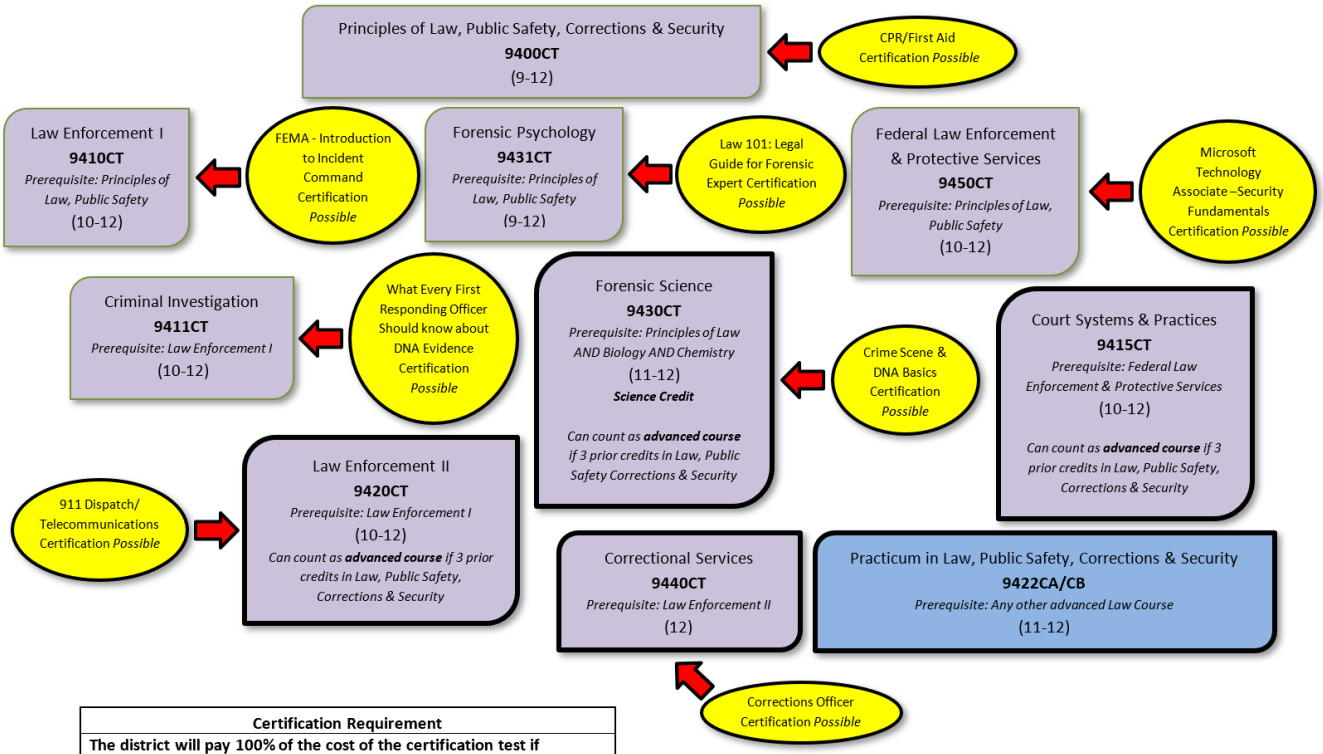
Law, Public Safety, Corrections & Security

Program of Study

BEN BARBER
INNOVATION ACADEMY

LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY

Endorsement: Public Services

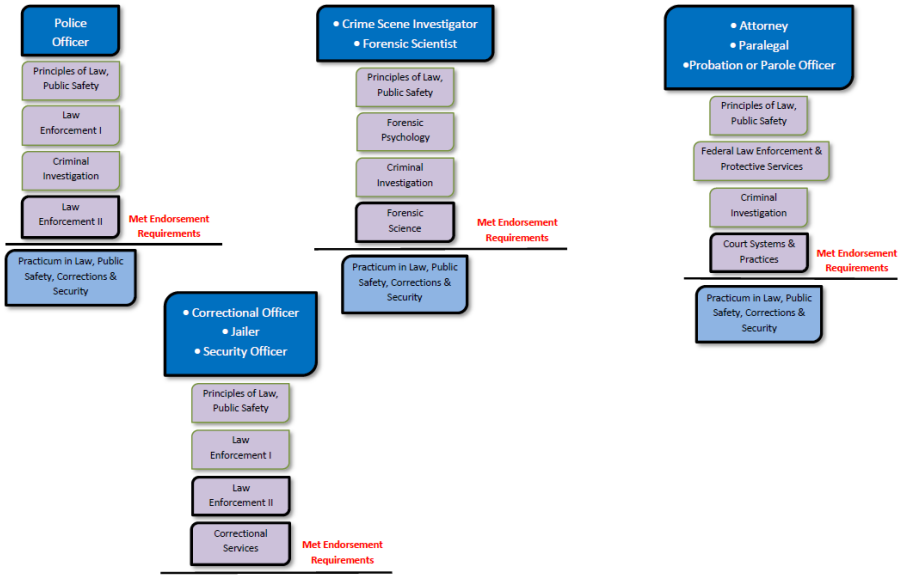


Certification Requirement
The district will pay 100% of the cost of the certification test if students can show mastery by:
Passing a certification practice test
Maintaining an 80+ overall course average at the time of the certification test
If students don't meet the requirements above, they must pay 100% of the cost of the certification test

LEGEND						
Fill Color	Length	Credit	Fill Color	Length	Credit	To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course
	18 weeks	1		HC - 18 weeks	0.5	
	36 weeks	2-3		HC - 36 weeks	1	
	College Course			Advanced Course		

Law, Public Safety, Corrections & Security

Recommended Career Pathways



To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course

Principles of Law, Public Safety, Corrections & Security


Prerequisite: None
Course: 9400CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

This 18-week course is the prerequisite for all upper level Law and Criminal Justice classes. This course is designed to give the student exposure to the careers available in the Law and Public Safety sectors. Students will leave this class with basic understanding of the US Constitution, Bill of Rights, Arrest Search and Seizure laws.

Student Activities

Students will have the opportunity to conduct a mock trial, practice Police tactical skills and hear a wide range of guest speakers.

Certifications

CPR/First Aid
Certification Possible
Student Cost: $6

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

If seeking certification, curriculum cannot be modified.

Organizations/After School/Competitions

Ben Barber Criminal Justice Club
Texas Law, Public Safety Corrections and Security Students Association Competition

Law Enforcement I

Prerequisite: Principles of Law, Public Safety, Corrections & Security
Course: 9410CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

Law Enforcement I is an overview of the history, organization, and functions of local, state, and federal law enforcement. 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.

Student Activities

Students will have the opportunity to role-play common scenarios that are related to Law Enforcement including felony traffic stops, domestic violence scenarios and arrest techniques. Students will investigate traffic accidents, crime scenes and have an opportunity to participate in community service projects with other classmates.

A uniform is required for this class. Uniform pricing is $35

Certifications

FEMA – Introduction to Incident Command
Certification Possible
Student Cost: $0

If seeking certification, curriculum cannot be modified.

Organizations/After School/Competitions

Ben Barber Criminal Justice Club
Texas Law, Public Safety Corrections and Security Students Association Competition

Forensic Psychology

Prerequisite: Principles of Law, Public Safety, Corrections & Security
Course: 9431CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Forensic Psychology uses and applies basic skills developed in psychology to criminal behavior and criminal scenarios resulting in a structured and scientific approach to investigative analysis, which enables police or law enforcement officials to predict criminal activity based upon mathematical/scientific data versus abstract intuition.

Student Activities

Students will investigate Crime Trends, FBI Uniformed Crime Report Statistics, and State Crime Statistics to determine a proper use of Law Enforcement Resources. Students will also research Mental Health and its role in Criminal Activity.

Certifications

Law 101: Legal Guide for Forensic Expert
Certification Possible
Student Cost: $0

If seeking certification, curriculum cannot be modified.

Organizations/After School/Competitions

Ben Barber Criminal Justice Club
Texas Law, Public Safety Corrections and Security Students Association Competition

Federal Law Enforcement & Protective Services

Prerequisite: Principles of Law, Public Safety, Corrections & Security
Course: 9450CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Federal Law Enforcement and Protective Services provides the knowledge and skills necessary to prepare for certification in security services for federal law enforcement and protective services. The course provides an overview of security elements and types of organizations with a focus on security measures used to protect lives, property, and proprietary information, to ensure computer security, to provide information assurance, and to prevent cybercrime.

Student Activities

Students will investigate crime trends, FBI uniformed crime report statistics, and state crime statistics to determine a proper use of law enforcement resources. Students will also research mental health and its role in criminal activity. Students work individually in teams, exploring key topics in greater depth and making presentations to the class. There will be an emphasis on developing analytical proficiency, along with research, writing, and verbal skills.

Certifications

Microsoft Technology Associate - Security Fundamentals Certification Possible
Student Cost: $69

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

If seeking certification, curriculum cannot be modified.

Organizations/After School/Competitions

Ben Barber Criminal Justice Club
Texas Law, Public Safety Corrections and Security Students Association Competition

Criminal Investigation

Prerequisite: Law Enforcement I OR Forensic Psychology OR Federal Law Enforce
Course: 9411CT Credits: 1 Length: 18weeks Placement: 10-12

Course Description

Criminal Investigation introduces students to the professions related to criminal investigations. Students will understand basic functions of criminal investigations and procedures. Students will learn how to investigate and follow up during the investigation process.

