



Resources

	Animal Science				
Levels		Courses			
Level 1	Principles	of Agriculture, Food & Natural I 1101CT / 9-12	Resources		
Level 2	Small Ai	nimal Management AND Equine 1114CT & 1113CT / 9-12 Courses must be taken together	Science		
Level 3		Livestock Production 1115CT / 10-12			
Level 4	Advanced Animal Science 1116CT / 11-12 Prerequisite: Biology, Chemistry or IPC, Geometry, AND Small Animal/Equine Science or Livestock Production Science Credit	Veterinary Medical Applications 1140CT / 11-12 Prerequisite: Small Animal/Equine Science or Livestock Production	Practicum in Agriculture, Food & Natural Resources 1135CA-CB / 11-12		
	Applied Agri	cultural Engineering			
Levels	Cou	rses	Supporting Courses		
Level 1		Food & Natural Resources Γ / 9-12			
Level 2	Agricultural Mechanic 1122CT <i>OSHA Certifi</i>				
Level 3	Agricultural Structures Design & Fabrication 1123CT / 11-12 Prerequisite: Agricultural Mechanics & Metal Technologies				
Level 4		Food & Natural Resources			
	Environmental	& Natural Resources			
Levels	Сои	rses	Supporting Courses		
Level 1		Food & Natural Resources Γ / 9-12			
Level 2	1103C	Ecology Management Γ / 9~12 <i>Certification Possible</i>			
Level 3		nd Ecology Systems 1/ 10~12			
Level 4	Practicum in Agriculture, 1135CA-0				
Plant Science					
Levels		rses	Supporting Courses		
Level 1	1101C	Food & Natural Resources Γ / 9-12			
Level 2	1109CT Commercial/Noncommercial P Pos	are Science 7 / 10-12 <i>testicide Application Certification</i> sible			
Level 3	Floral	Design			

	1110CT / 9~12 Fine Arts Credit					
	Texas State Floral Association Floral Skills Knowledge Based Certification Possible					
	Advanced Floral					
Level 4	Design 1124CT / 11~12		Agriculture, Food & al Resources			
	Prerequisite: Floral	1135CA	A-CB / 11-12			
	Design					
1 Semester Home Campus	2 Semester Home	1 Semester Ben Barber	2 Semester Ben Barber	College Course Weighted Credit		
The district will pay		ertification test if stu	dents can show mastery	by passing a certification practice		
test AND maintain a			certification test. If stude cost of the certification te	ents don't meet the requirements		
To earn an endorseme	nt, an MISD student mus [.]	t complete a coherer	it sequence for 4 or more	credits that consist of 2 courses		
	in the same program	n of study including a	at least 1 advanced CTE o	course		
		LevellCou	NC 0C			
		LeventCou	r565			
	ILTURE, FOOD & NATUR recommended as 1st cours			Placement: 9~12 Length: 18 weeks		
This class will give stud their lives on a daily b additionally students ar Students must keep an c	pasis. The foundation for re introduced to importar	xplore the various a truly understandin tt life skills includin knowledge about ag	g all that agriculture en g record keeping, leaders	y discover how agriculture impacts compasses is laid in this class and ship and meeting room procedures. icultural experience or SAE that acts		
		Level II Cou	irses			
SMALL ANIMAL MANA Course: 1114CT & 111	GEMENT/EQUINE SCIEN 3CT	ICE Credits: 1		Placement: 9-12 Length: 18 weeks		
potential careers relate caretakers, pet breeders interactions. Students w Suggested small animals reptiles, avian, dogs and	Small Animal Management is a course that educates and encourages responsible pet ownership. This course prepares students for potential careers related to small animal care, including but not limited to: veterinarians, veterinarian technicians, 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. Suggested small animals which may be included in the course of study include, but are not limited to, small mammals, amphibians, reptiles, avian, dogs and cats. Equine Science 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. These courses must be taken					
AGRICULTURAL MECH Course: 1122CT	ANICS & METAL TECHNO	OLOGIES Credits: 1		Placement: 10-12 Length: 18 weeks		
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 metal working techniques. Possible Certification: OSHA 10 hours*						
WILDLIFE, FISHERIES & Course: 1103CT	ECOLOGY MANAGEME	NT Credits: 1		Placement: 9-12 Length: 18 weeks		
Students will be prepared for careers in natural resource systems. Students need to attain academic skills and knowledge, acquire technical knowledge in skills related to natural resources, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. This course examines the management of gain and non-gain wildlife species, fish, and aqua crops and their ecological needs as related to current agriculture practices. Certification Possible: Texas Parks & Wildlife Hunter Safety*						
requirements, and indu aqua crops and their ec	stry expectations. This c ological needs as related	ourse examines the to current agricultur	management of gain and	egarding career opportunities, entry		

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. Certification Possible: Commercial/Noncommercial Pesticide Application*						
	Level III Courses					
LIVESTOCK PRODUCTION Course: 1115CT	Credits: 1	Placement: 10-12 Length: 18 weeks				
and skills related to animal systems, and de industry standards. To prepare for success, st skills in a variety of settings. This course e						
AGRICULTURAL STRUCTURES DESIGN & FA	BRICATION	Placement: 11-12				
Prerequisite: Agricultural Mechanics Course: 1123CT	Credits: 1	Length: 18 weeks				
This course will explore career opportunities mechanized agriculture and technical system design and fabrication.	s, entry requirements, and industry					
FORESTRY & WOODLAND ECOSYSTEMS Course: 1120CT	Credits: 1	Placement: 10~12 Length: 18 weeks				
relates to ecological requirements and how t	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. Includes exploration of careers associated with the forestry system, tree identification, calculating tree harvest and a study of the forest ecosystem.					
FLORAL DESIGN Course: 1110CT	Credits: 1	Placement: 9-12 Length: 18 weeks				
	isics of business involved in running	tic designs using flowers. Students will learn the g a flower shop and other floral related industries.				
	Level IV Courses					
ADVANCED ANIMAL SCIENCE Prerequisite: Biology, Chemistry & IPC, Geor Small Animal/Equine Science OR Livestock I Course: 1116CT		Placement: 11-12 Length: 18 weeks				
including treatments such as vaccinations as scientific and technological dimensions of	nd medications. Emphasis in this co ilvestock production. Students in	arn disease management in domesticated animals burse is placed on the inter relatedness of human, terested in Veterinary Technician, Veterinarian Note: Course can be used as an additional science				
VETERINARY MEDICAL APPLICATIONS Prerequisite: Small Animal/Equine Science Course: 1140CT	OR Livestock Production Credits: 1	Placement: 11-12 Length: 18 weeks				
For careers in the field of animal science, students need to attain academic skills and knowledge, acquire technical knowledge and skills related to animal systems and the work place, and develop knowledge and skills regarding career opportunities, entry requirements and industry expectations. Topics covered in this course include, but are not limited to, veterinary practices as they relate to both large and small animal species.						
PRACTICUM IN AGRICULTURE, FOOD & NA Course: 1135CA/CB	ATURAL RESOURCES Credits: 2	Placement: 11-12 Length: 36 weeks				

The practicum is designed to give students supervised practical application of knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experiences such as employment, independent study, internships, assistantships, mentorships or laboratories. **If a student does not have transportation, opportunities will be limited.**

ADVANCE FLORAL DESIGN Course: 1124CT

Credits: 1

Placement: 11-12 Length: 18 weeks

In this course, students build on the knowledge from the Floral Design course and are introduced to more advanced floral design concepts, with an emphasis on specialty designs and specific occasion planning. This course focuses on building skills in advanced floral design and providing students with a thorough understanding of the design elements and planning techniques used to produce unique specialty floral designs that support the goals and objectives of a specific occasion or event. Through the analysis and evaluation of various occasion and event types, students explore the design needs and expectations of clients and propose and evaluate appropriate creations. From conception to evaluation, students are challenged to create and design appropriate specialty floral designs that meet the needs of the client. Furthermore, an emphasis on budgetary adherence and entrepreneurship equips students with many of the necessary skills needed for success in floral enterprises.

Notes on agriculture science and technology courses:

The State Board of Education course requirements include a Supervised Agriculture Experience project for all courses. The Supervised Agriculture Experiences (SAE) must relate directly to the course in which the student is enrolled or has completed. The program will continue to be as flexible as possible in regards to SAE projects. Students enrolled in any and all Agricultural Science courses are provided the opportunity for membership in the FFA, the nation's largest youth leadership organization. Students are expected to meet membership requirements. Financial assistance is available to students who possess such need. FFA is an integral part of the curriculum of Agriculture, Food, and Natural Resources.

*Students must successfully pass certification test(s) in order to receive the certification.



Architectural Design				
Levels	Courses	Supporting Courses		
	Principles of Architecture			
Level 1	1819CT / 9~12			
	Architectural Design I	Interior Design		
Level 2	1660CT / 10-12 Prerequisite: Principles of Architecture AND English I AND	1512A/B / 10-12		
	Algebra I	Prerequistie: Algebra I AND English I		
	Architectural Design II			
Level 3	1665CA/CB / 11-12 Prerequisite: Architectural Design I AND Geometry			
	Autodesk Certified User in AutoCAD Certification Possible			
	Practicum in Architectural Design			
Level 4	1668CA/CB / 12			
	Prerequisite: Architectural Design II			
Loude	Construction Technology	Gupporting Courses		
Levels	Courses Principles of Construction	Supporting Courses		
Level 1	1824CT / 9~12	Principles of Architecture		
	NCCER Core Certification Possible	1819CT / 9~12		
		TCC CNBT 1300 Residential & Light		
	Construction Technology I	Commercial Blue Print Reading 0194 / 10-12		
T1 0	1820CA/CB / 10~12	Prerequisite: No TSI Requirement		
Level 2	Prerequisite: Principles of Construction	TCC CNBT 1316 Construction		
	Local Certification Possible	Technology I		
		0195 / 10~12 Prerequisite: No TSI Requirement		
		TCC CNBT 1110 Basic Construction		
	Construction Technology II	Safety		
	1825CA/CB / 11-12	0198 / 11-12		
Level 3	Prerequisite: Construction Technology I	Prerequisite: No TSI Requirement TCC CNBT 1350 Construction		
	OSHA 10 Hour AND NCCER Construction Tech Certification Possible	Technology II		
	Certification rossinie	0199 / 11-12		
		Prerequisite: No TSI Requirement		
	Practicum in Construction Technology 1827CA/CB / 12	Upon completion of all 4 TCC CNBT courses, students will earn a		
Level 4	Prerequisite: Construction Technology II	Residential/Commercial Site Layout		
		& Framer Assistant Occupational		
		Skills Award from TCC		
	HVAC & Sheet Metal			
Levels	Courses	Supporting Courses		
Level 1	Principles of Construction 1824CT / 9-12			
	NCCER Core Certification Possible			
	Heating, Ventilation & Air Conditioning &			
Level 2	Refrigeration I			
	1803CT / 10-12 Prerequisite: Principles of Construction			
	Refrigerant Handling Certification Possible			
	Heating, Ventilation & Air Conditioning &			
Level 3	Refrigeration II			
	1804CA/CB / 11-12			

		uisite: HVAC I vel I Certification Possible				
Level 4	1827	nstruction Technology CA/CB / 12	T			
	Prereq	uisite: HVAC II				
1 Semester Home Campus	2 Semester Home Campus	1 Semester Ben Barber		ester Ben Barber	College Course Weighted Credit	
	100% of the cost of the cert in 80+ overall course grade above, thev must		tion test.	If students don't		
To earn an endorseme	nt, an MISD student must c	omplete a coherent sequen	ce for 4	or more credits t	hat consist of 2 courses	
	in the same program o	of study including at least 1	ladvanc	ed CTE course		
		Levell				
PRINCIPLES OF ARCHIT Course: 1819CT	ECTURE	Credits: 1			Placement: 9~12 Length: 18 weeks	
Classroom studies incluent environment, leadership	re provides an overview to th de topics such as safety, wor p, teamwork, ethical and leg ical thinking, and reading to	k ethics, communication, in al responsibility, employab	nformati	on technology ap	plications, systems, health,	
PRINCIPLES OF CONST Course: 1824CT	RUCTION	Credits: 1			Placement: 9~12 Length: 18 weeks	
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, and common hand and power tools. This course also provides communication and occupation skills to assist the student in obtaining and maintaining employment. Possible Certification: NCCER Core*						
		Level II				
ARCHITECTURAL DESIG Prerequisite: Principles Course: 1660CT	GN I of Architecture AND Englis	sh I AND Algebra I Credit: 1			Placement: 10~12 Length: 18 weeks	
construction, making us using AutoCAD, CorelI	Architectural Design is an activity/project based technical course for students interested in architecture, interior design, construction, making use of measurements, perspectives and drawings. Students will study multiple activities and problem-solving using AutoCAD, CorelDraw, Word, Excel, Adobe, the Digital Camera, Laser, CNC Lathe. Additionally, students will study basic board drawing instruments, modeling, lettering and multiple drawing styles.					
CONSTRUCTION TECH Prerequisite: Principles Course: 1820CA/CB		Credits: 2			Placement: 10~12 Length: 36 weeks	
Students gain knowledge and skills specific to those needed to enter the work force or build a foundation toward a postsecondary degree or certification in the career pathway of construction science, architecture or engineering. Students acquire knowledge and skills in safety, tool usage, building materials, codes and basic framing. Various models and projects will be designed and built throughout the semester. Communication and employability skills along with options for continuing education will be provided throughout the semester. Opportunities for industry-related certification modules are part of this curriculum.						
Students can earr list of skills, pleas	n a Certificate of Excellence se visit <u>goo.gl/9VM3a9</u>	by achieving a specific list	of real w	orld skills related	d to this course. For the	
	ntial & Light Commercial Bl class. There is no TSI requir					
HEATING, VENTILATIO Prerequisite: Principles	N & AIR CONDITIONING &	REFRIGERATION I			Placement: 10-12 Length: 18 weeks	
Course: 1803CT		Credit: 1			Laigni, 10 Wood	

In this course students will gain knowledge and skills needed to enter the industry as technicians in the HVAC and refrigeration industry or building maintenance industry, prepare for a postsecondary degree in a specified field of construction management, or pursue an approved apprenticeship program. Students will acquire knowledge and skills in safety, principles of HVAC theory, use of tools, codes, and installation of HVAC and refrigeration equipment. Possible Certification: Refrigerant Handling* Level III ARCHITECTURAL DESIGN II Placement: 11~12 Prerequisite: Architectural Design I AND Geometry Length: 36 weeks Credits: 2 Course: 1665CA/CB 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 the design, design history, techniques and tools related to the production of drawings, renderings and scaled models for commercial or residential architectural purposes Possible Certification: Autodesk Certified User in AutoCAD* CONSTRUCTION TECHNOLOGY II Placement: 11-12 Prerequisite: Construction Technology I Length: 36 weeks Course: 1825CA/CB Credits: 2 As a continuation of Construction Technology I, this course is an activity/project based technical course for students interested in continuing their construction or architecture career pathway. Students gain advanced knowledge and skills specific to those needed to enter the work force as carpenters or prepare for a postsecondary degree in construction science, architecture or engineering, Beginning with wall framing, students will develop skills in sequential building trades - plumbing, residential wiring and masonry. Students are introduced to exterior and interior finish-out skills. Communication and employability skills along with options for continuing education will be provided throughout the year. Possible Certification: NCCER Construction Tech* Possible Certification: OSHA 10 Hour* TCC CNBT 1110 Basic Construction Safety & TCC CNBT 1350 Construction Technology II can be taken concurrently with this class. There is no TSI requirement, but students must register and pay tuition by TCC deadline. HEATING, VENTILATION & AIR CONDITIONING & REFRIGERATION II Placement: 11-12 Prerequisite: Principles of Construction Length: 36 weeks Course: 1804CA/CB Credit: 2 In this course students will gain advanced knowledge and skills needed to enter the industry as HVAC and refrigeration technicians or building maintenance technicians or supervisors, prepare for a postsecondary degree in a specified field of construction or construction management, or pursue an approved apprenticeship program. Students will acquire knowledge and skills in safety, electrical theory, use of tools, codes, installation of commercial HVAC equipment, heat pumps, troubleshooting techniques, various duct systems, and maintenance practices. Possible Certification: NCCER HVAC Level I* Level IV PRACTICUM IN ARCHITECTURAL DESIGN Placement: 12 Prerequisite: Architectural Design II Length: 36 weeks Course: 1668CA/CB Credits: 2 Practicum in Architectural Design is an occupation specific course designed to provide technical instruction in architectural design. Safety and career opportunities are included in addition to work ethics and architectural design study. Students will maintain a project portfolio that documents experience by using graphic or written documentation of architectural-related projects and a professional resumé that should include select educational and work history, professional references, appropriate letters of recommendation, record of work experiences, licenses, and certifications; and completion of education and training. If a student does not have transportation, opportunities will be limited. PRACTICUM IN CONSTRUCTION TECHNOLOGY Placement: 12 Prerequisite: Construction Technology II Length: 36 weeks Course: 1827CA/CB Credits: 2 This course is an internship and project-based technical course in best practices of construction and project management. This class includes design techniques and tools related to the management of architectural, engineering and construction projects. Students will establish their internship with an industry partner in a related field of study. Students must provide their own

transportation to the internship. All internships will document the student's progress and participation as a significant part of the grade for this course. Students must also identify, design and successfully manage project specific criteria and present their final product to a panel of industry advisors. Career plans, employment opportunities and options for continuing education will be part of ongoing discussion. Industry-related certification modules from previous courses are eligible for completion. If a student does not have transportation, opportunities will be limited. Supporting Courses INTERIOR DESIGN (Home Campus Only) Placement: 10~12 Length: 36 weeks Prerequisite: Algebra I AND English I Course: 1512A/B Credits: 1 Interior Design is an activity/project based technical course for students interested in architecture, interior design, construction, making use of measurements, perspectives and drawings. Students will study multiple activities and problem solve using AutoCAD, CorelDraw, Word, Excel, Adobe and digital cameras. Additionally, students will study basic board drawing instruments, modeling, lettering and multiple drawing styles. TCC CNBT 1300 RESIDENTIAL & LIGHT COMMERCIAL BLUE PRINT READING 🛄 Placement: 10-12 Prerequisite: Principles of Construction Length: 18 weeks Course: 0194 Credits: 1 This course includes introductory blueprint reading for residential and light commercial construction. Course offered at Ben Barber and is taught concurrently with Construction Technology I (1820CA). TCC CNBT 1316 CONSTRUCTION TECHNOLOGY I Placement: 10~12 Prerequisite: Principles of Construction Length: 18 weeks Course: 0195 Credits: 1 This course is an introduction to site preparation foundations, form work, safety, tools and equipment. Course offered at Ben Barber and is taught concurrently with Construction Technology I (1820CB). TCC CNBT 1110 BASIC CONSTRUCTION SAFETY Placement: 11-12 Prerequisite: Construction Technology I Length: 18 weeks Course: 0198 Credits: 1 This course is basic job site construction safety in residential, commercial, and industrial construction. Course offered at Ben Barber and is taught concurrently with Construction Technology II (1825CA). TCC CNBT 1350 CONSTRUCTION TECHNOLOGY II Placement: 11-12 Prerequisite: Construction Technology I Length: 18 weeks Credits: 1 Course: 0199 This course is framing in residential and light commercial construction. Includes safety, tools, and equipment used in floor, wall, ceiling, and roof framing methods and systems. Course offered at Ben Barber and is taught concurrently with Construction Technology II (1825CB). Upon completion of all 4 TCC CNBT courses, students will earn a Residential/Commercial Site Layout & Framer Assistant Occupational Skills Award from TCC. Weighted Credit *Students must successfully pass certification test(s) in order to receive the certification.



	Communications								
	Design & Multimedia Arts								
Levels	Courses					Supporting Courses			
Level 1		Prir	iciples of Arts, A/V 189	Technolo OCT / 9-		mmunications			Digital Media 1280CT 9-12
Level 2	189	c Design I 1CA-CB 0-12	Animation I 1897CA-CB 10-12	Comme Photogr 1889C 10~	aphy I A~CB	Video Game Design 1269CT 9~12	D 15	ashion Jesign I 511A-B 10-12	
		Adobe Pho	toshop Certification F	'Ossible					
Level 3	1893C Prer Graph Adobe Cert	c Design II CA-CB 10- 12 equisite: ic Design I Illustrator iffication ossible	Digital Art & Animation 1053BB / 10-12 Prerequisite: Animation I 3D Modeling & Animation 1054BB / 10-12 Prerequisite: Animation I Adobe Animate Certification Possible	Comme Photog II 1888C 10- Prerequ Comme Loc Certific Poss	A-CB 12 <i>uisite:</i> <i>ercial I</i> <i>cal</i>	Video Game Programming 1273CT 10-12 Prerequisite: Video Game Design	Do 15 1 Pre. F	ashion esign II 516A-B 10~12 requisite: Cashion Design I	Fashion Marketing AND Advertising 1515CT AND 1711CT 10-12 Courses must be taken together
Level 4	Graph 1899C Prer Graph Adobe Cert	ticum in ic Design CA-CB 11- 12 equisite: ic Design II ification ossible	Practicum in Animation 1898CA-CB 11- 12 Prerequisite: Digital Art & Animation OR 3D Modeling & Animation	1884CA-CB 11-12		Advanced Video Game Programming 1274CT / 10-12 Prerequisite: Video Game Programming Local Certification Possible			
			Digital C	ommi	inicat	tions			
Level	5				Cour	585			
Level	1			OCT / 9~1	ĩ2			Com	ofessional munications 46 / 9~12
Level	2		Video Production I 869CT / 9~12	D		udio Technology 30CT / 9~12	' I		
Level	3	Audio/ 187 Prerequi	Video Production II 1CA-CB / 10-12 isite: A/V Production Premiere Certification Possible	I	Digital Audio Technology II 1885CT / 10-12 Prerequisite: Digital Audio Technology I Local Certification Possible				
Level	4	187 Prereg	um in Audio/Video Production 3CA-CB / 11-12 nuisite: Audio/Video Production II tudio Production	leo Practicum in Audio Technology 1887CA-CB / 11-12 Prerequisite: Digital Audio Technology II		Practicum in Audio Technology 1887CA-CB / 11-12 Prerequisite: Digital Audio			
			5CA-CB / 11-12	spc		CA-CB / 11-12	um		

	Prerequisite: Audio/ Production II		Prerequisite: Digital Audio Technology II		
1 Semester Home Campus	2 Semester Home Campus	1 Semester Ben Barber	2 Semester Ben Barber	College Course Weighted Credit	
	80+ overall course grade		ation test. If students don	<i>ng a certification practice 't meet the requirements</i>	
To earn an endorsement,		omplete a coherent seque f study including at least		that consist of 2 courses	
		Levell			
PRINCIPLES OF ARTS, AUI Course: 1890CT	DIO/VIDEO TECHNOLOG	GY & COMMUNICATIONS Credits: 1	3	Placement: 9~12 Length: 18 weeks	
	ious and multifaceted can			on. Students will develop an edge, skills and educational	
PROFESSIONAL COMMUN Course: 2246	NICATIONS (Home Camp	ous Only) Credits: 0.5		Placement: 9-12 Length: 18 weeks	
Professional Communications blends written, oral, and graphic communication in a career-based environment. Careers in global economy require individuals to be creative and have a strong background in computer and technology applications, a strong and solid academic foundation, and a proficiency in professional oral and written communication. Within this context, students will be expected to develop and expand the ability to write, read, edit, speak, listen, apply software applications, manipulate computer graphics, and conduct Internet research.					
		Level II			
GRAPHIC DESIGN & ILLUS Course: 1891CA/CB	STRATION I	Credits: 2		Placement: 10-12 Length: 36 weeks	
concepts and design strat	tegies will be explored us ions and more. Students twork will be created for	sing design principles ar will learn to create and c	d art elements for creat	wing field. Commercial ar ing ads, logos, newsletters ets using Adobe software. A	
ANIMATION I Course: 1897CA/CB		Credits: 2		Placement: 10-12 Length: 36 weeks	
This course is for the creative student wanting to explore computer animation. Animation is a growing art form fulfilling a need in multiple careers such as entertainment, advertising commercials, medical and legal fields and other areas wanting a strong visual impact. Design principles of animation will be used for creating storyboards to develop characters and story lines. Sound will be imported into animations. Multiple file formats and forms of animation will be discussed and explored, including 2D and 3D animation. Adobe software will be used. A final DVD including animation will be created by students for a digital portfolio. Possible Certification: Adobe Photoshop*					
COMMERCIAL PHOTOGR Course: 1889CA/CB	APHY I	Credits: 2		Placement: 10~12 Length: 36 weeks	
Students will develop an understanding of the commercial photography industry with a focus on creating quality photographs. Careers in commercial photography require skills that span all aspects of the industry from setting up a shot to delivering products in a competitive market. Within this context, students will develop knowledge and skills needed for success in the Arts, Audio/Video Technology and Communications career cluster.					
Equipment Required: DSLI Possible Certification: Ado					
VIDEO GAME DESIGN Course: 1269CT		Credits: 1		Placement: 9-12 Length: 18 weeks	
				ill program in Game Make paration and delivery, real	

world time management and many basic computer and media technology skills. Other programming environment and game design techniques may also be studied to reinforce basic skills. Topics covered are mathematics, physics, design and computer programming.

FASHION DESIGN I (Home Campus Only) Course: 1511A/B

Fashion Design provides students with knowledge of the various business functions in the fashion industry and to help students develop an understanding of fashion and the textile and apparel industry. Students in Fashion Design will gain a working knowledge of promotion, merchandising, apparel construction, textiles, fashion history and career opportunities in the fashion industry.

Credits: 1

AUDIO/VIDEO PRODUCTION I Course: 1869CT

This course is designed to provide job-specific training for entry-level employment in movie, video and television careers. Students study video technologies, basic equipment operation, video composition, basic lighting and audio production planning and visual storytelling. Students work individually and in groups to create video projects utilizing professional editing equipment and software. Ultimately, students will create a "Demo DVD" of their work. Students will also be responsible for the production of MISD programs covering many of the activities and events at all campuses.

Credits: 1

DIGITAL AUDIO TECHNOLOGY I Course: 1880CT

This is an introductory course exploring the Radio Broadcasting industry. Students will study several topics including the history of radio, FCC rules and regulations, audio editing, commercial production and on-air broadcasting. Each student will have an opportunity to write, edit and produce his or her own radio show to be aired on the district's radio station 99.9theWILD (KMAN-FM).

Level III

Credits: 2

GRAPHIC DESIGN & ILLUSTRATION II Prerequisite: Graphic Design & Illustration I Course: 1893CA/CB

This advanced class will provide opportunities for students wanting to expand their skills and knowledge of the graphic arts and illustration field. Students will illustrate their designs and use the design process for presenting design ideas to clients. Students will create commercial artwork, ads, logos, poster and magazine designs, and packaging for 3D designs. Students will explore aspects of careers in the growing field of advertising and visual communications industry Possible Certification: Adobe Illustrator*

DIGITAL ART & ANIMATION Prerequisite: Animation I Course: 1053BB

Digital Art and Animation consists of computer images and animations created with digital imaging software. Digital Art and Animation has applications in many careers, including graphic design, advertising, web design, animation, corporate communications, illustration, character development, script writing, storyboarding, directing, producing, inking, project management, editing, and the magazine, television, film, and game industries. Students in this course will produce various real-world projects and animations. This course can be used as a Fine Arts Credit.