Student Activities

Students will learn terminology and procedures related to criminal investigations, crime scene processing, evidence collection, fingerprinting and courtroom presentation.

Certifications

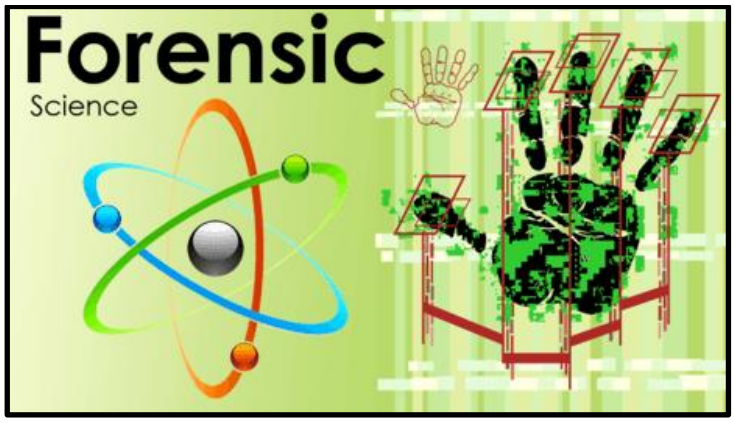
What Every First Responding Officer Should Know About DNA Evidence
Certification Possible
Student Cost: $0

If seeking certification, curriculum cannot be modified.

Organizations/After School/Competitions

Students may join the BBCTA Criminal Justice Club. Meetings are after school one day a week. Students may participate in the annual Law Enforcement Competition with the Students Association

Forensic Science



Prerequisite: Principles of Law AND Biology AND Chemistry
Course: 9430CT Credits: 1 Length: 18 weeks Placement: 11-12

Course Description

Forensic Science is a course that uses a structured and scientific approach to the investigation of crimes of assault, abuse and neglect, domestic violence, accidental death, homicide, and the psychology of criminal behavior.

Students can receive science credit for this course

Student Activities

Students participate in the following labs: fingerprinting, shoe mold, tire track molds, blood spatter lab, hair and fiber labs, DNA labs, virtual autopsy lab, decomposing animal lab for Entomology, and crime scene photography are several of the activities in which students will participate.

Certifications

Crime Scene & DNA Basics
Certification Possible
Student Cost: $0

If seeking certification, curriculum cannot be modified.

Organizations/After School/Competitions

BBCTA Criminal Justice Club

Additional Considerations

Students use sharp objects.

Court Systems & Practices

Prerequisite: Federal Law Enforcement & Protective Services
Course: 9415CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

Court Systems and Practices is an overview of the federal and state court systems. The course identifies the roles of judicial officers and the trial processes from pretrial to sentencing and examines the types and rules of evidence. Emphasis is placed on constitutional laws for criminal procedures such as search and seizure, stop and frisk, and interrogation.
For additional information on this course go to our website at
http://bbctacademy.weebly.com/public-safety-courses--ben-barber.html

Student Activities

Because the basics of criminal law are covered in the two prerequisite courses, students will take their basic understanding of the law into actual courtroom activities. Students will prepare cases for trial and present opening statements and closing arguments, interview and cross-examine witnesses, and prepare court exhibits. All of the cases will be presented in an actual courtroom. If students are interested in pursuing a career Law this is the course to take.

Organizations/After School/Competitions

Students may join the BBCTA Criminal Justice Club. Meetings are after school one day a week. Students may participate in the annual Law Enforcement Competition with the Students Association.

Law Enforcement II

Prerequisite: Law Enforcement I
Course: 9420CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

Law Enforcement II provides the knowledge and skills necessary to prepare for a career in law enforcement. This course includes the ethical and legal responsibilities, operation of police and emergency telecommunication equipment, and courtroom testimony.

Student Activities

Students participate in Law Enforcement Related Training scenarios that are designed to give students first-hand experience of a Law Enforcement Career. Students will have an opportunity to become certified as an emergency telecommunications operator. Students will conduct random campus patrols in teams.

A uniform is required for this class. Uniform pricing is $35

Certifications

911 Dispatch / Telecommunications
Certification Possible
Student Cost: $35

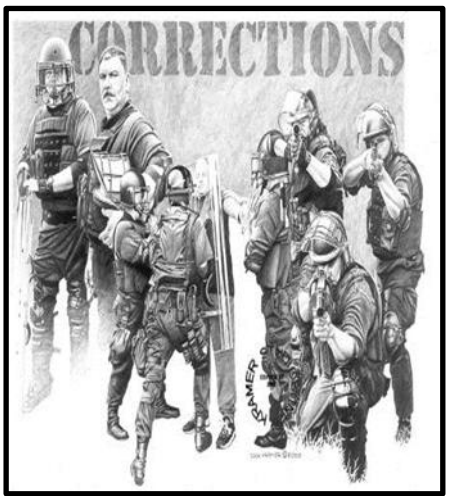
Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

If seeking certification, curriculum cannot be modified.

Organizations/After School/Competitions

Ben Barber Criminal Justice Club
Texas Law, Public Safety Corrections and Security Students Association Competition

Correctional Services



Prerequisite: Law Enforcement II

Course: 9440CT **Credits:** 1 **Length:** 18 weeks **Placement:** 12

Course Description

Correctional Services students prepare for the certification required for employment as a correctional officer. The student will analyze rehabilitation and alternatives to institutionalization.

Student Activities

The student will learn the role and responsibilities of a correctional officer; discuss relevant rules, regulations, and laws; and discuss defensive tactics, restraint techniques, and first aid procedures as used in the correctional setting.

Certifications

Correction Officer
Certification Possible
Student Cost: $25
Student must be 18 to take certification exam

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

If seeking certification, curriculum cannot be modified.

Organizations/After School/Competitions

Ben Barber Criminal Justice Club

Practicum in Law, Public Safety, Corrections & Security

Prerequisite: Any other advanced Law course
Course: 9422CA/9422CB Credits: 2 Length: 36 weeks Placement: 11-12

Course Description

The Practicum is designed to give students supervised practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations related to the Criminal Justice System. Students will be required to uphold the highest standards in relation to job ethics and professional demeanor. For additional information on this course go to our website at http://bbctacademy.weebly.com/public-safety-courses--ben-barber.html

Student Activities

Students will have an opportunity to gain first hand working experience in the LPSCS Field by pairing students with an approved work location/supervisor for the semester. Students will have to Interview for their positions. Students will work on a project with their supervisors, and present their findings at an exit interview with supervisors, parents, and faculty. Students will work the entire semester in order to obtain a letter of recommendation from their supervisors.

Additional Considerations

If a student does not have transportation, opportunities will be limited.

Organizations/After School/Competitions

Students may join the BBCTA Criminal Justice Club. Meetings are after school one day a week. Students may participate in the annual Law Enforcement Competition with the Students Association.

Law, Public Safety, Corrections & Security Certifications

Name	Course	Provider	Cost
CPR/First Aid	Principles of Law	American Heart Association	Student Pays: $6
The certification will be completed in the classroom at Ben Barber and there are no age restrictions. There is a written exam and students must successfully perform skills related to AED and CPR for adults, children & infants.			
FEMA Introduction to Incident Command System	Law Enforcement I	Federal Emergency Management Agency	Student pays: $0
Students must successfully complete a 40-question exam covering topics including the role of law enforcement officers during an emergency incident, the history of the Incident Command System (ICS), features and principles of ICS, and organizational structure of the Incident Command System. The test is given during class and there are no age restrictions. In order to earn the certification, students must pass the exam with a 75% or better.			
Law 101: Legal Guide for the Forensic Expert	Forensic Psychology	National Institute of Justice	Student pays: $0
Students must complete all 13 modules of a self-paced training course. This course is designed to give a comprehensive discussion of recommended practices for the forensic expert to follow when preparing for and testifying in court. No exam required.			
Microsoft Technology Associate - Security Fundamentals	Federal Law Enforcement & Protective Services	Microsoft	Student pays: $69
MTA certifications are a great place to start if you would like to get into the technology field. MTA certifications address a wide spectrum of fundamental technical concepts, assess and validate core technical knowledge, and enhance technical credibility. https://www.microsoft.com/en-us/learning			
What Every Investigator and Crime Scene Technician Should Know About DNA Evidence	Criminal Investigation	National Institute of Justice	Student pays: $0
This course focuses on issues that arise for the first-responding law enforcement officer and is intended to provide interactive training that covers basic information about the identification, preservation, and collection of DNA evidence at a crime scene. https://letraining.training.nij.gov/			
Crime Scene and DNA Basics	Criminal Investigation	National Institute of Justice	Student pays: $0

Students must complete all four modules of a self-paced training course. Students will learn the importance of documenting, protecting, and preserving crime scenes, what types of evidence can be found there, and methods used for its collection and preservation. No exam required.			
911 Dispatch/ Telecommunications	Law Enforcement II	Institute for Law Enforcement and Protective Services Excellence	Student pays: $55
Proper use of technology and effectively communicating under stressful situations are vital skills telecommunication personnel should possess. This course is designed to prepare participants to perform successfully as a telecommunications call taker or dispatcher.			
Corrections Officer	Correctional Services		Student pays: $25
Texas is home to the nation's largest prison system. The Texas Department of Criminal Justice (TDCJ) employs approximately 25,000 correctional officers who oversee 152,000 offenders housed in 111 state prisons. The TDCJ is seeking upstanding individuals to join the ranks of proud Texas correctional officers https://www.correctionalofficeredu.org/texas/			