3D MODELING & ANIMATION Prerequisite: Animation I Course: 1054BB

3-D Modeling and Animation consists of computer images created in a virtual three-dimensional (3-D) environment. 3-D Modeling and Animation has applications in many careers, including criminal justice, crime scene, and legal applications; construction and architecture; engineering and design; and the movie and game industries. Students in this course will produce various 3-D models of real-world objects. **This course can be used as a Fine Arts Credit. Possible Certification: Adobe Animate***

Credits: 1

COMMERCIAL PHOTOGRAPHY II Prerequisite: Commercial Photography I Course: 1888CA/CB

Credits: 2

Careers in commercial photography span all aspects of the industry from setting up a shot to delivering products in a competitive market. Within this context, in addition to developing advanced technical knowledge and skills needed for success in the Arts,

Credits: 1

Placement: 10~12 Length: 18 Weeks

Placement: 10-12

Length: 18 Weeks

Placement: 10~12

Length: 36 weeks

Placement: 9~12 Length: 18 weeks

Placement: 10~12 Length: 36 weeks

Placement: 9~12 Length: 36 weeks

Placement: 9~12

Length: 18 weeks

Credits: 1

Audio/Video Technology, and Communications career cluster, students will be expected to develop an advanced technical understanding of the commercial photography industry with a focus on producing, promoting and presenting professional quality photographs.

Equipment Required: DSLR camera



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 <u>goo.gl/9VM3a9</u>

VIDEO GAME PROGRAMMING Prerequisite: Video Game Design Course: 1273CT

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#, Java programming environments, XNA Game Studio or Unity.

FASHION DESIGN II (Home Campus Only) Prerequisite: Fashion Design I Course: 1516A/B

Fashion Design II focuses on careers in fashion that span all aspects of the textile and apparel industries. Within this context, in addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an understanding of the fashion industry with an emphasis on design and construction.

Credits: 1

AUDIO/VIDEO PRODUCTION II Prerequisite: Audio/Video Production I Course: 1871CA/CB

This course refines the video and multimedia production skills to prepare the student for post-secondary education or entry-level employment in the media technology industry. Students will be responsible for the production of several programs such as Every 15 Minutes and the Senior Video. Seniors will work on producing their personal Demo Reel which they will be able to utilize for acceptance to various colleges, trade schools and internships. Possible Certification: Adobe Premiere*

Credits: 2

DIGITAL AUDIO TECHNOLOGY II Prerequisite: Digital Audio Technology I Course: 1885CT

Credits: 1

In this advanced course, students will be responsible for the day-to-day operation of the district's radio station, KMAN-FM. All programming will be written, edited and produced by the students for airing on a daily schedule. Students will also be responsible for covering many events including plays, sporting events and newsworthy stories that take place within MISD. Students will continue to develop their interviewing skills, on-air personality and commercial sales abilities. Demo reels will be produced for each student for possible consideration of internships with local radio stations. Students also have the opportunity to compete in Skills USA competitions.

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 <u>goo.gl/9VM3a9</u>

Level IV

Credits: 2

PRACTICUM IN GRAPHIC DESIGN & ILLUSTRATION Prerequisite: Graphic Design & Illustration II Course: 1899CA/CB

Careers in graphic design and illustration span all aspects of the advertising and visual communications industry. Within this context, in addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop a technical understanding of the industry with a focus on skill proficiency. Instruction may be delivered through lab-based classroom experiences or career preparation opportunities. If a student does not have transportation, opportunities will be limited. Possible Certification: Adobe InDesign*

PRACTICUM IN ANIMATION Prerequisite: Digital Art & Animation OR 3D Modeling & Animation Course: 1898CA/CB Credits: 2

Credits: 1

Placement: 10-12 Length: 36 weeks

Placement: 10-12

Length: 18 weeks

Placement: 10-12 Length: 36 weeks

Placement: 10~12 Length: 18 weeks

Placement: 11-12 Length: 36 weeks

Placement: 11-12 Length: 36 weeks

Careers in animation span all aspects of the advertising and visual communications industry. Within this context, in addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop a technical understanding of the industry with a focus on skill proficiency. Instruction may be delivered through lab-based classroom experiences or career preparation opportunities. If a student does not have transportation, opportunities will be limited.

PRACTICUM IN COMMERCIAL PHOTOGRAPHY Prerequisite: Commercial Photography II Course: 1884CA/CB

This course focuses on careers in commercial photography that span all aspects of the industry from setting up a shot to delivering products in a competitive market. In addition to developing advanced technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an advanced technical understanding of the commercial photography industry with a focus on producing, promoting, and presenting professional quality photographs. If a student does not have transportation, opportunities will be limited.

ADVANCED VIDEO GAME PROGRAMMING Prerequisite: Video Game Programming Course: 1274CT

This course give 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.

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

PRACTICUM IN AUDIO/VIDEO PRODUCTION Prerequisite: Audio/Video Production II Course: 1873CA/CB

In this self-paced independent production course, students will work with a mentor in the film/video industry and produce a final project complete with script, storyboard, casting, crew and premiere to an audience. Students must obtain prior approval before enrolling and provide an outline for a future project to be implemented by the student. If a student does not have transportation, opportunities will be limited.

Credits: 2

PRACTICUM IN AUTIO TECHNOLOGY Prerequisite: Digital Audio Technology II Course: 1887CA/CB

This advanced level of Radio Broadcasting is an extension of the two previous classes. This class will focus on the management side of every day operations of 99.9 The Wild, Mansfield ISD's official radio station. The students enrolled in this class will be placed into different managerial roles and will be responsible for promotions, music, programming and everyday operations of the station. This class will prepare them for the everyday ins and outs of a commercial radio station. Students also have the opportunity to compete in Skills USA competitions. If a student does not have transportation, opportunities will be limited.

Credits: 2

TV STUDIO PRODUCTION Prerequisite: Audio/Video Production II Course: 1875CA/CB

Students will work in a television studio environment learning all aspects of studio production including camera, lighting, directing, producing and techniques of professional on-air talent. Projects will consist of talk shows, newscasts, game shows etc. that will be scheduled for viewing on MISD-TV. Students will understand the TV studio environment from both the production side as well as the business side. If a student does not have transportation, opportunities will be limited.

Credits: 2

SPORTS BROADCASTING PRACTICUM Prerequisite: Digital Audio Technology II Course: 1877CA/CB

This Radio Broadcasting Practicum course focuses on the field of Sports Broadcasting. The students will learn both live play-byplay techniques as well as sports talk radio techniques. The students will be responsible for the athletic events within the district as well as sports programming for 999theScore (KMAN-FM). Students develop their interviewing and broadcast preparation skills as well as their sports knowledge. Demo reels will be produced for each student for possible consideration of internships with local sports affiliates. If a student does not have transportation, opportunities will be limited.

Credits: 2

Supporting Courses

Length: 18 weeks

Placement: 11-12

Length: 36 weeks

Placement: 10~12

Placement: 11-12

Length: 36 weeks

Placement: 11-12 Length: 36 weeks

Placement: 11~12 Length: 36 weeks

Placement: 11-12

Length: 36 weeks

Credits: 1

Credits: 2

DIGITAL MEDIA Course: 1280CT

Credits: 1

Students will develop beginner-intermediate skills in Adobe Creative Suite software including InDesign, Photoshop Extended, Acrobat Professional, Illustrator, and Fireworks. Become a multimedia, presentation master! In this course the students design and create original interactive computer generated multimedia projects and presentations. Students will learn to use digital cameras and scan and edit photographs. Students create animation and dynamic web content while learning about careers and the ethical, acceptable use of multimedia. Portfolio development, along with correct oral and written communication skills will be integral in all aspects of this course.

FASHION MARKETING / ADVERTISING
Course: 1515CT & 1711CT

Credits: 1

Placement: 10~12 Length: 18 weeks

Fashion Marketing is designed to provide students with the knowledge of the various business functions in the fashion industry. Students will gain a working knowledge of promotion, textiles, merchandising, mathematics, selling, visual merchandising and career opportunities in the field of fashion marketing. Advertising is designed as a comprehensive introduction to the principles and practices of advertising. Students will gain knowledge of techniques used in current advertising, including print, broadcast, and digital media. The course explores the social, cultural, ethical, and legal issues of advertising and sales promotion. Students are encouraged to participate in DECA, a co-curricular youth organization for Marketing, Management and Entrepreneurship. These courses must be taken together.

*Students must successfully pass certification test(s) in order to receive the certification.



Business & Industry Endorsement Business, Marketing & Finance

	Account	cing & Financial Se	ervices			
Levels		Courses		Supporting Courses		
Level 1	Principles of Business Marketing & Finance 1715CT / 9~12	Money Matters 1230CT / 9~12	BIM I 1240A-B 9~12	Touch Systems 1211 9-12		
Level 2	Accounting I 1271CT / 10-12 Microsoft Office Specialist Excel Certification Possible	Financial Mathematics 1224CT / 10-12 Prerequisite: Algebra I Math Credit	Banking & Financial Services 1226 10-12			
Level 3	Accounting II 1272CT / 11-12 Prerequisite: Accounting I Microsoft Office Expert Excel Certification Possible Math Credit	Financial Analysis 1227CT / 11-12 Prerequisite: Accounting I Local Certification Possible				
Level 4	Security & Investments 1225CT / 11~12	Practicum in Business Management 1251CA-CB / 11-12				
	Bue	iness Manageme	nt			
Levels			Supporting Courses			
Level 1	Principles of Business N 1715CT /	Touch Systems 1211 9~12				
Level 2	Business Law 1215CT / 10-12	Virtual Business 1203 / 10-12	BIM II 1250A-B / 10-12 Prerequisite: BIM I Microsoft Office Specialist Word & Excel Certifications Possible			
Level 3	Business Management 1216CT / 10-12 Prerequisite: 1-Level I or II Business Management Course Local Certification Possible	ness Management216CT / 10-12uisite: 1-Level I or IIness ManagementCourse				
Level 4	Level 4 Practicum in Business Management 1251CA-CB / 11-12					
	Entrepreneurship					
Levels	Courses			Supporting Courses		
Level 1	Principles of Business, Marketing & Finance 1715CT / 9-12					
Level 2	Entrepreneurship 1720CT / 10-12 Entrepreneurship & Small Business Certification Possible					
Level 3	Entrepreneurship II 1721CT / 11-12					
Level 4	Practicum in Business Management					

	1251 CA-CB / 11-12				
	Marke	ting & Salo	es		
Levels	Ca	ourses		Supporting Courses	
Level 1	Principles of Busine		Finance	0001969	
	1715 Sports & Entertainment Marke	CT / 9~12 ting AND Social	Media Marketing		
Level 2	1725CT ANI) 1727CT / 9~1 t be taken together	2		
	Sports & Entertainment N	larketing Certifica	ation Possible		
Level 3	Fashion Marketi 1515CT AND	ng AND Adverti 1711CT / 10~1			
	Courses must Advanced Marketing	t be taken together	r		
Level 4	1367CT / 11-12		cticum in Marketing 364 CA-CB / 11-12		
	Prerequisite: One credit from Level 2 or Marketing Courses	5 10	064 CA-CD / 11-12		
1 Semester	Home 2 Semester Home	ester Der Derfern		Ben Barber OR Home	
Campu	s Campus I Sem vill pay 100% of the cost of the certification	ester Ben Barber	2 Semester Ben Barber	Campus	
	intain an 80+ overall course grade at the tim	ne of the certificat	tion test. If students don't i		
To earn an end	<i>above, they must pay 100:</i> orsement, an MISD student must complete a			at consist of 2 courses	
	in the same program of study i	-	1 advanced CTE course		
		Levell			
				Placement: 9-12 Length: 18 weeks	
and services, ad allows students	nowledge and skills in economics and private vertising and product pricing. Students analy to reinforce, apply and transfer academic k ettings in business, marketing and finance.	ze the sales proce	ss and financial manageme	nt principles. This course	
MONEY MATTI Course: 1230C		Credits: 1		Placement: 9-12 Length: 18 weeks	
will investigate Students will le budgeting, borr	This course introduces students to the financial planning process and the components of a comprehensive financial plan. Students will investigate global economics with emphasis on the free enterprise system and its impact on consumers and businesses. Students will learn how to achieve long-term financial goals by preparing a financial plan that includes saving, investing, budgeting, borrowing, risk management (insurance) and retirement and estate planning. Students will analyze income and taxes, learn to use credit wisely, evaluate personal financial needs and manage personal finances.				
BUSINESS INFO Course: 1240A	RMATION MANAGEMENT I (Home Campus /B Ci	s Only) redits: 1		Placement: 9-12 Length: 36 weeks	
This course provides students the opportunity to implement personal and interpersonal skills to strengthen individual performance in the workplace and/or postsecondary education. Students apply technical skills, using Microsoft Office to create word- processing documents, develop a spreadsheet, formulate a database, and make an electronic presentation.					
Level II					
ACCOUNTING Course: 1271C		Credits: 1		Placement: 10-12 Length: 18 weeks	
Students in this course will learn to record and interpret accounting information through accounting terminology, the use of the accounting equation and its application to procedures and the basic steps in the accounting cycle. Good work habits and the ability to apply mathematical analysis in problem-solving situations are necessary to satisfactorily complete practice simulation for a sole proprietorship, partnership and/or corporation. Students will complete some work in the computer lab. This course is a "must" for any student planning to major in business or own his/her own business in the future. Possible Certification: Microsoft Office Specialist Excel*					