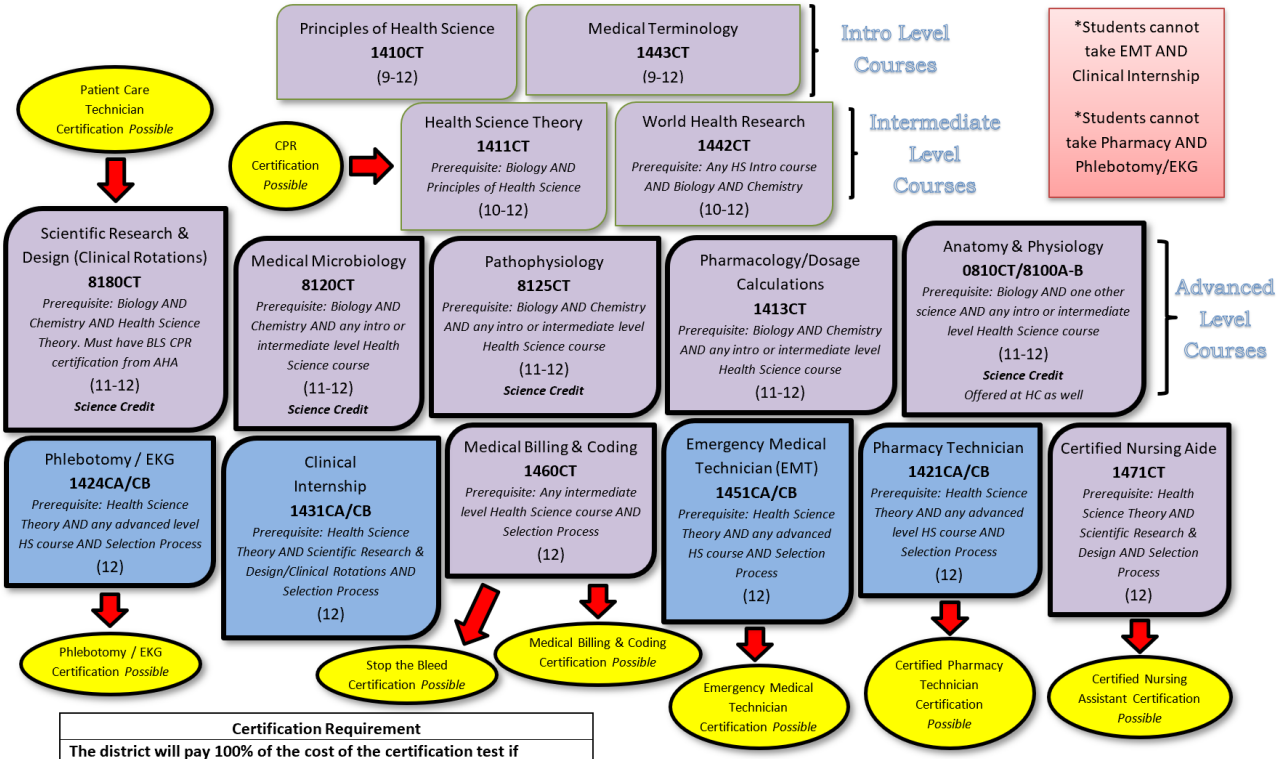
Health Science

Program of Study

BEN BARBER
INNOVATION ACADEMY

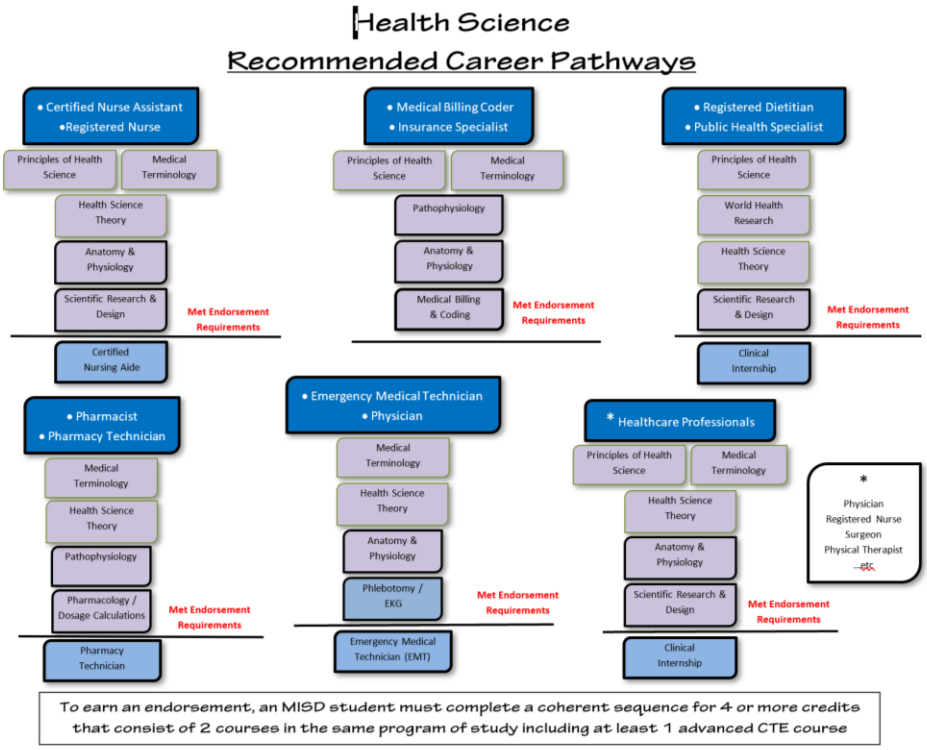
HEALTH SCIENCE

Endorsement: Public Services



Certification Requirement
The district will pay 100% of the cost of the certification test if students can show mastery by:
Passing a certification practice test
Maintaining an 80+ overall course average at the time of the certification test
If students don't meet the requirements above, they must pay 100% of the cost of the certification test

LEGEND						
Fill Color	Length	Credit	Fill Color	Length	Credit	To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course
	18 weeks	1		HC - 18 weeks	0.5	
	36 weeks	2-3		HC - 36 weeks	1	
	College Course			Advanced Course		



Principles of Health Science

Prerequisite: None

Course: 1410CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Principles of Health Science provides an introduction to careers in health care and explores the education and skills needed to attain various health care degrees. Students will gain insight into the functionality of the teamwork environment now utilized in the field of health care. This course strives to enhance the student's ability to successfully secure employment or pursue advanced education in health care, in order to one day transition to clinical or work-based experiences in health care.

Student Activities

Students will have the opportunity to explore: how to build effective communication skills; examine medical ethics and legal responsibilities; discuss standards of patient care and safety; and explore the medical language used in a variety of health care settings.

Advancement

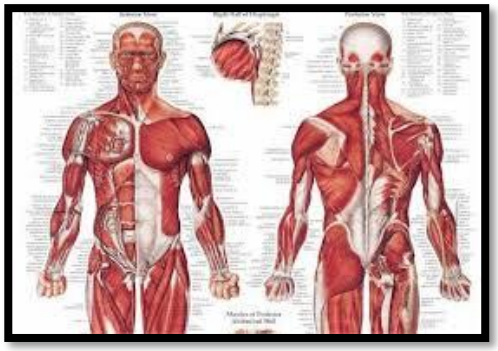
Principles of Health Science is designed to serve as an intro-level course required for eligibility into intermediate-level health science courses. This course is a prerequisite for many upper level Health Science Technology (HST) courses. Advancement in HSTE will be determined based on the student's class participation, grade, conduct, attendance, attitude, safety, and teacher recommendation.

Organizations/After School/Competitions

Mansfield Medical Club

SkillsUSA

Medical Terminology



Prerequisite: None
Course: 1443CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Learn the language of medicine while applying it to real-life emergency situations. Medical Terminology takes students from prefixes, suffixes and root words to dissecting the most complicated of medical terms. Be ahead of your peers and sound like a professional as you progress through the Health Science Program of Study.

Student Activities

Bring language alive as you discuss, research, dissect terms, and create products to help you and your classmates learn medical terminology.

Organizations/After School/Competitions

Mansfield Medical Club

SkillsUSA

Start Learning Now!

Health Science Theory

Prerequisite: Principles of Health Science AND Biology
Course: 1411CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

This course will give students the opportunity to further investigate areas of the health care field (diagnostic, therapeutic, health informatics, support services, and biotechnology research and development) and consider the importance of professional integrity as it relates to medical ethics and communication. Students will learn skills to prepare them for upper-level courses and a career in the medical field.

This course is a prerequisite for ALL health science practicum courses.

Student Activities

Students will have the opportunity to learn patient assessment skills such as vital signs, and how to appropriately respond to emergency situations. Students will be trained in CPR and basic first aid. Multiple Project Based Learning opportunities will be available throughout this course.

Advancement

This course is a prerequisite for all upper level Health Science Technology courses. Advancement in HSTE will be determined by the students' class participation, grade, conduct, attendance, attitude, safety, and teacher recommendation.

Organizations/After School/Competitions

Mansfield Medical Club

SkillsUSA

Certifications

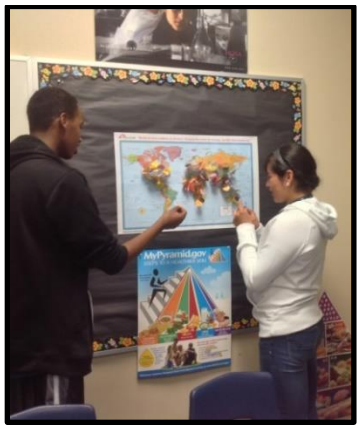
CPR Certification Possible
Student Cost: $6
Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Additional Considerations

Cannot modify curriculum due to certification.