FINANCIAL MATHEMATICS		Placement: 10-12
Prerequisites: Algebra I Course: 1224CT	Credits: 1	Length: 18 weeks
This course is about personal money manage decisions based on current and projected econ education planning into financial decision make	nomic factors. Financial Mathematics	will integrate career and postsecondary
BANKING & FINANCIAL SERVICES (Home Camp Course: 1226	ous Only) Credits: 0.5	Placement: 10-12 Length: 18 weeks
This course surveys the principles and practices the major functions of banks and other deposito Federal Reserve System, and modern trends in th of banking to become competent consumers, em functions and operations including credit risk e	bry institutions, in-house operations and e banking industry. Students develop the ployees, and entrepreneurs. The credit	l procedures, central banking through the e knowledge and skills in the many aspects component provides an overview of credit
BUSINESS LAW Course: 1215CT	Credits: 1	Placement: 10-12 Length: 18 weeks
Students analyze the social responsibility of busin business ethics, torts, contracts, negotiable fina concept of agency and employment and real pro-	ancial instruments, personal property,	
VIRTUAL BUSINESS (Home Campus Only) Course: 1203	Credits: 0.5	Placement: 10-12 Length: 18 weeks
Virtual Business is designed for students to star marketing, examining contracts appropriate for also demonstrate bookkeeping skills for a virtua a virtual business.	an online business, and demonstrating	project-management skills. Students will
BUSINESS INFORMATION MANAGEMENT II (H	ome Campus Only)	Placement: 10~12
Prerequisite: BIM I Course: 1250A/B	Credits: 1	Length: 36 weeks
This course continues where Business Inform documents, develop sophisticated spreadsheets u students may prepare for and take Microsoft Of Possible Certification: Microsoft Office Specialis	using charts and graphs and make electro fice Specialist certification tests in Word	onic multimedia presentations. In addition I, Excel and PowerPoint.
ENTREPRENEURSHIP Course: 1720CT	Credits: 1	Placement: 10~12 Length: 18 weeks
Students will gain the knowledge and skills nee to begin and operate a business. The primary for opportunity, preparing a business plan, determ promote the business and its products and servic desired and the potential for profit. Students Marketing, Management and Entrepreneurship Possible Certification: Entrepreneurship & Small	cus of the course is to help students unde ining feasibility of an idea using researc ces. In addition, students understand the are encouraged to participate in DECA	erstand the process of analyzing a business ch, and developing a plan to organize and capital required, the return on investment
SPORTS & ENTERTAINMENT MARKETING / SO Course: 1725CT & 1727CT	CIAL MEDIA MARKETING Credits: 1	Placement: 9~12 Length: 18 weeks
Sports & Entertainment Marketing will allow stu course exposes students to skills necessary to for close friends or thousands of energetic fans.	rm a sports franchise and the knowledge	e needed to have a successful event for ten

Sports & Entertainment Marketing will allow students to actually study what many universities are offering as college majors. This course exposes students to skills necessary to form a sports franchise and the knowledge needed to have a successful event for ten close friends or thousands of energetic fans. Social Media Marketing is designed to look at the rise of social media and how marketers are integrating social media tools in their overall marketing strategy. The course will investigate how the marketing community measures success in the new world of social media. Students will manage a successful social media presence for an organization, understand techniques for gaining customer and consumer buy-in to achieve marketing goals, and properly select social media platforms to engage consumers and monitor and measure the results of these efforts. Students are encouraged to participate in DECA, a co-curricular youth organization for Marketing, Management and Entrepreneurship. These courses must be taken together.

Possible Certifications: Sports & Entertainment Marketing*

	Level III					
ACCOUNTING II Prerequisites: Accounting I Course: 1272CT	Credits: 1	Placement: 11-12 Length: 18 weeks				
accounting for managerial decision making for internal decision making and for plannir in every discipline, this course provides the	Accounting II introduces the fundamentals of management accounting, including manufacturing and cost accounting, budgeting, accounting for managerial decision making and financial statement analysis. Students learn how to use accounting information for internal decision making and for planning and control. Because accounting knowledge is beneficial to business professionals in every discipline, this course provides them with the financial acumen necessary to make informed personal and business decisions. Note: Course can be used as an additional math credit for graduation.					
FINANCIAL ANALYSIS Prerequisites: Accounting I Course: 1227CT	Credits: 1	Placement: 11~12 Length: 18 weeks				
Part of managing a successful and solvent business is evaluating performance in areas such as income, profitability, liquidity, working capital, debt, cash flow, etc. Students will also analyze accounting systems to examine their contribution to the fiscal stability of a business. By the end of the course, students will be able to evaluate company case studies and discuss the financial stability and value of the company.						
Students can earn a Certificate of Excel list of skills, please visit <u>goo.gl/9VM3a</u>	llence by achieving a specific list of real worl a <u>9</u>	ld skills related to this course. For the				
BUSINESS MANAGEMENT Prerequisite: 1-Level I or II Business Manage	mont Course	Placement: 10~12				
Course: 1216CT	Credits: 1	Length: 18 weeks				
Students analyze the primary functions of releading and controlling. They develop a for aspects of business to become competent main simulations.	andation in the economic, financial, technol	logical, international, social and ethical				
★ Students can earn a Certificate of Excel list of skills, please visit <u>goo.gl/9VM3a</u>	llence by achieving a specific list of real worl a <u>9</u>	d skills related to this course. For the				
GLOBAL BUSINESS / HUMAN RESOURCES N Course: 1201CT & 1202CT OR 1201,1202	AANAGEMENT (Offered at BB & HC) Credits: 1	Placement: 10-12 Length: 18 weeks				
In Global Business students will implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and to make a successful transition to the workforce and postsecondary education. Students will apply technical skills to address global business applications of emerging technologies. Students will develop a foundation in the economic, financial, technological, international, social, and ethical aspects of business to become competent consumers, employees, and entrepreneurs. Students will enhance reading, writing, computing, communication and reasoning skills and apply them to the business environment. In Human Resource Managements, students analyze the primary functions of human resources management, which include recruitment, selection, training, development and compensation. Topics will incorporate social responsibility of business and industry to its employees. Courses must be taken together at BBIA.						
Both Global Business (1201) and Human Res and do not have to be taken together. They n		he home campus as 0.5 credit courses				
ENTREPRENEURSHIP II Course: 1721CT	Credits: 1	Placement: 11-12 Length: 18 weeks				

Students will build on what they learned in Entrepreneurship I. The primary focus of the course is for students to analyze a business opportunity, developing a business plan and developing a plan to organize and promote the business and its products and services. In addition, students understand the capital required, the return on investment desired and the potential for profit. Students are encouraged to participate in DECA, a co-curricular youth organization for Marketing, Management and Entrepreneurship.

Placement: 10-12

Length: 18 weeks

FASHION MARKETING / ADVERTISING Course: 1515CT & 1711CT

Fashion Marketing is designed to provide students with the knowledge of the various business functions in the fashion industry. Students will gain a working knowledge of promotion, textiles, merchandising, mathematics, selling, visual merchandising and career opportunities in the field of fashion marketing. Advertising is designed as a comprehensive introduction to the principles

Credits: 1

	Level IV	
SECURITIES & INVESTMENTS Course: 1225CT	Credits: 1	Placement: 9-12 Length: 18 weeks
firms, the trading process, credit and mar understanding of how a securities firm serve	ns of a modern securities organization. Throu gin practices, automated processes, and gov ices its customers and plays an important role nomics, accounting, and data processing to the mes.	ernment regulations, students gain an in our economy. Students are given the
PRACTICUM IN BUSINESS MANAGEMENT Course: 1251CA/CB	Credits: 2	Placement: 11-12 Length: 36 weeks
implement personal and interpersonal skills successful transition to the workforce or pos of emerging technologies. Students enhance the business environment. Students incorp	supervised practical application of previously s to strengthen individual performance in the stsecondary education. Students apply technical reading, writing, computing, communication porate a broad base of knowledge that inclu- ions of business to make appropriate busines 1 .	workplace and in society and to make a al skills to address business applications and reasoning skills and apply them to ades the legal, managerial, marketing,
ADVANCED MARKETING Course: 1367CT	Credits: 1	Placement: 11-12 Length: 18 weeks
and skills that help them to be proficient in of marketing information management, pricit Students integrate skills from academic subju- to make responsible decisions. Students par	at focuses on the customer to generate a profita one or more of the marketing functional areas ng, product, planning, promotion, purchasin ects, information technology, interpersonal con rticipate in leadership and career developmen organization for Marketing, Management ar ice.	associated with distribution, financing, lg, risk management and selling skills. mmunication and management training t activities. Students are encouraged to
PRACTICUM IN MARKETING Course: 1364CA/CB	Credits: 2	Placement: 11-12 Length: 36 weeks
covers technology, communication, and cus application of previously studied knowledge the nature and level of experience. The pract	b them become proficient in one or more of the stomer-service skills. The practicum is design e and skills. Practicum experiences can occur ticum course is an unpaid experience for stude n marketing education. If a student does not ha	ed to give students supervised practical in a variety of locations appropriate to nts participating in a coherent sequence

and practices of advertising. Students will gain knowledge of techniques used in current advertising, including print, broadcast, and digital media. The course explores the social, cultural, ethical, and legal issues of advertising, historical influences, strategies, media decision processes as well as integrated marketing communications, and careers in advertising and sales promotion. Students are encouraged to participate in DECA, a co-curricular youth organization for Marketing, Management and

Supporting Courses

Credits: 0.5

TOUCH SYSTEM DATA ENTRY (Home Campus Only) Course: 1211

Entrepreneurship. These courses must be taken together.

This course will enhance reading, writing, computing, communication, and reasoning skills and apply them to the business environment. Students will need to apply touch system data entry for production of business documents. Students apply technical skills to address business applications of emerging technologies.

*Students must successfully pass certification test(s) in order to receive the certification.

Placement: 9~12 Length: 18 weeks



Public Service Endorsement Education & Training

			сии		ranning
	Te	aching & Traini	ng		
Levels	C	ourses			rting Courses
Level 1		es of Education A-B / 9-12		Principles of Human Services 1505A-B / 9-12 Not a prerequisite	
Level 2	1537	vth & Development CT / 10-12 rinciples of Education		Child 1520	Development DA-B / 10-12 <i>a prerequisite</i>
Level 3	1531CA Prerequisite: Human Grow	ional Practices A-CB / 11~12 th & Development AND Se Process 2 I Certification Possible	election		
Level 4	15350	ducation & Training CA-CB / 12 Practices AND Selection F	Process		
1 Semester Home Campu	2 Semester Home Campus	1 Semester Ben Barber	2 Seme	ester Ben Barber	College Course Weighted Credit
AND maintain an 80	t, an MISD student must con	time of the certification te 100% of the cost of the ce nplete a coherent sequenc study including at least 1	<i>est. If stud</i> <i>rtification</i> e for 4 o r	dents don't meet i n test. more credits that	the requirements above,
		Levell			
Course: 1536A/B Students will use self-k training career cluster.	TION & TRAINING (Home C nowledge and educational an Students will also gain an un career cluster. Students will	Credits: 1 nd career information to a nderstanding of the basic k	nowledg	e and skills essent	tial to careers within the
student s interest area.		Levell			
		LEVEIII			
HUMAN GROWTH & I Prerequisite: Principles Course: 1537CT	DEVELOPMENT s of Education & Training	Credits: 1			Placement: 10-12 Length: 18 weeks
perspectives, and comr	n examination of human d non physical, cognitive, emo- ostsecondary, one-semester i	tional and social developm	iental mil	estones. The cour	se covers material that is
		Level III			
Prerequisite: Human C Course: 1531CA/CB	TICES IN EDUCATION & TR.	Selection Process Credits: 2		tion Statesta	Placement: 11-12 Length: 36 weeks
grades Pre-K through g student's interest and ca a high academic stand	internship experience for stu grade 12. Internships will ta areer goals. Since students wi ard and professional behavio en Barber at least once a wee Educational Aide I*	ke place at schools within ill be functioning directly i or. Students must provide	the MISE n a teach	district and will district and will	be assigned based on the it is imperative to exhibit

Level IV

PRACTICUM IN EDUCATION & TRAINING Prerequisite: Instructional Practices AND Selection Process Course: 1535CA/CB Credits: 2

Practicum in Education and Training is a field-based internship that provides students background knowledge of child and adolescent development principles as well as principles of effective teaching and training practices. Students in the course work under the joint direction and supervision of both a teacher with knowledge of early childhood 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. Students will meet at Ben Barber at least once a week.

Supporting Courses

PRINCIPLES OF HUMAN SERVICES (Home Campus Only) Course: 1505A/B

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.

Credits: 1

CHILD DEVELOPMENT (Home Campus Only) Course: 1520A/B

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 development. Other topics include characteristics of quality child care, prevention of child abuse and investigate safe and healthy environments for children to grow and thrive properly.

Credits: 1

*Students must successfully pass certification test(s) in order to receive the certification.

Placement: 9~12 Length: 36 weeks

Placement: 10~12 Length: 36 weeks

Placement: 12 Length: 36 weeks



Public Service Endorsement Health Science

	_	Health	ıcare	Infor	matics			
Levels				(Courses			
Level 1		Medical Terminology 1443CT / 9-12						of Health Science
Level 2		BIM I 1240A-B / 9-12						
Level 3	Medical Co	Medical Coding & Billing 1460CT / 11-12 Prerequisite: BIM I AND Medical Terminology Medical Coding & Billing Specialist Certification Possible Stop the Bleed Certification Possible						
Level 4		World Health Research 1442CT / 11~12 Prerequisite: Biology & Chemistry						
					apeutic			
Levels				Cc	ourses			
Level 1			Prin		f Health Scie CT / 9~12	ence		
Level 2			N		Terminolog CT / 9~12	ÿ		
Level 3	Anatomy & Physiology 0810CT OR 8100A-B 11-12 Prerequisite: Biology & 1 other science credit AND Principles of Health Science Science Credit	Health Science Theory 1411CT 10-12 Prerequisite: Biology AND Principles of Health Science CPR Certification Possible	Medical MicrobiologyPathophysio8120CT8125CT10~1211~12Prerequisite:PrerequisitPrerequisite:PrerequisitBiology &Biology &ChemistryChemistryANDPrinciples ofHealth ScienceScience Creation		CT 11-12 .2 Prerequisite: y & Principles of y & Health Science Phlebotomy Cience Certification		1426CT 11-12 Prerequisite: f Principles of ce Health Science Certified EKG/ECG	
Level 4	Pharmacy Technician* 1421CA-CB 12 Prerequisite: Health Science Theory AND an Level 3 HS Coun AND selection process Certified Pharmacy Technician Certification Possible	e 1451CA 12 Prerequiny Health So rse Theory Al Level 3 HS AND selo proco Emergo Media	cal cian* A-CB hisite: cience ND any Course ection ess ency cal n Basic ation	Aide/ 14 Pren Heali Theor Level 2 AND Certi Aide, Certi	Tied Nurse Assistant 471CT 12 <i>requisite:</i> <i>th Science</i> <i>y AND any</i> <i>3 HS Course</i> <i>9 selection</i> <i>rocess</i> fied Nurse /Assistant tification ossible	Te 14 Pro Hea Th Phie EKC selec Pa To Ce	tient Care chnician* 13CA-CB 12 erequisite: Alth Science eory AND ebotomy OR G/ECG AND tion process tient Care echnician rtification Possible	Clinical Internship* 1431CA-CB 12 Prerequisite: Health Science Theory AND any Level 3 HS Course AND selection process
*Students canno		iy AND EKG/EG	CG. Stud					ernship. Students
	can	not take Pharm	lacy Tech	1 & Patie	ent Care Tec	nniciai	1.	
1 Semester Home Campus	2 Semester H Campus	ome 1 Sem	iester Ben 1	Barber	2 Semes	ter Ben I	Barber	College Course Weighted Credit