POS: Health Science | Endorsement: Public Services

World Health Research


Prerequisite: Any intro level Health Science course AND Biology AND Chemistry
Course: 1442CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

This is a research-based course that examines the major health issues facing our world and the emerging technologies that may provide solutions to current medical problems. This course is designed to improve the student's understanding of the cultural, infrastructural, political, educational, and technological constraints that affect how health care is administered in the United States and in other parts of the world. World Health Research aims to inspire ideas for appropriate technological solutions to global health care issues.

Student Activities

Students will have the opportunity to explore the developing world as they research the culture, economy, politics, and specific health concerns that people in developing countries face. Units covered in World Health Research include: history of disease and technology; worldwide health care systems; global health and economic data; globalization of health care; public health and epidemiology; chronic and age-related diseases; infectious diseases; mental health and illnesses; maternal and perinatal conditions; immunity and disease; and cutting-edge medical technology. A significant portion of this course revolves around a research project that gives students the chance to explore the major health issues that affect least-developed countries (LDC's).

Doctors Without Borders

Organizations/After School/Competitions

Mansfield Medical Club

SkillsUSA

Scientific Research & Design



Prerequisite: Biology AND Chemistry AND Health Science Theory
Course: 8180CT Credits: 1 Length: 18 weeks Placement: 11-12

Course Description

This course expands on knowledge and skills attained in Medical Terminology & Health Science Theory. Students will develop an understanding of the human body, applying classroom concepts in a clinical setting while studying and achieving competency in skills needed to obtain a provisional certification as a Certified Patient Care Technician.

This course is for students interested in Clinical Internship and CNA.

This course can be used as a science credit.

Student Activities

Students will have an opportunity to achieve competency in five domains needed to achieve the PCT certification: patient care, compliance, safety & professional responsibility, infection control, phlebotomy and ECG. **All students will complete a research project.**

Course Fee: a $25 activity fee to help cover the cost of Liability Insurance, TB test, urine drug screening, back ground checks and patch.

Organizations/After School/Competitions

Mansfield Medical Club
SkillsUSA

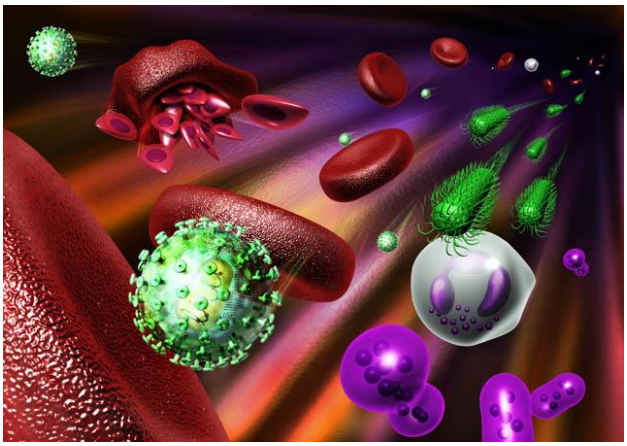
Certifications

Patient Care Certification Possible
Student Cost: $224
Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Additional Considerations

Cannot modify curriculum due to certification.

Medical Microbiology



Prerequisite: Biology AND Chemistry AND any intermediate level HS course
Course: 8120CT Credits: 1 Length: 18 weeks Placement: 11-12

Course Description

Students will study the relationships of microorganisms to wellness and disease. Students will develop knowledge and skills related to disease prevention by learning chain of infection, asepsis, and standard precautions. Pathogenic and nonpathogenic organisms will be identified to assist the understanding of specific diseases, causative agents, and treatment options.

Note: Course can be used as an additional science credit for graduation.

Student Activities

This course will include the following laboratory activities: microscope use, slide fixation, medium fixation, staining (both simple and gram), and microorganism identification. This course will also contain, but is not limited to, projects over community awareness, pathogens, and diseases.

Additional Considerations

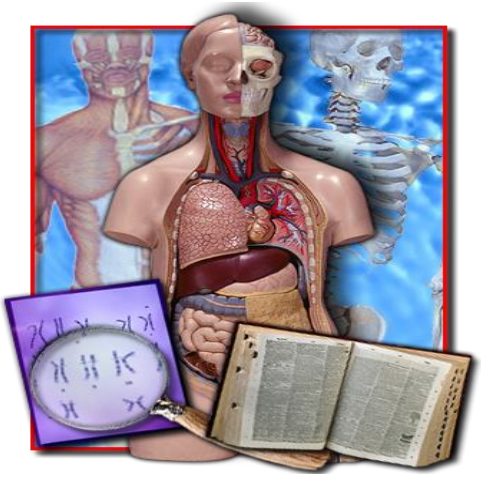
Students must have successfully completed Biology and Chemistry without modification. Students need fine motor skills and mobility to work with sharp instruments.

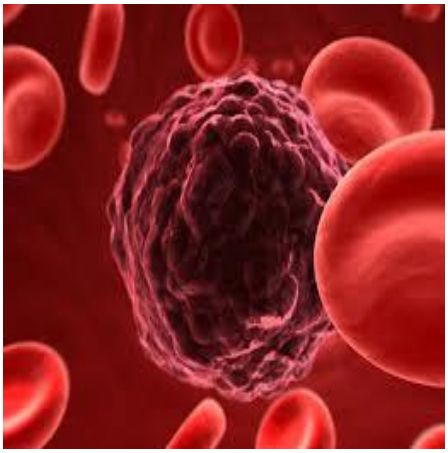
Organizations/After School/Competitions

Mansfield Medical Club

SkillsUSA

Pathophysiology





Prerequisite: Biology AND Chemistry & any intermediate level HS course

Course: 8125CT Credits: 1 Length: 18 weeks Placement: 11-12

Course Description

Students will study disease processes, and how the human systems are affected. Emphasis is placed on prevention and treatment of diseases. Students will differentiate normal and abnormal physiology.

Note: Course can be used as an additional science credit for graduation.

Student Activities

This course requires students to develop microscope mastery, lab safety protocol, and demonstrate proper techniques to perform autopsies on animal specimens. Students will research mechanisms of disease, to include etiology, signs and symptoms, diagnosis, treatment, and prognosis of system specific disorders.

Organizations/After School/Competitions

Mansfield Medical Club

SkillsUSA

Pharmacology/ Dosage Calculations



Prerequisite: Biology AND Chemistry AND any intermediate level HS course
Course: 1413CT Credits: 1 Length: 18 weeks Placement: 11-12

Course Description

The objective of the class will be to introduce the general principles and practical application of pharmacology to future health professionals. This course is designed to strengthen the mathematical abilities of students so that they can be successful in the medical industry. This class should be used as an alternative for students who do not wish to obtain a pharmacy technician certification.

Student Activities

The course content will provide students with an overview of drug classifications, drug actions, routes of administration, therapeutic uses, and adverse effects. Students will demonstrate mathematical knowledge and skills required to calculate medical dosages. Students will be evaluated through examinations and hands-on activities.

Advancement

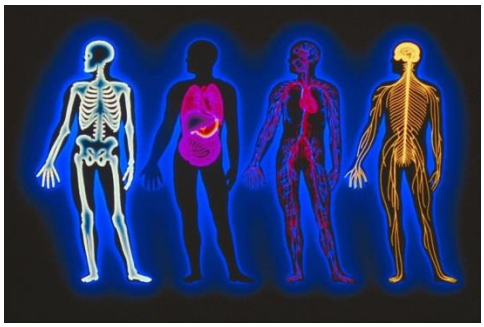
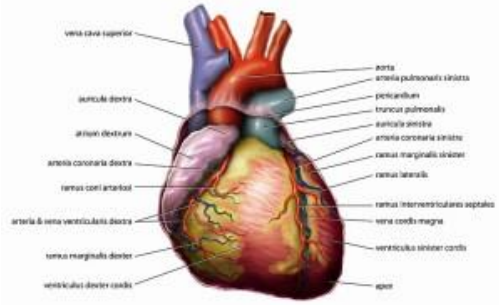
This course is a prerequisite for all upper level Health Science Technology courses. Advancement in HSTE will be determined by the students' class participation, grade, conduct, attendance, attitude, safety, and teacher recommendation.

Organizations/After School/Competitions

Mansfield Medical Club

SkillsUSA

Anatomy & Physiology


Prerequisite: Biology AND 1 other science AND any intermediate level HS course
Course: 0810CT/8100 HC Credits: 1 Length: 18/36 we Placement: 11-12

Course Description

Students will study the structure and function of the human body and the interaction of body systems for maintaining homeostasis.

Note: Course can be used as an additional science credit for graduation.

Student Activities

Students will do a comparative study of mammals with an in depth mammalian dissection. Human development, maintenance of homeostasis, transport systems and energy processes will also be topics of study. As part of the laboratory investigative process, students will be active in the dissection of prepared specimens.

Organizations/After School/Competitions

Mansfield Medical Club

SkillsUSA

Phlebotomy/EKG

Prerequisite: HS Theory AND any adv level HS Course AND selection process

Course: 1424CT Credits: 2 Length: 36 weeks Placement: 12

Course Description

This is a combines course which includes instruction in both electrocardiogram and Phlebotomy. Students will learn the needed knowledge, skills, vocabulary, mindset and professionalism to be successful in the healthcare field.

Students cannot take Phlebotomy & EKG AND Pharmacy Technician

Student Activities

EKG – Students will learn the "how and why" of applying, obtaining and interpreting an ECG on both simulated and real-world patients.