The district will pay 100% of the cost of the certification test if students can show mastery by passing a certification practice test AND maintain an 80+ overall course grade 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. 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 Levell PRINCIPLES OF HEALTH SCIENCE Placement: 9~12 Course: 1410CT Credits: 1 Length: 18 weeks This course provides an introduction to health care careers, education and skills needed to attain various health care degrees, and insight into the functionality of teamwork in health care. Students will have the opportunity to explore: how to build effective communication skills, examine medical ethics and legal responsibilities, discuss standards of client care and safety and medical language as used in a variety of health care environments. This course will enhance the student's ability to successfully secure employment or pursue advanced education in health care and prepare for the transition to clinical or work-based experiences in health care. Level II BUSINESS INFORMATION MANAGEMENT I (Home Campus Only) Placement: 9~12 Course: 1240A/B Credits: 1 Length: 36 weeks This course provides students the opportunity to implement personal and interpersonal skills to strengthen individual performance in the workplace and/or postsecondary education. Students apply technical skills, using Microsoft Office to create wordprocessing documents, develop a spreadsheet, formulate a database, and make an electronic presentation. MEDICAL TERMINOLOGY Placement: 9~12 Course: 1443CT Credits: 1 Length: 18 weeks Students are introduced to the language of medicine while learning possible lifesaving techniques of CPR and First Aid. Students will learn the structure of medical terms and will build upon this foundation through each body system unit of study. Special focus will be on the application and use of medical language and terminology as it pertains to body systems related to cardiopulmonary emergencies as well as caring for sudden illness and injuries. Level III **MEDICAL BILLING & CODING** Placement 11~12 Prerequisite: BIM I AND Medical Terminology Length: 18 weeks Credits: 1 Course: 1460CT The medical billing and coding program will offer 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. 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. Upon successful completion of the Medical Billing and Coding Program, students will be qualified to sit the national certification exam through the National Certified Insurance Coding Specialist. (NCICS)

Possible Certification: Medical Coding & Billing Specialist AND Stop the Bleed* Student must be 16 to take certification exam.

ANATOMY & PHYSIOLOGY Prerequisite: Biology AND 1 other science AND Principles of Health Science Course: 0810CT BB/8100A-B HC Credits: 1

Students will study the structures and functions of the human body systems. 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. Note: Course can be used as an additional science credit for graduation.

HEALTH SCIENCE THEORY Prerequisite: Biology and Principles of Health Science Course: 1411CT

Credits: 1

Placement: 10~12 Length: 18 weeks

Length: 18wks BB/36wks HC

Placement: 11-12

The Health Science Theory course is designed to provide for the development of advanced knowledge and skills related to a wide variety of health careers. Students will employ hands-on experiences for continued knowledge and skill development. To pursue a career in the health science industry, students should recognize, learn to reason, think critically, make decisions, solve problems, and communicate effectively. Students should recognize that quality health care depends on the ability to work well with others.

MEDICAL MICROBIOLOGY Prerequisite: Biology AND Chemistry AND Princi Course: 8120CT	ples of Health Science Credits: 1	Placement: 10-12 Length: 18 weeks
Students will study the relationships of microorgate to disease prevention by learning the chain of organisms will be identified to assist in the underst can be used as an additional science credit for grad	infection, asepsis and standard pre- tanding of specific diseases, causative	ecautions. Pathogenic and nonpathogenic
PATHOPHYSIOLOGY Prerequisite: Biology AND Chemistry AND Princi Course: 8125CT	ples of Health Science Credits: 1	Placement: 11~12 Length: 18 weeks
Students will study disease processes and how hudiseases. Students will differentiate between norr credit for graduation.		
PHLEBOTOMY Prerequisite: Principles of Health Science Course: 1424CT	Credits: 1	Placement: 11~12 Length: 18 weeks
This course is designed to teach the knowledge in blood specimens and venipuncture required to be theory and hands-on instruction and prepares stu Possible Certification: Phlebotomy Technician*	come a Phlebotomy technician. The	Phlebotomy Technician program includes
Students cannot take Phlebotomy and EKG/ECG.		
EKG/ECG Prerequisite: Principles of Health Science Course: 1426CT	Credits: 1	Placement: 11-12 Length: 18 weeks
This course introduces the basic principles of elec heart. Students learn how to record EKGs, vital sig myocardial infarctions are associated. Possible Certification: EKG/ECG Technician*		
Students cannot take EKG/ECG and Phlebotomy.		
	Level IV	
WORLD HEALTH Prerequisite: Biology AND Chemistry Course: 1442CT	Credits: 1	Placement: 11-12 Length: 18 weeks
This is a research-based course that examines m medical problems. This course is designed to i		

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 will inspire ideas for appropriate technological solutions to global health care issues. This class will also provide students with the opportunity to delve deep in 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: the history of disease and technology; health care systems around the world; 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 major portion of this course revolves around a lengthy research project that allows students the opportunity to work in groups to explore health issues that affect a least-developed country.

PHARMACY TECHNICIAN Prerequisite: Health Science Theory AND any Level 3 course AND selection process Course: 1421CA/CB Credits: 2

This course is a prerequisite for ALL Health Science Practicum courses.

Possible Certification: CPR*

Placement: 12 Length: 36 weeks

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 who enroll

in this course will be required to participate in the 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. Twenty (20) externship hours will be required of each participant. Students will be required to pay for their own uniform. Students should be prepared to submit to a criminal background check, drug screening, TB testing, and to present proof of current immunizations including current flu shot and valid Social Security card.

Students cannot take Pharmacy Technician and Patient Care Technician.

Course Fees: a \$25 activity 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 (\$107). Possible Certification: Certified Pharmacy Technician* Student must be 17 & HS Graduate to take certification exam

EMERGENCY MEDICAL TECHNICIAN Prerequisite: Health Science Theory AND Level 3 course AND selection process Course: 1451CA/CB Credits: 3

Placement: 12 Length: 36 weeks

This course is designed to prepare the student to perform minimum entry-level emergency care in the out of hospital environment. At the end of this course, successful students will be eligible to sit for National certification testing as an Emergency Medical Technician-Basic. Emphasis includes recognizing the nature and seriousness of the patient's condition, administering appropriate emergency medical care, lifting, moving and positioning the patient to minimize discomfort and prevent further injury, and to perform these duties safely and effectively. Students will complete clinical hours in the hospital and ambulance ride outs with the MFD post-graduation to be eligible for the exam. Students should be prepared to submit to a criminal background check, drug screening, TB testing, and to present proof of current immunizations including current flu shot and valid Social Security card. The classroom portion of this course will be taught at the Ben Barber campus. Students will be required to provide their own transportation to clinical sites.

Students cannot take EMT and Clinical Internship.

Course Fee: A \$100.00 activity fee to help cover cost of Liability Insurance and TB test AND security background check and drug screening through MedStar. A uniform is required for this course. Students are required to buy pants, shoes, undershirt, watch and belt.

Possible Certification: Emergency Medical Technician*

Student must be 18 & HS Graduate to take certification exam

CERTIFIED NURSING AIDE Prerequisite: Health Science Theory AND any Level 3 course AND selection process Course: 1471CT Credits: 1

This course, approved by the Texas Department of Aging and Disability Services, is designed to prepare students for a nursing - related career in healthcare facilities. Students must have an original Social Security card, successfully complete this course and pass the state written and skills performance exams to be listed in the Texas Registry. The classroom portion of the course will be taught at the Ben Barber campus and the clinical experience will be held off campus in a healthcare facility. Students will be provided transportation to the clinical site. All students will be required to utilize this transportation. Students should be prepared to submit to a criminal background check, drug screening, TB testing, and to present proof of current immunizations including current flu shot. All candidates must provide a valid Social Security card.

Course Fee: A \$25.00 activity fee to help cover cost of Liability Insurance, TB test, Urine drug screening, background checks and patch.

Possible Certification: Certified Nursing Assistant* Student must be 16 to take certification exam

PATIENT CARE TECHNICIAN

Prerequisite: Health Science Theory AND Phlebotomy OR EKG/ECG AND selection process Course: 1413CA/CB Credits: 2 Placement: 12 Length: 36 weeks

Placement: 12

Length: 18 weeks

This course prepares students for the Patient Care Technician certification exam and the responsibilities of being a Patient Care Technician. The responsibilities include helping patients with procedures such as taking vital signs, performing electrocardiography (ECG), blood draws and other needs. In addition, students will learn about providing beside care, interactions with patients, nurses, doctors and patient's family, conduct catheterizations, saline locks and wound care procedures. All students will be required to utilize this transportation. Students should be prepared to submit to a criminal background check, drug screening, TB testing, and to present proof of current immunizations including current flu shot. All candidates must provide a valid Social Security card.

Students cannot take Patient Care Technician and Pharmacy Technician.

Course Fee: A \$25.00 activity fee to help cover cost of Liability Insurance, TB test, Urine drug screening, background checks and patch.

Possible Certification: Patient Care Technician*

CLINICAL INTERNSHIP Prerequisite: Health Theory AND any Level 3 course AND Selection Process Course: 1431CA/CB Credits: 2

This is an internship program for specific health professions. It is designed for those students who desire further study in a specific health specialty. Students are responsible for individualized study supervised by coordinator and clinical supervisor(s). Students are encouraged to participate in Health Occupations Students of America (HOSA), a co-curricular youth organization. Students are directed regarding participation in community service and in HOSA competition/activities. Students will learn multiple advanced practice skills as well as completing multiple research-based projects dealing with various topics related to healthcare. **Students will be expected to provide their own transportation to and from the internship sites**. Students should be prepared to submit to a criminal background check, drug screening, TB testing, and to present proof of current immunizations including current flu shot and valid Social Security card. The classroom portion of this course will be taught at the Ben Barber campus.

Course Fee: A \$25.00 activity fee to help cover cost of Liability Insurance, TB test, Urine drug screening, background checks and patch.

Students cannot take Clinical Internship and EMT.

*Students must successfully pass certification test(s) in order to receive the certification.



Business & Industry Endorsement Hospitality & Tourism

Culinary Arts					
Levels		Cour			Supporting Courses
Level 1	1542	<mark>fuction to</mark> CT OR 15	Culinary Arts 542A-B / 9-12 r AND Home Ca		
Level 2	Prerequisite	e: Introduc	ry Arts CB / 10~12 ction to Culinary Is Certification F		
Level 3	1	558CA-C <i>Yulinary Ar</i>	ulinary Arts CB / 11-12 <i>rts AND Selectio</i> ry Cook Certifici		
Level 4	1547CA-CB / 11-1 Prerequisite: Culinary Art Selection Process	Practicum in Culinary Arts I1547CA-CB / 11-12Prerequisite: Culinary Arts AND Selection ProcessServSafe Manager Certification			
1 Semester Home Campu	s 2 Semester Home Campus	1 Semes	ter Ben Barber	2 Semester Ben Barber	Ben Barber or Home Campus
The district will pay 100% of the cost of the certification test if students can show mastery by passing a certification practice test AND maintain an 80+ overall course grade 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.					
To earn an endorsemen	it, an MISD student must con the same program of s	nplete a co	pherent sequenc	e for 4 or more credits t	hat consist of 2 courses in
		-	evell		
INTRODUCTION TO CULINARY ARTS (Offered at BB & HC) Placement: 9-12 Prerequisite: Recommended that 11th/12th graders take on home campus and 9th/10th take at BB Length: 18 weeks Course: 1542CT/1542CA-CB Credits: 1 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.					
Level II					
CULINARY ARTS Prerequisite: Intro to C Course: 1546CA/CB	Culinary Arts	C	Credits: 2		Placement: 10-12 Length: 36 weeks
This is a laboratory course designed to provide specific training leading to enhanced knowledge and skills for employment in the area of Culinary Arts. Students will develop skills in culinary and baking techniques, as well as prepared catered events. Students will also learn prepping techniques for restaurant operations, which will be used in future courses involving the on-campus restaurant, Savvy's Bistro.					
	nt is required to purchase a u Certified Fundamentals*	niform for	r \$50.00		
		Le	evel III		
ADVANCED CULINAR Prerequisite: Culinary Course: 1558CA/CB	Y ARTS Arts AND Selection Process	Cr	edits: 2		Placement: 11-12 Length: 36 weeks

This course will extend content and enhance skills introduced in Culinary Arts by in-depth instruction of industry-driven standards in order to prepare students for success in higher education, certifications and/or immediate employment. Students will continue to develop in-depth skills in culinary and baking techniques, as well as prepare catered events. Students will also learn prepping techniques for restaurant operations which will be used in future courses involving the on-campus restaurant, Savvy's Bistro and be introduced to advanced cake assembly, laminated dough, chocolate work, plating and specialty showpieces. Students will also taste and evaluate products they create in class to enhance their understanding of the course material.

Course Fee: Each student is required to wear their uniform or purchase one for \$50.00 Possible Certification: Certified Fundamentals Pastry Cook*

Level IV

PRACTICUM IN CULINARY ARTS I Prerequisite: Culinary Arts AND Selection Process Course: 1547CA/CB

This advanced laboratory course is a unique practicum that provides occupationally specific opportunities for students to participate in a learning experience that combines classroom instruction with actual business and industry career experiences. Students will manage the daily operations of the on-campus restaurant, Savvy's Bistro. Students will be instructed in efficient back-of-the-house operations as well as front-of-the-house operations. Students will participate in a broad range of experiences related to the culinary arts industry.

Credits: 2

Course Fee: Each student is required to wear their uniform or purchase one for \$50.00 Possible Certification: ServSafe Manager*

PRSCITUM IN CULINARY ARTS II Prerequisite: Culinary Arts AND Selection Process Course: 1549CA/CB

This advanced laboratory course provides high level instruction in the kitchen/restaurant management. Students will receive extensive training in food preparation, inventory control, food cost and profit/loss analysis; all of which assist/support the student operated restaurant, Savvy's Bistro. **Students are required to be ServSafe certified**.

Credits: 2

*Students must successfully pass certification test(s) in order to receive the certification.

Placement: 11~12 Length: 36 weeks

Placement: 12 Length: 36 weeks



Public Service Endorsement Human Services

		numari Services			ACES
Family & Community Services					
Levels Courses					
Level 1	Principles of Human Services 1505A-B / 9 - 12	Profess Commun 2246 /	ications 9 ~ 12	Interpersonal Studies 1517 / 9 ~ 12	Dollars & Sense 1220 / 9 - 12
Level 2	Lifetime Nutrition & We 1513 / 9 -12		Educ	pment C / 10 ~12 1 Principles of ation	hild Development 520A-B / 10 -12
Level 3	Prerequia		1514A-B	Mental Health / 11-12 or II in Family & Consumer	• Science
Level 4				this level at this time	
					College Course
1 Semester Home Campu			r Ben Barber	2 Semester Ben Barber	Weighted Credit
To earn an endorsemen	it, an MISD student must co			ce for 4 or more credits th I advanced CTE course	at consist of 2 courses in
	the same program of	-	vell		
		20	1011		
PRINCIPLES OF HUMAN SERVICES (Home Campus Only) Course: 1505A/B Credits: 1					Placement: 9~12 Length: 36 weeks
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.					
PROFESSIONAL COMMUNICATIONS (Home Campus Only) Course: 2246 Credits: 0.5				Placement: 9-12 Length: 18 weeks	
Professional Communications blends written, oral and graphic communication in a career-based environment. Careers in the global economy require individuals to be creative and have a strong background in computer and technology applications, a strong and solid academic foundation and a proficiency in professional oral and written communication. Within this context, students will be expected to develop and expand the ability to write, read, edit, speak, listen, apply software applications, manipulate computer graphics and conduct Internet research. Students who are enrolled in this course will receive Professional Communications credit, which satisfies this ¹ / ₂ credit graduation requirement.					
INTERPERSONAL STUDIES (Home Campus Only) Course: 1517 Credits: 0.5				Placement: 9-12 Length: 18 weeks	
Interpersonal Studies examines how the relationships between individuals and among family members significantly affect the quality of life. Students use knowledge and skills in family studies and human development to enhance personal development, foster quality relationships, promote wellness of family members, manage multiple adult roles, and pursue careers related to counseling and mental health services.					
DOLLARS & SENSE (Ho Course: 1220				Placement: 9~12 Length: 18 weeks	
	decision-making skills relat balance a check book, and o				ehold budget, understand
		Lev	vel II		

LIFETIME NUTRITION & WELLNESS (Home Campus Only)	I	
Course: 1513	Credits:	0.5

Placement: 9~12 Length: 18 weeks

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.

HUMAN GROWTH & DEVELOPMENT Prerequisite: Principles of Education & Training Course: 1537CT

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

Credits: 1

CHILD DEVELOPMENT (Home Campus Only) Course: 1520A/B

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 development. Other topics include characteristics of guality child care, prevention of child abuse and investigate safe and healthy environments for children to grow and thrive properly.

Level III

COUNSELING & MENTAL HEALTH (Home Campus Only) Prerequisite: 2 credits from Level I or II in Family & Consumer Science Credits: 1 Course: 1514A/B

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

Placement: 11~12 Length: 36 weeks

Placement: 10-12

Length: 18 weeks

Placement: 10~12

Length: 36 weeks

Credits: 1



Business & Industry AND STEM Endorsement Information Technology

	Net	working Syste	ems		
Levels		Cour	'Ses		
Level 1	Computer Scient 1050CT / Prerequisite: 1 LOTE Cre	9~12 Algebra I	Principles of Information Technology 1850CT / 9-12		
Level 2	AP Computer Scient 1266CT / Prerequisite: 2	9~12	Computer M. 1829CA-CE <i>CompTIA A+ Cert</i> a	3 / 10-12 ification Possible	
Level 3			Networ 1831CA-CE Prerequisite: Comp CompTIA Network + (3 / 11-12 uter Maintenance	
Level 4	4 CompTIA Network + Certification Possible Practicum in Information Technology 1851CA-CB / 12 Prerequisite: 2 courses in Information Technology OR STEM Oracle Certified Database Associate Certification Possible				
1 Semester Home Campu	s 2 Semester Home Campus	1 Semester Ben Barber	2 Semester Ben Barber	College Course	
				Weighted Credit	
The district will pay 100% of the cost of the certification test if students can show mastery by passing a certification practice test AND maintain an 80+ overall course grade 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.					
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					
		Levell			
COMPUTER SCIENCE I Prerequisite: Algebra I Course: 1050CT		Credits: 1		Placement: 9-12 Length: 18 weeks	
Computer Science I will foster students' creativity and innovation by presenting opportunities to design, implement, and present meaningful programs through a variety of media. Students will collaborate with one another, their instructor, and various electronic communities to solve the problems presented throughout the course. Through data analysis, students will identify task requirements, plan search strategies, and use computer science concepts to access, analyze, and evaluate information needed to solve problems. By using computer science knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will gain an understanding of the principles of computer science through the study of technology operations, systems, and concepts. This is a Project Lead the Way course. Note: Course can be used as a LOTE credit for graduation.					
PRINCIPLES OF INFORM Course: 1850CT	MATION TECHNOLOGY	Credits: 1		Placement: 9-12 Length: 18 weeks	
Students develop computer literacy skills to adapt to emerging technologies used in the global marketplace. Students implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. Students enhance reading, writing, computing, communication and reasoning skills and apply them to the information technology environment. Students investigate the vast wealth of career opportunities in the Information Technology field. Students learn beginning computer programming skills and the program design process.					
		Level II			
AP COMPUTER SCIENC Prerequisite: Algebra I Course: 1266CT		Credits: 1		Placement: 9-12 Length: 18 weeks	
Students will learn abo	Students will learn about the computing tools that are used every day. Students will foster their creativity and innovation through				

Students will learn about the computing tools that are used every day. Students will foster their creativity and innovation through opportunities to design, implement, and present solutions to real-world problems. Students will collaborate and use computer science concepts to access, analyze, and evaluate information needed to solve problems. Students will learn the problem-solving

and reasoning skills that are the foundation of computer work of individuals and groups in solving problems, knowledge, create solutions, and evaluate the results. regulations and by practicing integrity and respect. Stu through the study of technology operations and concepts	students will select t Students will learn d adents will gain an u	the technology appropriate for the task, synthesize digital citizenship by researching current laws and
COMPUTER MAINTENANCE Course: 1829CA/CB	Credits: 2	Placement: 10~12 Length: 36 weeks
This course prepares students for jobs in the Information preventative maintenance, basic networking, installation research current technology. Students will demonstrate Possible Certification: CompTIA A+*	n, troubleshooting, cc	ommunication and professionalism. Students also
	Level III	
NETWORKING Prerequisite: Computer Maintenance Course: 1831CA/CB	Credits: 2	Placement: 11-12 Length: 36 weeks
This course provides the student with theory and hands software conflicts. Students practice SCAN Skills (industry and skills related to telecommunications and data netw career development. To prepare for success, students will to a variety of settings and problems. Possible Certification: CompTIA Network*	y-defined employment orking technologies	nt skills). Students develop knowledge of the concepts and practices in order to apply them to personal or
	Level IV	
PRACTICUM IN INFORMATION TECHNOLOGY Prerequisite: 2 courses in Information Technology OR SI Course: 1851CA/CB	IEM Credits: 2	Placement: 12 Length: 36 weeks
This personalized independent study course will allow opportunities for advanced learning beyond the classro experiences such as competition and or product innova and development. If a student does not have transportat Possible Certification: Oracle Certified Database Associat	oom environment. St ition, classroom teach tion, opportunities w i	tudents will engage in a variety of industry relevant ning opportunities, and/or advanced topics research

Weighted Credit *Students must successfully pass certification test(s) in order to receive the certification.