Phlebotomy – Students will demonstrate tactile skill and practical knowledge which will allow them to effectively locate veins and obtain blood samples from both manikins and human subjects. Students will obtain the required minimum 25 successful venipunctures and 5 sticks per NCCT requirements.

Certifications

Phlebotomy Certification Possible
Student Cost: $117
EKG Certification Possible
Student Cost: $115

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Additional Considerations

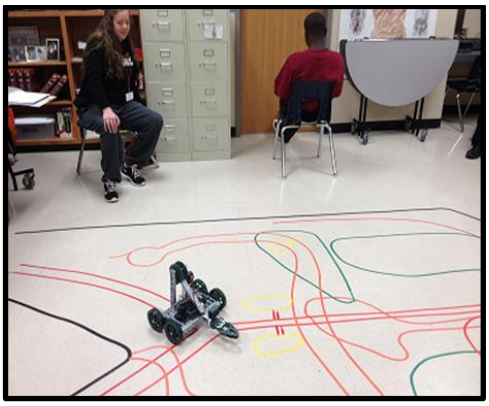
Cannot modify curriculum due to certification.

Organizations/After School/Competitions

Mansfield Medical Club

SkillsUSA

Clinical Internship



Prerequisite: Health Science Theory AND Scientific Research & Design/Clinical Rotations AND Selection Process

Course: 1431CA/1431CB Credits: 2 Length: 36 weeks Placement: 12

Course Description

The Clinical Internship class is designed to give students practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. Students are responsible for independent study supervised by instructor and clinical supervisors. Students must provide their own transportation to internship sites. Prerequisite courses are Medical Terminology/Principles of HealthCare and Skills/A&P and advancement through the selection process.

Students cannot take Clinical Internship AND EMT

Student Activities

Students spend a portion of class time at off campus internships in health care settings.
In class activities are largely centered around project based lessons on many interesting and relevant health care topics. Students develop patient care skills such as phlebotomy, IV therapy, foley catheter insertion and childbirth. Students will also have the opportunity to develop their speaking and leadership skills in many varied situations.

There is a $25 course fee to help cover the cost of Liability Insurance, TB test, urine drug screening, back ground checks and patch.

Organizations/After School/Competitions

Mansfield Medical Club

SkillsUSA

Additional Considerations

Students must provide their own transportation and complete independent internship. Students need fine motor skills and mobility.

Medical Billing & Coding

Prerequisite: Any intermediate Health Science course AND Selection Process
Course: 1460CT Credits: 1 Length: 18 weeks Placement: 12

Course Description

The medical billing and coding program offers a unique opportunity for students to learn the business side of medicine. A detailed curriculum takes the students through every step of this of growing field and prepares each student for a future in the medical industry.

Student Activities

This course requires students to develop patient bill routines, entering patient demographics, generating financial reports, posting transactions and entering payments, medical administrative duties, and medical records management. Recommended courses include Pathophysiology and Medical Terminology/CPR/First Aid.

Certifications

Upon successful completion of the Medical and Billing Program, students will be qualified to sit the national certification exam through the **National Certified Insurance Coding Specialist.** (NCICS)

Medical Billing & Coding Certification Possible
Student Cost: $90
Stop the Bleed Certification Possible
Student Cost: $0

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Organizations/After School/Competitions

Mansfield Medical Club

SkillsUSA

Additional Considerations

Cannot modify curriculum due to certification.

POS: Health Science | Endorsement: Public Services

Emergency Medical Technician (EMT)

Prerequisite: Health Science Theory AND Selection Process
Course: 1451CA/1451CB Credits: 3 Length: 36 weeks Placement: 12

Course Description

This 3.0 credit senior level course is designed to prepare the student to perform at minimum entry-level emergency care in the pre-hospital environment. Emphasis of this course includes recognizing the nature and seriousness of the patient's condition, administering appropriate emergency medical care, moving and positioning the patient to minimize discomfort and prevent further injury.

Students cannot take EMT and Clinical Internship

Student Activities

Students will master skills such as patient assessment, vital sign monitoring, splinting fractures, immobilizing the neck and spine, moving and transporting patients, oxygen administration, various drug administrations, and Basic Life Support. Once the student has passed the National Skills test, the student will rotate through hospital emergency rooms and fire department ambulance services.

There is a $100 course fee to help cover the cost of Liability Insurance and TB test and a security background check and drug screening through MedStar. A uniform is required for this class. Students are required to purchase pants, shoes, undershirt, watch and belt.

Certifications

Emergency Medical Technician Certification Possible
Student Cost: $85

Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Student must be 18, a high school graduate, meet course requirements and pass skills testing to be eligible to take the certification exam

Competitions

Mansfield Medical Club

SkillsUSA

Additional Considerations

Students need fine motor skills and mobility. If seeking certification, curriculum cannot be modified

Pharmacy Technician

Prerequisite: Health Science Theory AND Selection Process
Course: 1421CA/1421CB **Credits:** 2 **Length:** 36 weeks **Placement:** 12

Course Description

The curriculum will place emphasis on the pharmaceutical knowledge and laboratory skills required of health care workers while offering students the opportunity to add an industry certification to their professional portfolio. Those who successfully complete this course will be expected to take the National Pharmacy Technician Certification exam upon graduation.

Students cannot take Pharmacy Technician AND Phlebotomy & EKG

Student Activities

Students will be introduced to industry standards in the pharmacy classroom lab designed to utilize the skills required of a pharmacy technician.

Students who enroll in this course will be required to participate in 36 hours of clinical externship portion of the class and must meet the requirements of the Texas State Board of Pharmacy to be approved as a Pharmacy Technician Trainee. Students will be responsible for their own transportation to the approved clinical externship sites during after school hours.

There is a $25 course fee to help cover the cost of Liability Insurance, TB test, urine drug screening, back ground checks and patch. Students must obtain a Pharmacy Technician Trainee certificate (approximate cost $97).

Certifications

Emergency Medical Technician Certification Possible
Student Cost: $130
Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test
Student must be a high school graduate to take certification test

Additional Considerations

Cannot modify curriculum due to certification.

Organizations/After School/Competitions

Mansfield Medical Club

SkillsUSA

Certified Nursing Aide

Prerequisite: HS Theory AND Scientific Research AND Selection Process

Course: 1471CT Credits: 1 Length: 18 weeks Placement: 12

Course Description

The course prepares students to provide direct care to residents under the supervision of a registered nurse or other member of the medical staff. Classroom and clinical instruction will prepare students to handle a wide range of tasks related to resident care.

Student Activities

Students will be expected to assist patients with activities of daily living, bedside care, obtaining vital signs and other basic nursing skills.

There is a $25 course fee to help cover the cost of Liability Insurance, TB test, urine drug screening, back ground checks and patch.

Certifications

Certified Nursing Assistant Certification Possible
Student Cost: $95
Certification paid for by CTE if student has an 80+ GPA in course and passes a practice test

Additional Considerations

Students need fine motor skills and mobility. Cannot modify curriculum due to certification.

Organizations/After School/Competitions

Mansfield Medical Club

SkillsUSA

Health Science Certifications

Name	Course	Provider	Cost
CPR	Health Science Theory	American Heart Association	Student Pays: $6
The certification will be completed in the classroom at Ben Barber and there are no age restrictions. There is a written exam and students must successfully perform skills related to AED and CPR for adults, children & infants.			
Certified Nursing Aide	Certified Nursing Aide	Texas Department of Aging & Disability Pearson-Vue	Student Pays: $95
Students must complete 100 hours of instruction before taking the exam. 60 hours are classroom activities and 40 hours are clinical internships in our community partner's facilities. The test is taken online at Ben Barber. It consists of 70 questions and there is a 2 hour time limit. Students must also successfully demonstrate their ability to complete 5 skills test. Students must be 16 years or older to take the CNA exam.			
National Certified Insurance Coding Specialist	Medical Billing & Coding	National Center for Competency Testing	Student Pays: $90
Students must complete all Medical Billing & Coding coursework before they sit for the exam. The certification exam is taken at Ben Barber and consists of 130 questions that must be completed in 2 ½ hours. The topics tested on the exam include medical insurance, medical billing, collections, claim processes, ICD-10, HCPCS, CPT and law & ethics.			
Emergency Medical Technician - B	Emergency Medical Technician	National Registry of Emergency Medical Technicians	Student Pays: $85
Students must be 18 years or older to take this certification exam. Students are also required to complete 2 - 16 hour rotations with an approved Fire Department's EMS unit and 3 -12 hour rotations at an approved hospital's emergency room. The certification consists of a written, multiple choice exam and psychomotor skills assessment over all components of EMS.			
Certified Pharmacy Technician	Pharmacy Technician	Pharmacy Technician Certification Board	Student Pays: $129
Students must be 17 years or older and a high school graduate to take this certification exam. Test must be taken at a Pearson-Vue Testing Facility and the closest site is in Hurst, Texas. There is a course requirement that all students complete a 20 hour externship at an approved pharmacy before taking the certification exam. The test consists of 90 questions and must be completed in 1 hour, 50 minutes.			
EKG	Phlebotomy/EKG	National Centers for Competency Testing	Student Pays: $115
https://www.ncctinc.com/Documents/ECG%20Technician%20Detailed%20Test%20Plan.pdf			
Phlebotomy	Phlebotomy/EKG	National Centers for Competency Testing	Student Pays: $117
https://www.ncctinc.com/Documents/PT%20Detailed%20Test%20Plan.pdf			
Patient Care Technician	Scientific Research & Design	National Centers for Competency Testing	Student Pays: $224

https://www.ncctinc.com/Documents/Patient%20Care%20Technician%20Detailed%20Test%20Plan.pdf			
Stop the Bleed	Medical Billing & Coding	American College of Surgeons	Student Pays: $ 0
https://www.bleedingcontrol.org/			