Public Service Endorsement Law & Public Service

	~~~ ~		LawΠ		Service	
	Law E	inforcemer	ıt			
Levels		Cours	ses			
Level 1	Principles c	Principles of Law, Public Safety, Corrections & Security 9400CT / 9-12				
Level 2	Law Enforcement I 9410CT / 9~12 Prerequisite: Principles of Law FEMA – Intro to Incident Command Certification Possible	9450CT / 9-12 Prerequisite: Principles of Law Non-Commissioned Security Officer Level II Certification		minal Investigation 9411CT / 10-12 uisite: Principles of Law at Every Officer Should w About DNA Evidence ertification Possible		
Level 3	Law Enforcement II 9420CT / 10-12 Prerequisite: Law Enforcement I IAED Emergency Telecommunicator Certification Possible	Correctional Services 9440CT / 12 Prerequisite: Principals of Law Correctional Officer		( Law	rensic Psychology 9431CT / 11-12 7 <i>101: Legal Guide for</i> sic Expert Certification Possible	
Level 4	Practicum in Law, Public Safety, Corrections & Security 9422CA-CB / 11-12	Counseling & Mental Health Psych 1514A-B / 11-12 Cri		Pi Pi Psycho <b>Crin</b>	Forensic Science 9430CT / 11-12 rerequisite: Forensic plogy AND Biology AND Chemistry re Scene & DNA Basics certification Possible Science Credit	
	Leg	al Studies				
Levels	Courses			Supporting Courses		
Level 1	Principles of Law, Public Safety, Corrections & Security 9400CT / 9-12					
Level 2	Court Systems & Practices         Business Law           9415CT / 10-12         1215CT / 11-12					
Level 3	941 Prerequisite: C	Advanced Court Systems 9416CT / 11~12 Prerequisite: Court Systems & Practices				
Level 4 Practicum in Law, Public Safety, Corrections & Security 9422CA-CB / 11-12						
1 Semester Home Campus	Campus	nester Ben Barber	2 Semester Ben		College Course Weighted Credit	
The district will pay test AND maintain a	100% of the cost of the certification an 80+ overall course grade at the fine above, they must pay 100 nt, an MISD student must complete in the same program of study	ime of the certificat <u>7% of the cost of th</u> a coherent sequer	<i>tion test. If stude</i> <i>e certification tes</i> nce for 4 or more	ents don't st. credits t	g a certification practice meet the requirements	
	P.03	Levell				
RINCIPLES OF LAW, P Course: 9400CT	UBLIC SAFETY, CORRECATIONS & S	SECURITY Credits: 1			Placement: 9-12 Length:18 weeks	
ervices. Student will e gencies of fire and em	students to professions in law enfor- xamine the roles and responsibilitie ergency services. Emphasis is place	s of police, courts, d on constitutional	corrections, priv laws for crimina	ate secur il procedi	ity and protective ures that are building	

agencies of fire and emergency services. Emphasis is placed on constitutional laws for criminal procedures that are building blocks for a career in the criminal justice system. The course provides student with an overview of the skills necessary for careers in law enforcement, fire service, security and corrections.

	Level II	
LAW ENFORCEMENT I Prerequisite: Principles of Law, Public Safety Course: 9410CT	Credits: 1	Placement: 9-12 Length: 18 weeks
This course is an overview of the history, orga includes the role of constitutional law, the U classification and elements of crime. Compone their knowledge and skills into a scenario-based	nited States legal system, criminal law	w, law enforcement terminology, and the
Course Fee: Each student is required to purchase Possible Certifications: FEMA Intro to Incident C		
FEDERAL LAW ENFORCEMENT & PROTECTIVE Prerequisite: Principles of Law, Public Safety Course: 9450CT	SERVICES Credits: 1	Placement: 9-12 Length: 18 weeks
Federal Law Enforcement and Protective Services services for federal law enforcement and protector organizations with a focus on security measures security, to provide information assurance, and Possible Certifications: Non-Commissioned Security	ctive services. The course provides an s used to protect lives, property, and put to prevent cybercrime.	overview of security elements and types of
CRIMINAL INVESTIGATION Prerequisite: Principles of Law, Public Safety Course: 9411CT	Credits: 1	Placement: 10-12 Length: 18 weeks
Criminal Investigation is a course that introduce basic functions of criminal investigations and p Students will learn terminology and investigative collection, fingerprinting, and courtroom present analyze evidence such as fingerprint analysis, b firearms and ammunition, blood spatter, digital Possible Certifications: What every Investigator	procedures and will learn how to inver- ve procedures related to criminal inve- ntation. Through case studies and simu- odily fluids, hairs, fibers, shoe and tire evidence, and other types of evidence.	estigate or follow up during investigations. stigation, crime scene processing, evidence lated crime scenes, students will collect and impressions, bite marks, drugs, tool marks,
COURT SYSTEMS & PRACTICES Course: 9415CT	Credits: 1	Placement: 10~12 Length: 18 weeks
Court Systems & Practices is an overview of the and the trial process from pretrial to sentencing law for criminal procedures such as search and	and examines the types and rules of evi	dence. Emphasis is placed on constitutional
BUSINESS LAW Course: 1215CT	Credits: 1	Placement: 11-12 Length: 18 weeks
Students analyze the social responsibility of busin business ethics, torts, contracts, negotiable fina concept of agency and employment and real pro-	ancial instruments, personal property,	
	LevelIII	
LAW ENFORCEMENT II Prerequisite: Law Enforcement I Course: 9420CT	Credits: 1	Placement: 10-12 Length: 18 weeks
Law Enforcement II provides the knowledge and the ethical and legal responsibilities, operation of Components of this course emulate more extens skills into a scenario-based learning environm Certification.	of police and emergency telecommunications of a Police Academy whe	ation equipment, and courtroom testimony. re students will apply their knowledge and
Course Fee: Each student is required to purchase Possible Certifications: IAED Emergency Telecon		
CORRECTIONAL SERVICES		Placement: 12

In Correctional Services, students prepare for the certificate learn the role and responsibilities of a correctional office tactics, restraint techniques, and first aid procedures as us alternatives to institutionalization. Possible Certification: Corrections Officer* Student must	cer; discuss relevant rules, regulations, and laws; sed in the correctional setting. The student will and	and discuss defensive	
FORENSIC PSYCHOLOGY Course: 9431CT	Credits: 1	Placement: 11~12 Length: 18 weeks	
Forensic Psychology uses and applies basic skills develope a structured and scientific approach to investigative analy activity based upon mathematical/scientific data versus a Possible Certifications: Law 101: Legal Guide for Forensic	rsis, which enables police or law enforcement offic abstract intuition.	l scenarios resulting in ials to predict criminal	
ADVANCED COURT SYSTEMS Prerequisite: Court Systems & Practices Course: 9416CT	Credits: 1	Placement: 11~12 Length: 18 weeks	
This course is a more in depth look of the federal and sta procedures such as search and seizure, stop and frisk ar compete in mock trial competitions.			
	Level IV		
PRACTICUM IN LAW, PUBLIC SAFETY, CORRECTIONS & Course: 9422CA/CB	SECURITY Credits: 2	Placement: 11~12 Length: 36 weeks	
Students will have supervised practical application of previously studied knowledge and skills in Law, Public Safety, Corrections, and Security by participating in a non-paid Internship that is related to their interest within the Criminal Justice Field. Partners include the MISD Police Department, Local Government Agencies, Local Attorneys, Texas Department of Criminal Justice, Texas Attorney General and Tarrant County Sheriff's Department. If a student does not have transportation, opportunities will be limited.			
COUNSELING & MENTAL HEALTH (Home Campus Only) Course: 1514A/B	Credits: 1	Placement: 11~12 Length: 36 weeks	
Students model the knowledge and skills necessary to environments. Students are expected to apply knowledge their actions. Professional integrity in counseling and		er through simulated	

FORENSIC SCIENCE Prerequisite: Forensic Psychology AND Biology AND Chemistry Course: 9430CT Credit: 1

This course 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. Student will learn terminology and investigative procedures related to crime scene, questioning, interviewing, criminal behavior characteristics, truth detection and scientific procedures used to solve crimes. Using scientific methods, students will collect and analyze evidence through case studies, simulated crime scenes and laboratory applications such as fingerprint analysis, ballistics, blood spatter analysis and DNA. Students will learn the history, legal aspects, and career options for forensic science. Note: Course can be used as an additional science credit for graduation. Possible Certification: Crime Scene & DNA Basics*

*Students must successfully pass certification test(s) in order to receive the certification.

# Prerequisite: Principles of Law

Course: 9440CT

Credits: 1

Placement: 11-12 Length: 18 weeks



# Manufacturing

Manufacturing Technology					
Levels	Courses			Supporting Courses	
Level 1	Principles of Manufacturing 1809CT / 9~12				
Level 2	Diversified Manufacturing I Prerequisites: Principles of Manufacturing 1828CT / 9~12		<b>Robotics</b> 1856CT / 9-12		
Level 3	Precision Metal Manufacturing I 1806CA-CB / 10-12 Prerequisites: Principles of Manufacturing OSHA 10 Hour Certification Possible				
Level 4	Precision Metal Manufacturing II 1807CA-CB / 11-12 Prerequisite: Precision Metal Manufacturing I NIMS Level I CNC Milling Certification Possible	1822CA Prerequisite: I	Manufacturing A-CB / 12 Precision Metal Acturing I		
Welding					
Levels	Courses			Supporting Courses	
Level 1	Principles of Manufacturing 1809CT / 9-12				
Level 2	Welding I 1813 CA-CB / 10-12 Prerequisite: Principles of Manufacturing AWS D9.1 Sheet Metal AND OSHA 10 Hour Certification Possible		TCC WLDG 1428 Intro to Shielded Metal Arc Welding 0176 / 10-12 No TSI Requirement Weighted Credit TCC WLDG 1430 Intro to Gas Metal Arc Welding 0177 / 10-12 No TSI Requirement Weighted Credit		
Level 3	Welding II 1814CA-CB / 11-12 Prerequisites: Welding I AWS D1.1 Structural Steel Certification Possible			TCC WLDG 1317 Intro to Layout & Fabrication 0178 / 11-12 No TSI Requirement Weighted Credit	
Level 4	Practicum in Manufacturing 1822CA-CB / 12 Prerequisites: Welding I				
1 Semester Home Campus	2 Semester Home Campus 1 Sem	ester Ben Barber	2 Semester Ben Barber	College Course Weighted Credit	
The district will pay 100% of the cost of the certification test if students can show mastery by passing a certification practice test AND maintain an 80+ overall course grade 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.         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					
Level I					
				Placement: 9-12 Length: 18 weeks	
Students will gain knowledge and skills in the application, design, production, and assessment of products, services, and systems					

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. Students will prepare for the modern world, using 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. Students will apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings in a manufacturing setting. Students will gain an understanding of career opportunities available in manufacturing and what employers require to obtain and maintain employment in these careers. Level II DIVERSIFIED MANUFACTURING Placement: 9~12 Prerequisite: Principles of Manufacturing Length: 18 weeks Course: 1828CT Credit: 1 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. WELDING I Placement: 10~12 Prerequisite: Principles of Manufacturing Length: 36 weeks Credits: 2 Course: 1813CA/CB This course provides the knowledge, skills, and technology required for employment in metal technology systems. This course supports the integration of academic and technical knowledge and skills. Students will wire weld as well as use hand and power tools. The plasma cutter and the cutting torch will be also be introduced. Students will use measurement, drafting, welding and metal fabrication skills. Projects may require a lab fee. Possible Certification: AWS D9.1 Sheet Metal and OSHA 10 Hour* TCC WLDG 1428 Introduction to Shielded Metal Arc Welding and TCC WLDG 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. Level III Placement: 10-12 PRECISION METAL MANUFACTURING I Prerequisite: Principles of Manufacturing Length: 36 weeks Course: 1806CA/CB Credits: 2 This course 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. Projects may require a lab fee. Possible Certification: OSHA 10 Hour* WELDING II Placement: 11~12 Prerequisite: Welding I Length: 36 weeks Course: 1814CA/CB Credits: 2 This course builds upon knowledge and skills developed in Collision Repair and Welding. Students will develop advanced welding concepts and skills as they relate to personal career development. This course integrates academic and technical knowledge and skills. Students will have opportunities to reinforce, apply and transfer knowledge and skill to a variety of settings and problems. Projects may require a lab fee. Possible Certification: AWS D1.1 Structural Steel* TCC WLDG 1417 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. Level IV PRECISION METAL MANUFACTURING II Placement: 11~12 Prerequisite: Precision Metal Manufacturing I Length: 36 weeks Course: 1807CA/CB Credits: 2 This course trains students in the area of Computer Numerical Control (CNC) entry and intermediate machinist skills. This course will enhance technical knowledge and skills by allowing students the opportunity to explore career preparation through onsite internships with manufacturing business partners in our community. Student must provide their own transportation to participate in this course.

Possible Certification: NIMS Level 1 CNC Milling*

#### PRACTICUM IN MANUFACTURING Prerequisite: Welding I OR Precision Metal Manufacturing I Course: 1822CA/CB Credits: 2

Students will gain supervised practical application of previously studied knowledge and skills in metal manufacturing focusing on welding. Students in this course will be required to participate in an internship with a local business to give them real world work experience. The student is expected to go out and secure this internship within the first week of class. Students are expected to know how to use all equipment from previous courses as well as be able to read and interpret working drawings with weld symbols. If a student does not have transportation, opportunities will be limited.

Placement: 12

Length: 36 weeks

Supporting Courses				
ROBOTICS I Course: 1856CT	Credits: 1	Placement: 9~12 Length: 18 weeks		
Students enrolled in this course will demonstrate knowledge and skills necessary for the robotic and automation industry. Through implementation of the design process, students will transfer advanced academic skills to component designs in a project-based environment. Students will build prototypes or use simulation software to test their designs. Additionally, students explore career opportunities, employer expectations and educational needs in the robotic and automation industry.				
TCC WLDG 1428 INREO TO SHIELDED METAL . Prerequisite: Principles of Manufacturing Course: 0176	ARC WELDING 🛄 Credits: 1	Placement 10-12 Length: 18 weeks		
This course is an introduction to the shielded metal arc process. Emphasis is placed on power sources, electrode selection, oxy- fuel cutting and various joint designs. Instruction provided in SMAW fillet welding in various positions. Course offered at Ben Barber and is taught concurrently with Welding I (1813CA/CB).				
TCC WLDG 1430 INTRO TO GAS METAL ARC WELDING 🚇 Placement: 10-12				
Prerequisite: Principles of Manufacturing Course: 0177	Credits: 1	Length: 18 weeks		
This course teaches the principles of gas metal arc welding, set-up and use of GMAW equipment and safe use of tools and equipment. Instruction in various joint designs. Course offered at Ben Barber and is taught concurrently with Welding I (1813CA/CB).				
TCC WLDG 1417 INTRO TO LAYOUT & DESIGN Prerequisite: Welding I Course: 0178	1 🛄 Credits: 1	Placement 11-12 Length: 18 weeks		
This fundamental course in layout and fabrication related to the welding industry. Major emphasis is placed on structural shapes and use in construction. Course offered at Ben Barber and is taught concurrently with Welding II (1814CA/CB)				

Weighted Credit *Students must successfully pass certification test(s) in order to receive the certification

83		STEM Endorsement Science, Technology, Engineering & Math				
Cybersecurity						
Levels		•	Cou	rses		
Level 1	Foundations of CybersecurityPrinciples of Information1853CT / 9-121850CT / 9-12					
Level 2	1260CT / 9~12	PreAP Computer1050CT / 9-12AP ComputeProgramming IInternational International Int		nputer Science Principles 1266CT / 9-12		
Level 3	Networking 1831CA-CB / 10-12 CompTIA Network + Certification Possible					
Level 4	Comptation Result         Practicum in Information Technology         1851CA-CB / 12         Prerequisite: 2 courses in Information Technology OR STEM         Oracle Certified Database Associate Certification Possible					
		Engin	leering			
Levels		Cour	ses			Supporting Courses
Level 1	Introduction to Engineering (PLTW)Principles of Applied Engineering1835CT / 9 ~121610A-B / 9 ~12Weighted Credit1610A-B / 9 ~12		<b>Robotics</b> 1856CT / 9~12			
Level 2	Principles of Engineering (Engineering Science) (PLTW) 1836CT / 10-12 Prerequisite: Intro to Engineering AND Algebra I AND Biology AND Chemistry OR IPC Weighted Credit, Science Credit			AC/DC Electronics 1841CT / 10-12 OSHA 10 Hour Certification Possible		
Level 3	Computer Integrated Manufacturing (PLTW) 1838CT / 10-12 Prerequisite: Principles of Engineering Weighted Credit Local Certification Possible	Aeros Engineerin 1834CT Prerequisite of Engin	Aerospace Engineering (PLTW) 1834CT / 10-12 Prerequisite: Principles of Engineering Weighted Credit Civil Engineering Architecture (PLT 1861CT / 10-1 Prerequisite: Principles of Engineering Weighted Credit		PLTW) -12 nciples ing	Solid State Electronics 1843CT / 10-12 Prerequisite: AC/DC Electronics Local Certification Possible
Level 4	Edu-Drone I1860CT / 11-12Engineering Design &Prerequisite: Algebra I AND mustDevelopment (PLTW)have driver's license by the end of the semester1845CT / 11-12FAA Part 107 Remote Drone Pilot Certification PossiblePrerequisite: CIM OR AE OR CE Weighted Credit		)			
Programming & Software Development						
Levels	Courses					
Level 1	No courses offered at Level 1 in this program of study			udy		
Level 2	PreAP Computer 1050C1 / 9~12 Prerequisite: Algebra I		<b>PComputer Science</b> <b>Principles</b> 1266CT / 9-12			

Intervertor       Computer Programming       Prerequisite: Computer Sci         Weighted Credit       LOTE Credit         Local Certification Possible       Practicum in Information Technology	vience I				
Level 4 1851CA-CB / 11-12 Prerequisite: 2 courses in Information Technology OR STEM	1851CA-CB / 11-12				
Oracle Certified Database Associate Certification Possible	Oracle Certified Database Associate Certification Possible				