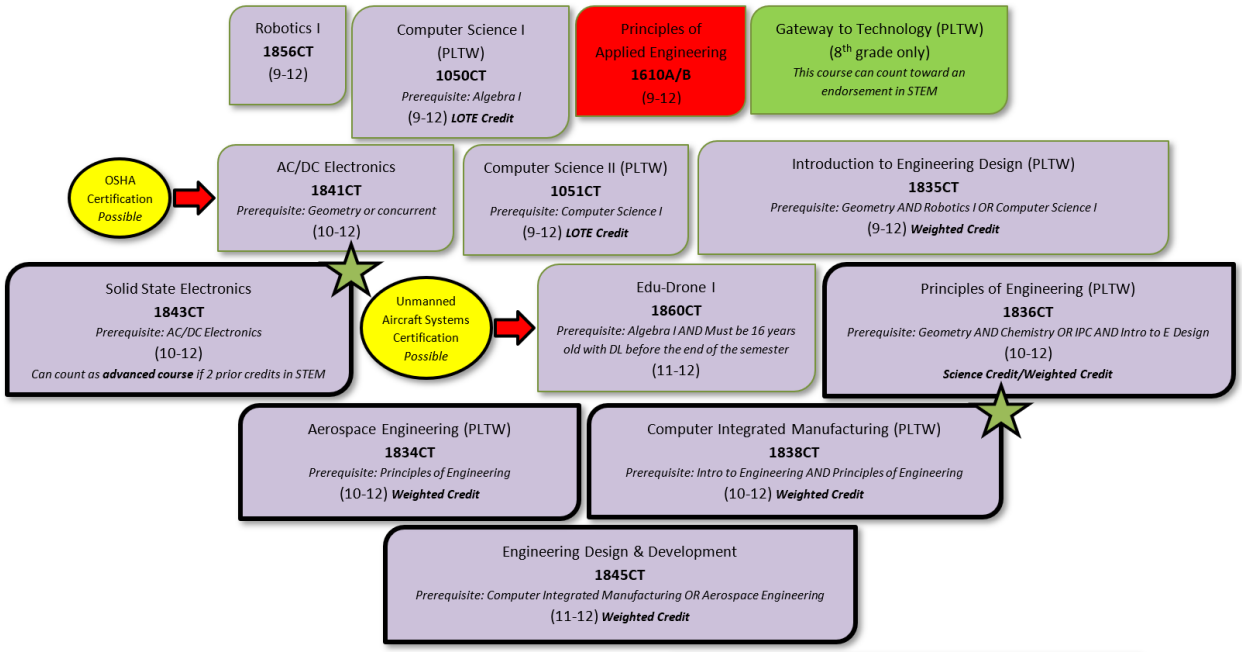
Science, Technology, Engineering & Mathematics

Program of Study

BEN BARBER
INNOVATION ACADEMY

SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

Endorsement: Science, Technology, Engineering & Math



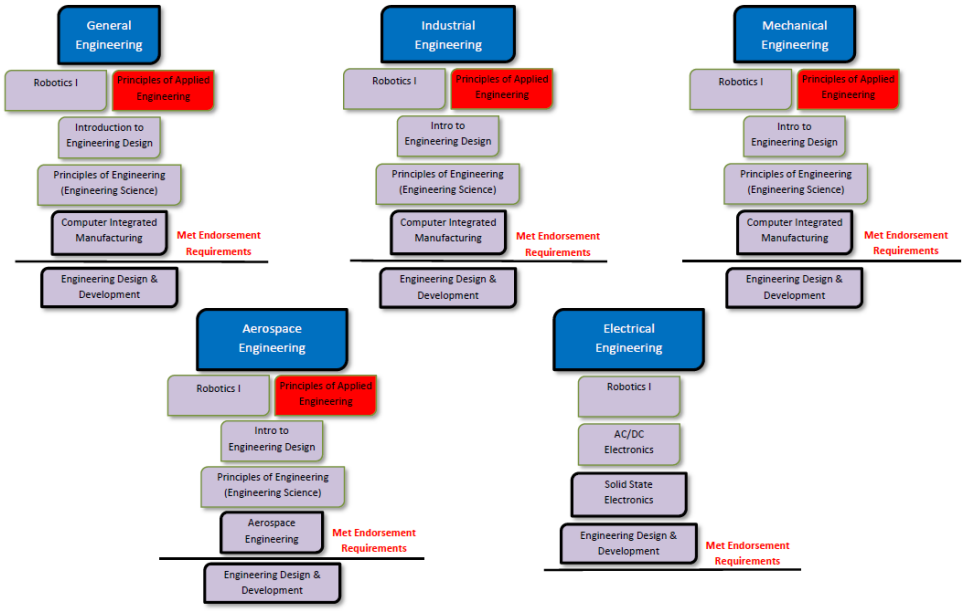
Certification Requirement
The district will pay 100% of the cost of the certification test if students can show mastery by:
Passing a certification practice test
Maintaining an 80+ overall course average at the time of the certification test
If students don't meet the requirements above, they must pay 100% of the cost of the certification test

★ Certificate of Excellence can be earned for this course.

LEGEND						
Fill Color	Length	Credit	Fill Color	Length	Credit	To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course
	18 weeks	1		HC - 18 weeks	0.5	
	36 weeks	2-3		HC - 36 weeks	1	
	College Course			Advanced Course		

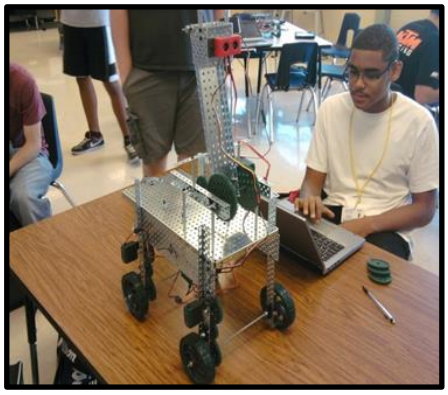
Science, Technology, Engineering & Math

Recommended Career Pathways



To earn an endorsement, an MISD student must complete a coherent sequence for 4 or more credits that consist of 2 courses in the same program of study including at least 1 advanced CTE course

Robotics I



Prerequisite: None
Course: 1856CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Students will learn how to design, build, and program robots! They will participate in several projects and builds every week. Students will also the study the history and what impact robots have had on our society and its future. Visit Achieve Texas for more information on career opportunities at: http://www.achievetexas.org/Sciences.htm

Student Activities

We design robots!

We program robots!

We build robots!

Organizations/After School/Competitions

MISD BBCTA Competitions Robotics Team

FIRST FTC Robotics

Additional Considerations

Algebra I recommended. Students need fine motor skills and mobility.

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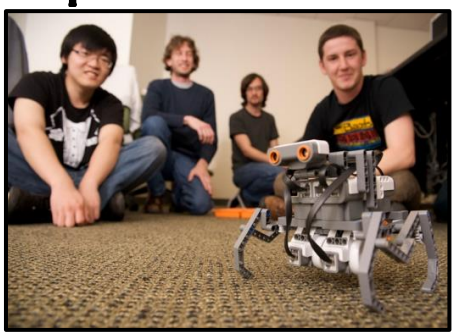
Computer Science I


Prerequisite: Algebra I
Course: 1050CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

Computer Science 1 will introduce students to the field of computer science and students will design solutions to solve real world problem. Programming environments or languages used in this course are App inventor, Python, and Vex Coding Studio.

Students can earn LOTE credit for this course.

Student Activities

Computer Science 1 course brings awareness and real world application of computer science across different technological domains. Students will explore careers in computer science, the impact of technology on our society, develop mobile applications, program robots to solve varying challenges and learn how to program using Python. Students will also learn design skills, teamwork, presentation preparation and delivery, real-world time management and many basic computer and media technology skills.

Organizations/After School/Competitions

Business Professionals of America

FTC Tech Challenge

Additional Considerations

Algebra I recommended. Students need fine motor skills and mobility. PLTW curriculum cannot be modified.

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Principles of Applied Engineering

(Home Campus Only)



Prerequisite: None

Course: 1610A/B Credits: 1 Length: 36 weeks Placement: 9-12

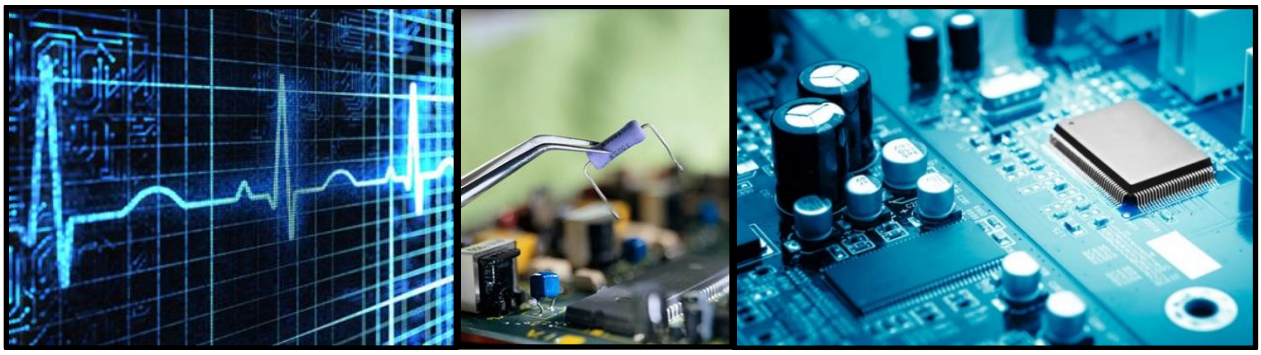
Course Description

Principles of Applied Engineering provides an overview of the various fields of science, technology, engineering, and mathematics and their interrelationships. Students will develop engineering communication skills, which include computer graphics, modeling, and presentations, by using a variety of computer hardware and software applications to complete assignments and projects. Upon completing this course, students will understand the various fields of engineering and will be able to make informed career decisions. Further, students will have worked on a design team to develop a product or system. Students will use multiple software applications to prepare and present course assignments. *https://www.txcte.org/resource/science-technology-engineering-and-mathematics-college-and-career-planning-guide*

Student Activities

- Research Designs – 3D Cube Puzzle
- Drawings/Digital Rendering
- Modeling, Testing & Final Outcomes
- Mechanical – Trebuchet
- Materials – Wooden Roller Coaster
- Electrical – Circuits
- Computer – Robotic Arm
- Aerospace – Glider, Rocket, Model Plane
- Chemical Engineering
- Bioengineering – Prosthetics Device
- Environmental – Green Energy
- Product Analysis & Development

AC/DC Electronics



Prerequisite: Geometry or concurrent
Course: 1841CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

Welcome to the world of electronics! The course is designed to provide all students the opportunity to learn about the basics electricity and electronics, available careers and job opportunities. This course is designed to provide broad introductory skills and knowledge of career opportunities and training requirement in electrical and electronics-related fields. This course teaches safety, technical math, job skills and introduces DC and AC electronic principles as well as digital concepts. Circuit construction, soldering, use of basic test equipment, residential wiring, tools and materials of the electrical and electronics industry, troubleshooting and project building are explored.

Student Activities

- Students use the concepts taught in class to research, design, build, troubleshoot and explain projects.
- Students participate in community service projects such as providing a video game room at a Christmas party for underprivileged children
- Students have the opportunity to compete in SkillsUSA

Organizations/After School/Competitions

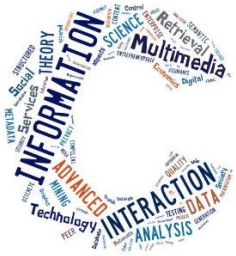
SkillsUSA Champions at Work

SkillsUSA is a partnership of students, teachers and industry working together to ensure America has a skilled workforce.

Additional Considerations

Students must have successfully completed Geometry without modification. Students need fine motor skills and mobility.

Computer Science II



Prerequisite: Computer Science I

Course: 1051CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

In Computer Science 2 students will utilize the curriculum to learn more advanced topics in computer science. Students used the concepts they learn to create products and attempt to solve real-world problems using Python. Topics include algorithms, procedures and functions, iteration, recursion, arrays, object-oriented programming and graphical user interface. The concepts and skills student learn in this class will assist them in some STEM fields. Programming language used in this course is Python.

Students can earn LOTE credit for this course.

Student Activities

Computer Science 2 course offers real world application of computer science across different technological and engineering domains. Students will design, write and debug computer programs. Possible applications of concepts include simulations, robotics programming, app design, and games.

Organizations/After School/Competitions

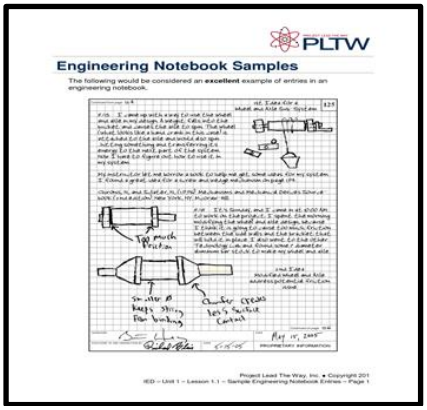
Business Professionals of America

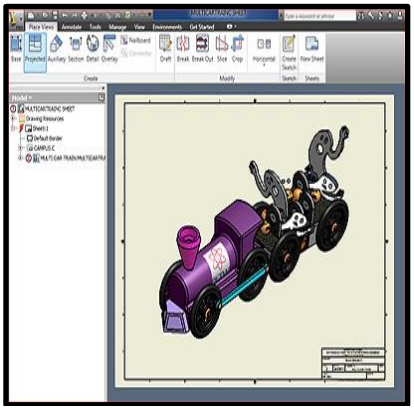
FTC Tech Challenge

Additional Considerations

Algebra I recommended. Students need fine motor skills and mobility. PLTW curriculum cannot be modified.

Introduction to Engineering Design





Prerequisite: Geometry AND Robotics OR Computer Science I

Course: 1835CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

The major focus of the course is learning how to take an idea through a design process that will eventually be a manufactured or produced. Students will learn about various aspects of engineering and engineering design, such as how engineers communicate through drawing. Students will apply what they learn through various activities, projects, and problems. Students have the opportunity to receive college-level recognition such as college credit, scholarships, and admissions preference.

Students can earn weighted credit for this course.

Student Activities

* CAD Solid Modeling
* Reverse Engineering
* Consumer Product Design Innovation
* Marketing
* Graphic Design
* Engineering Ethics
* Modeling
* Sketching
* Measuring, Statics and Applied Geometry
* Presentation Design and Deliver
* Engineering Drawing Standards

Additional Considerations

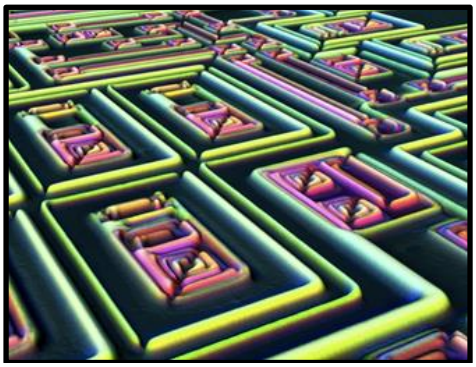
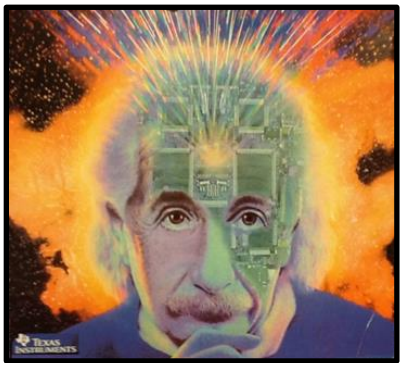
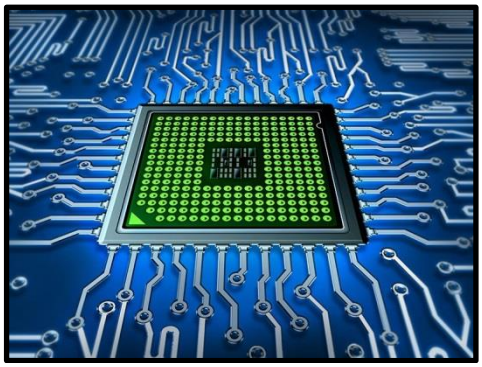
Students must have successfully completed Algebra I without modification. Cannot modify curriculum.

Organizations/After School/Competitions

Robotics Club

Shine Runners Solar Car Racing Team

Solid State Electronics

Prerequisite: AC/DC Electronics

Course: 1843CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

This class builds on the skills learned in AC/DC Electronics. Students will be required to develop a Project Development Plan and do research on the various projects they will build as a part of the course. Topics of study include circuit application, robotics, microprocessors, optic electronics, voice sensors, high voltage, power supplies, amplifiers, oscillators, active devices, solid state applications, video and sound circuits, integrated circuits, television and radio theory and application, digital electronics, fundamentals of logic and other areas of electronics found in the industry.

Student Activities

- Students use the concepts taught in class to research, design, build, troubleshoot and explain projects.
- Students participate in community service projects such as providing a video game room at a Christmas party for underprivileged children
- Students have the opportunity to compete in SkillsUSA

Organizations/After School/Competitions

SkillsUSA Champions at Work

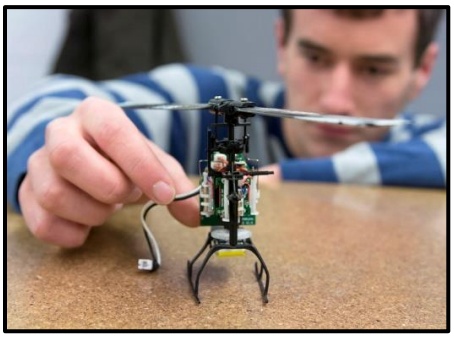
Additional Considerations

Students must have successfully completed Geometry without modification. Students need fine motor skills and mobility.

Certificate of Excellence

Students can earn a Certificate of Excellence by achieving a specific list of real world skills related to this course. For the list of skills, please visit goo.gl/9VM3a9

Edu-Drone I



Prerequisite: Alg I AND must be 16 years old with DL before the end of semester
Course: 1860CT Credits: 1 Length: 18 weeks Placement: 11-12

Course Description

Learn

Students learn about large-and small-type UAS systems, the industries they are revolutionizing, sensor payloads, how to analyze collected data, and much more.

Practice

Students practice with simulated UAS flights at the end of each class. Students work on flight skills from the very beginning of the course.