Campus Campus I Semester Ben Barber Barber Barber Weigh	ge Course hted Credit				
The district will pay 100% of the cost of the certification test if students can show mastery by passing a certification practice test AND maintain an 80+ overall course grade 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.					
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					
Project Lead the Way is a four year sequence of courses which, when combined with traditional mathematics and science courses in high school, introduces students to the scope, rigor, and discipline of engineering prior to entering college. However, those not intending to pursue further formal education will benefit greatly from taking some or all of the courses provided.					
Levell					
	Placement: 9~12 Length: 18 weeks				
In the Foundations of Cybersecurity course, students will develop the knowledge and skills needed to explore fundamental concepts related to the ethics, laws, and operations of cybersecurity. Students will examine trends and operations of cyberattacks, threats, and vulnerabilities. Students will review and explore security policies designed to mitigate risks. The skills obtained in this course prepare students for additional study in cybersecurity.					
	cement: 9~12 gth: 18 weeks				
Students develop computer literacy skills to adapt to emerging technologies used in the global marketplace. Students implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. Students enhance reading, writing, computing, communication and reasoning skills and apply them to the information technology environment. Students investigate the vast wealth of career opportunities in the Information Technology field. Students learn beginning computer programming skills and the program design process.					
	nent: 9~12 h: 18 weeks				
Engineering is the practice of manipulating the natural world to fit our needs as humans. In this introductory course, students will learn the basics of design and communication so that they can understand and use the methods in which our designed world is created. Products are created, analyzed, and communicated using solid modeling design software. This class combines math, art, science, and group skills to prepare students for creative and exciting jobs. This course allows students the opportunity to earn transcripted college credit to articulate college credit hours upon high school graduation through participating college/university Tech Prep programs. This is a Project Lead the Way course.					
	nent: 9~12 h: 36 weeks				
This course provides an overview of the following various fields: science, technology, engineering, and mathematics, and their relationships. Students will use a variety of computer hardware and software applications to complete assignments and projects. Upon completing this course, students will have an understanding of the various fields of study and will be able to make informed decisions regarding a coherent sequence of subsequent courses.					
Level II					
	ement: 9~12 th: 18 weeks				

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. Students will see how computer programs are used in industry and write basic programs utilizing similar techniques. Other fourth generation "learning" programming environments, such as Jeroo, will also be studied to help introduce and reinforce skills.

# PRE-ADVANCED COMPUTER PROGRMMING I $\square$ Course: 1263CT

In this fast-paced, hands-on, advanced course environment (high-level programming problems), 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. Students will see how computer programs are used in industry and write basic programs utilizing similar techniques. Other fourth generation "learning" programming environments, such as Jeroo, will also be studied to help introduce and reinforce skills.

#### COMPUTER SCIENCE I Prerequisite: Algebra I Course: 1050CT

Credits: 1

Computer Science I will foster students' creativity and innovation by presenting opportunities to design, implement, and present meaningful programs through a variety of media. Students will collaborate with one another, their instructor, and various electronic communities to solve the problems presented throughout the course. Through data analysis, students will identify task requirements, plan search strategies, and use computer science concepts to access, analyze, and evaluate information needed to solve problems. By using computer science knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will gain an understanding of the principles of computer science through the study of technology operations, systems, and concepts. This is a Project Lead the Way course. Note: Course can be used as a LOTE credit for graduation.

#### AP COMPUTER SCIENCE PRINCIPLES Prerequisite: Algebra I Course: 1266CT

Students will learn about the computing tools that are used every day. Students will foster their creativity and innovation through opportunities to design, implement, and present solutions to real-world problems. Students will collaborate and use computer science concepts to access, analyze, and evaluate information needed to solve problems. Students will learn the problem-solving and reasoning skills that are the foundation of computer science. By using computer science knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will gain an understanding of the principles of computer science through the study of technology operations and concepts.

Credits: 1

# PRINCIPLES OF ENGINEERING (Engineering Science)

This course is designed to help students understand the field of engineering/engineering technology by exploring various technology systems and manufacturing processes. The activities and projects offered through this course are designed to help students learn how engineers and technicians use math, science, and technology in an engineering problem solving process. This course allows students the opportunity to earn transcripted college credit or to articulate college credit hours upon high school graduation through participating college/university Tech Prep programs. This is a Project Lead the Way course. Note: Course can be used as an additional science credit for graduation.

Level III

#### NETWORKING Prerequisite: Computer Maintenance Course: 1831CA/CB

Credits: 2

Placement: 11~12 Length: 36 weeks

This course provides the student with theory and hands-on experience. The students gain experience in resolving hardware and software conflicts. Students practice SCAN Skills (industry-defined employment skills). Students develop knowledge of the concepts and skills related to telecommunications and data networking technologies and practices in order to apply them to personal or career development. To prepare for success, students will have opportunities to reinforce, apply and transfer knowledge and skills to a variety of settings and problems.

Possible Certification: CompTIA Network*

#### Placement: 9~12 Length: 18 weeks

Placement: 9~12 Length: 18 weeks

Placement: 10~12

Length: 18 weeks

Length: 18 weeks

Placement: 9~12

Credits: 1

#### COMPUTER INTEGRATED MANUFACTURING Prerequisite: Principles of Engineering Course: 1838CT

This course applies principles of robotics and automation. Students learn to program machinery to bring their 3D design while introducing computer programming and the processes used to manufacture today's consumer products. This course builds on the skills students develop in Introduction to Engineering Design and Principles of Engineering. Students use CNC equipment to produce actual models of their three-dimensional designs. Fundamental concepts of robotics used in automated manufacturing and design analysis are included. This course allows students the opportunity to earn transcripted college credit or to articulate college credit hours upon high school graduation through participating college/university Tech Prep programs. This is a Project Lead the Way course.

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

Credits: 1

# AEROSPACE ENGINEERING Dependence Principles of Engineering Course: 1834CT

Aerospace Engineering is the study of the engineering discipline which develops new technologies for use in aviation, defense systems and space exploration. The course explores the evolution of flight, flight fundamentals, navigation and control, aerospace materials, propulsion, space travel, orbital mechanics, ergonomics, remotely operated systems and related careers. In addition, the course presents alternative applications for aerospace engineering concepts. Students will analyze, design and build aerospace systems. While implementing these designs, students will continually hone their interpersonal skills, creativity and application of the design process. Students apply knowledge gained throughout the course in a final multi-media project to envision their future professional accomplishments. This is a Project Lead the Way course.

CIVEL ENGINEERING & ARCHITECTURE Prerequisite: Principles of Engineering Course: 1861CT

Civil Engineering & Architecture is the study of the design & construction of residential & commercial building projects. The course includes an introduction to many of the varied factors involved in building design & construction including building components & systems, structural design, storm water management, site design, utilities & services, cost estimation, energy efficiency & careers in the design & construction industry. This is a Project Lead the Way course.

Credits: 1

#### AP COMPUTER PROGRAMMING II Prerequisite: Computer Programming I or PreAP Computer Programming I Course: 1265CT Credits: 1

This course is designed for the student who anticipates a career in a technological field, such as physical science, mathematics, engineering, or computer science. Students will learn object oriented programming concepts using the JAVA programming language. Object-oriented programming, including inheritance will be emphasized. Classic algorithms, programming control structures, advanced data structures and the AP Computer Science A case study will be examined. Upon completion of this course, students will be ready and encouraged to take the Advanced Placement Computer Science A Exam.

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

#### COMPUTER SCIENCE II Prerequisite: Computer Science I Course: 1051CT

Credits: 1

Computer Science II will foster students' creativity and innovation by presenting opportunities to design, implement, and present meaningful programs through a variety of media. Students will collaborate with one another, their instructor, and various electronic communities to solve the problems presented throughout the course. Through data analysis, students will identify task requirements, plan search strategies, and use computer science concepts to access, analyze, and evaluate information needed to solve problems. By using computer science knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will gain an understanding of computer science through the study of technology operations, systems, and concepts. **Note: Course can be used as a LOTE credit for graduation.** 

Level IV

PRACTICUM IN INFORMATION TECHNOLOGY

## Credits: 1

Placement: 10-12

Placement: 10~12

Length: 18 weeks

Placement: 10~12 Length: 18 weeks

Placement: 10-12 Length: 18 weeks

Placement: 9~12 Length: 18 weeks

Placement: 10~12 Length: 18 weeks

Placement: 12

Prerequisite: 2 courses in Information Course: 1851CA/CB	Credits: 2	Length: 36 weeks
opportunities for advanced learning b experiences such as competition and c	course will allow students interested in pursuing beyond the classroom environment. Students will en or product innovation, classroom teaching opportuni t have transportation, opportunities will be limited. Database Associate*	gage in a variety of industry relevant
EDU-DRONE I Prerequisite: Algebra I AND Must be 1 Course: 1860CT	16 years old with driver's license before end of the co Credits: 1	Placement: 11-12 urse Length: 18 weeks
ENGINEERING DESIGN & DEVELOPME Prerequisite: Computer Integrated Ma Aerospace Engineering OR Civil Engine Course: 1845CT	nufacturing OR	Placement: 11~12 Length: 18 weeks
	the opportunity to master the design process to solv lop, model test their solutions. Each team will presen Way course.	
Weighted Credit		
	Supporting Courses	
ROBOTICS I Course: 1856CT	Credits: 1	Placement: 9-12 Length: 18 weeks
implementation of the design process, environment. Students will build proto	monstrate knowledge and skills necessary for the robo , students will transfer advanced academic skills to o ptypes or use simulation software to test their designs and educational needs in the robotic and automation	component designs in a project-based . Additionally, students explore career
AC/DC ELECTRONICS Course: 1841CT	Credits: 1	Placement: 10-12 Length: 18 weeks
	n, high-tech approach that includes a computer-bas	ed module lab-learning environment
electrical-electronic troubleshooting a covers fundamental math and scienc fundamental relationship of current, application of the Ohm's, Power and K	assignments using industry standard test equipment be concepts needed in electronics. Radio transmitte , voltage, resistance, capacitance, inductance, and Kirchhoff's Laws. Lab equipment includes Function ge ourse design project includes the research, design,	current theory and perform advanced including oscilloscopes. This course ers and receivers are explored. The l power is demonstrated though an enerators, oscilloscopes and meters al

#### SOLID STATE ELECTRONICS Prerequisite: AC/DC Electronics Course: 1843CT

Advanced Electronics presents the type of electronics in many of today's high-tech devices. Solid-state theory (transistors, integrated circuits, numbering systems, logic gates, flip-flops) is introduced and practiced, as well as TTL and CMOS devices, digital logic, counters, registers, a/d and d/a converters and solid-state devices. It also reviews the advanced concepts of DC, AC Digital electronics, which include Fundamentals of semiconductor devices, which include diodes, common diode applications, BJT, Biasing Circuits, Amplifier principals, FETs, Op-Amps, Oscillators and Voltage Regulators. Labs include the use of power supplies, function generators, oscilloscopes and meters. All labs require written reports. The end of the course has a research and design component.

Credits: 1

Length: 18 weeks



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 <u>goo.gl/9VM3a9</u>



LOGISTICS					
Automotive					
Levels	Courses				
Automotive Basics 1800CT / 9~12					
SP2 Ethics & You in the Automotive Industry,					
	SP2 Land That Job Certification Possible				
Energy, Power & Transportation Systems         1810CT / 9-12         Level 2       Prerequisite: Automotive Basics					
	SP2 Bullying in the Workplace, SP2 Substance Abuse Awareness & Management Certification Possible				
	Automotive Technology I				
Level 3	evel 3 1811CA-CB / 10-12 Prerequisites: Energy, Power & Transportation Systems			nn c	
	11	ASE Maintenance	e & Light Repair,	1110	
		SP2 Mechanical Safety		portation, Distribution &	
	Automotive Te 1815CA-CB			gistics	
Level 4	Prerequisites: Automo			~CB / 11~12	
	ASE Brakes AND ASE Su Certification			tomotive Technology I onics Systems Certifications	
	Cermication		ŀ	Possible	
1 Somester Home Comm	A Semester Heres Commun	1 Compostor Day Dayloon	2 Semester Ben Barber	College Course	
1 Semester Home Campu		1 Semester Ben Barber		Weighted Credit	
	<i>00% of the cost of the certific + overall course grade at the they must pay</i>		est. If students don't me		
To earn an endorsemer	it, an MISD student must cor the same program of	•		that consist of 2 courses in	
the same program of study including at least 1 advanced CTE course Level I					
AUTOMOTIVE BASICS				Placement: 9~12	
Course: 1800CT		Credits: 1		Length: 18 weeks	
This course is designed to familiarize the student with the basic understanding of career opportunities and training requirements in the automotive services field. This provides the skills and knowledge required for employment in the automotive field. This is the first class of the ASE/NATEF Certified Automotive Training Program. Competencies are set per NATEF Task List. Application of the knowledge and skills will be provided through hands on experiences in the classroom and laboratory. Possible Certification: SP2 Ethics & You in the Automotive Industry AND SP2 Land that Job*					
Level II					
ENERGY, POWER & TRANSPORTATION SYSTEMSPlacement: 9-12Prerequisite: Automotive BasicsLength: 18 weeksCourse: 1810CTCredits: 1				Placement: 9-12 Length: 18 weeks	
This course is designed to provide the skills and knowledge required for employment in the automotive field of brake and suspension systems. This class is the second part of 4 classes of the ASE/NATEF Certified Automotive Training Program. Competencies are set per the NATEF Task List. Application of the knowledge and skills will be provided through hands on experiences in the classroom and laboratory. Possible Certification: SP2 Bullying in the Workplace AND SP2 Substance Abuse Awareness & Management*					
Level III					
AUTOMOTIVE TECHNOLOGY I: MAINTENANCE & REPAIR Placement: 10~12					

#### Prerequisite: Energy, Power, & Transportation Systems Course: 1811CA/CB

This course is a continuation of the ASE/NATEF curriculum and standards designed to prepare the student for an entry level position in the automotive technology field. The areas of instruction pertain to the Maintenance and Light Repair Certification of the NATEF Task List.

Possible Certifications: ASE Auto Maintenance & Light Repair AND SP2 Mechanical Safety*

#### AUTOMOTIVE TECHNOLOGY II: AUTOMOTIVE SERVICE Prerequisite: Automotive Technology I Course: 1815CA/CB

This course prepares the student for an entry level position in the automotive technology field. The area of instruction include advanced components of the Maintenance and Light Repair Certification of the NATEF Task List. Placement in an internship may occur during the summer between a students' junior and senior year in a dealership or independent shop. Potential interns are chosen by the Business and Education Council Committee. Students must have all required safety wear as listed in the prerequisite class.

Credits: 2

Possible Certification: ASE Brakes AND ASE Suspension & Steering*

PRACTICUM IN TRANSPORTATIN SYSTEMS Prerequisite: Automotive Technology I Course: 1821CA/CB Placement: 11-12 Length: 36 weeks

This practicum course is an unpaid internship for students participating in the Automotive Technology courses. A student must have an Automotive Technology related job no later than the 2nd week after the start of class to receive credit. Students must adhere to all workplace rules and regulations and have a positive report from employers. If a student does not have transportation, opportunities will be limited.

Credits: 2

Possible Certifications: ASE Electrical/Electronic Systems*

*Students must successfully pass certification test(s) in order to receive the certification.

Length: 36 weeks

Placement: 11~12

Length: 36 weeks

Credits: 2

& Light Repair AND SP2 Mechanical Safety*