Fly

Students participate in live flight training throughout the course, preparing them for FAA certification and enabling them to work in a high-demand STEM field

Organizations/After School/Competitions

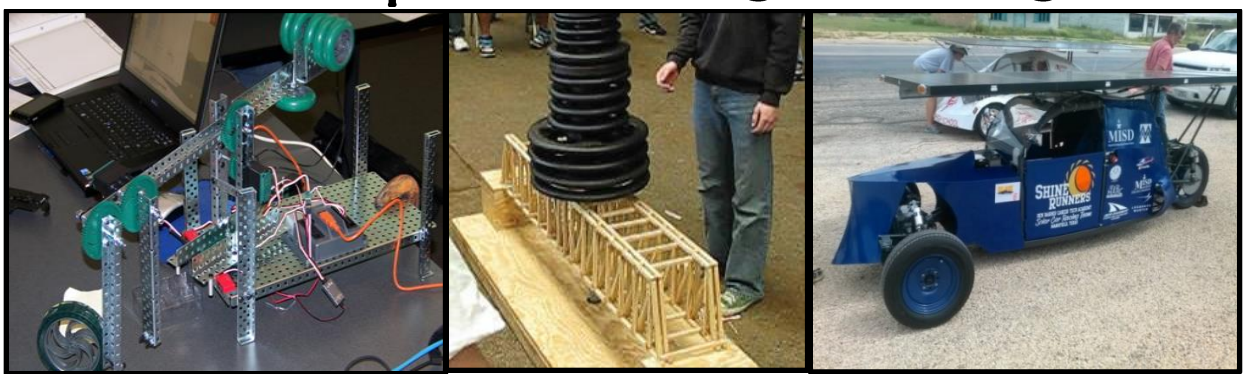
Business Professionals of America

FTC Tech Challenge

Additional Considerations

Students need fine motor skills and mobility.

Principles of Engineering



Prerequisite: Geometry AND Chemistry OR IPC AND Intro to Engineering Design
Course: 1836CT Credits: 1 Length: 18 weeks Placement: 9-12

Course Description

This course explores the wide variety of careers in engineering and technology and covers various technology systems and manufacturing processes. Using activities, projects, and problems, students learn firsthand how engineers and technicians use math, science, and technology in an engineering problem-solving process to benefit people. **Course can be used as an additional science credit for graduation. Students can earn weighted credit for this course.**

Student Activities

Overview and Perspective of Engineering: Students learn about the types of engineers and their contribution to society.
Communication and Documentation: Students collect and categorize data, and produce graphics
Design Process: Students learn about problem solving and how products are developed, including how engineers work in teams. Students will be required to create graphical representations, keep an engineer's notebook, and make written and oral presentations.
Engineering Systems: Students learn about mechanical, thermodynamics, fluid, electrical, and control systems.
Statics: Students learn about measurement, scalars and vectors, equilibrium, structural analysis, and strength of materials.
Materials and Materials Testing: Students learn the categories and properties of materials, including how materials are shaped and joined, and materials testing.
Engineering for Quality and Reliability: Students will use precision measurement tools to gather and apply statistics for quality and process control. Students will also learn about reliability, redundancy, risk analysis, factors of safety, and liability and ethics.
Dynamics: Students will be introduced to dynamics/kinematics.

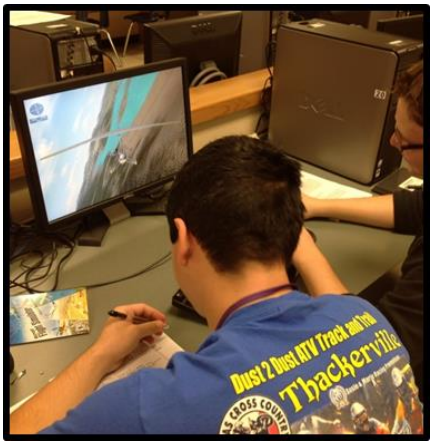
Organizations/After School/Competitions

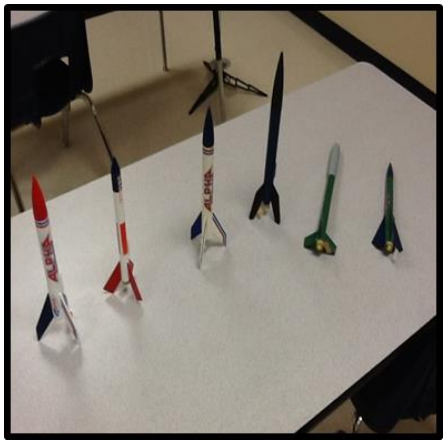
Shine Runners Solar Car Racing Team, FTC Robotics, Technology Student Association

Additional Considerations

Students must have successfully completed Geometry without modification. Cannot modify curriculum.

Aerospace Engineering



Prerequisite: Principles of Engineering
Course: 1834CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

Aerospace Engineering is the branch of engineering that deals with aircraft, spacecraft, and their related systems. The course explores the evolution of flight, flight fundamentals, flight simulation, navigation and control, GPS, aerospace materials, propulsion, space travel, orbital mechanics, ergonomics, remotely operated systems and related careers. Students will analyze, design and build aerospace systems. While implementing these designs, students will continually work on their interpersonal skills, creativity and application of the design process. Students build gliders, build model rockets, use flight simulators, build composite materials, fly model planes, fly model helicopters, etc…

Students can earn weighted credit for this course.

Student Activities

- Build Gliders
- Build Model Rockets
- Fly Planes on Flight Simulators
- Build Composite Materials & Test
- Study Propulsion
- Study Flight Physiology

Additional Considerations

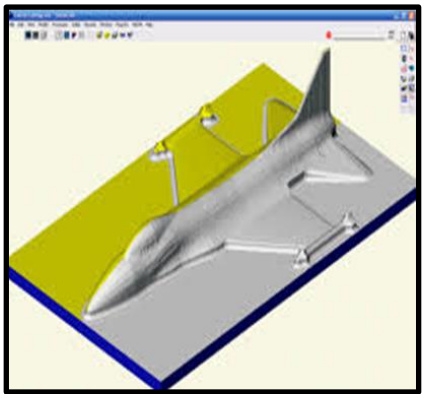
Students must have successfully completed Geometry without modification. Students need fine motor skills and mobility. Cannot modify curriculum.

Organizations/After School/Competitions

Shine Runners Solar Car Racing Team
FTC Robotics
Technology Student Association

POS: Science, Technology, Engineering & Mathematics | Endorsement: STEM

Computer Integrated Manufacturing



Prerequisite: Intro to Engineering Design AND Principles of Applied Engineering
Course: 1838CT Credits: 1 Length: 18 weeks Placement: 10-12

Course Description

In Computer Integrated Manufacturing the student will examine and utilize modern manufacturing practices and computer techniques used to design and build various projects from clients around the district. Students will learn about and incorporate their knowledge of robotics to laser cutting and engraving, and 3D printing to complete these projects.
Students can earn weighted credit for this course.

Student Activities

Student projects include:

1. Laser cutting and engraving key chains, signs, puzzles, toys, awards, and other items.
2. 3D Printing of miniatures, gears, toys, chess pieces, tools, etc.
3. Wood, plastics, and metal crafting
4. Robotics and Automation, CNC Milling and Lathe, and 3D modeling.

Additional Considerations

Students must have successfully completed Geometry without modification. Students need fine motor skills and mobility. Cannot modify curriculum.

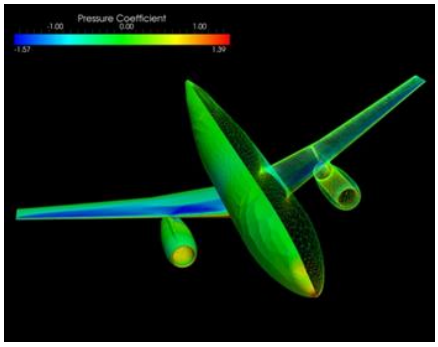
Organizations/After School/Competitions

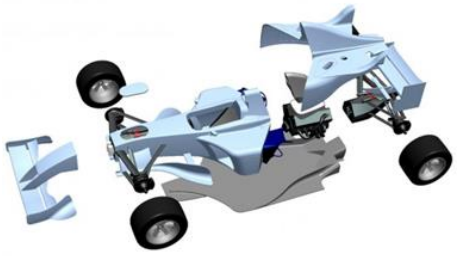
Shine Runners Solar Car Racing Team
FTC Robotics
Technology Student Association

Certificate of Excellence

Students can earn a Certificate of Excellence by achieving a specific list of real world skills related to this course. For the list of skills, please visit goo.gl/9VM3a9

Engineering Design & Development






Prerequisite: Computer Integrated Manufacturing OR Aerospace Engineering
Course: 1845CT Credits: 1 Length: 18 weeks Placement: 11-12

Course Description

This course is recommended for student pursuing a career in engineering. This course will provide students with the opportunity to master the design process to solve a design problem of their choosing. They will use prior knowledge to develop, model, and test their solutions. Each team will present and defend their solutions to a panel of experts.
Students can earn weighted credit for this course.

Student Activities

If you are interested in high-tech, fast-paced and lucrative work in the engineering industry, Engineering can not only provide you with a solid education while you are in high school, but also offer you the opportunity of an internship/job shadowing under an experienced engineer with a local engineering firm. This will provide you with the skills needed to build a great career in a variety of industries.

Organizations/After School/Competitions

Shine Runners Solar Car Racing Team
FTC Robotics
Technology Student Association