Montgomery Independent School District (ISD)
Career & Technical Education Program Evaluation

Overview - Montgomery ISD

Program evaluations performed by CTAT generally include the following elements;

A. Five year FTE Analysis
B. Audit of Service ID Usage and Reporting
C. Course Catalog Examination with Review of TEA Approved Programs of Study
D. Budget review – Revenue vs Expense and planning for 2019-2020
E. On-site Visit with Recommendations
F. Comprehensive Exit report

Montgomery ISD is a school district in Montgomery, TX. As of the 2019-2020 school year, it had 8,999 students. 30% of students were considered at risk of dropping out of school. 3% of students were enrolled in bilingual and English language learning programs. The school received an accountability rating of A for the previous school year. Because of the coronavirus pandemic, the state waived accountability ratings for the 2019-2020 school year.
In the Class of 2019, 96.4% of students received their high school diplomas on time or earlier. The dropout rate for students in grades 9-12 was 0.4% during the 2018-2019 school year.The average SAT score at Montgomery ISD was 1131 for 2018-2019 graduates. The average ACT score was 23.3.

As of the 2019-2020 school year, an average teacher's salary was $58,010, which is $919 more than the state average. On average, teachers had 13.8 years of experience.https://schools.texastribune.org/districts/montgomery-isd/

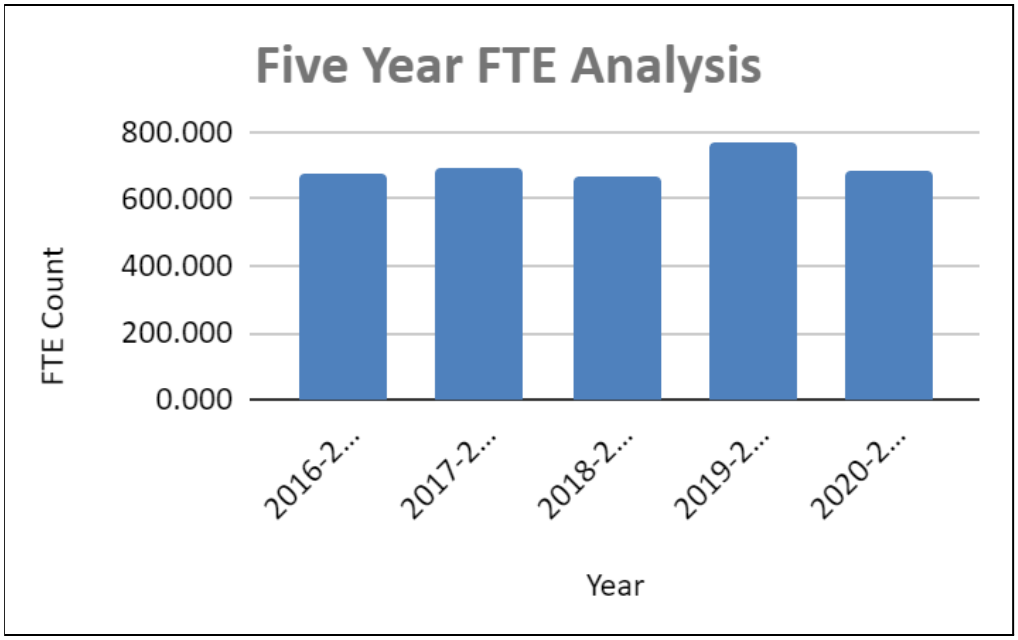
A. Five Year Analysis of Full Time Equivalent (FTE)
Enrollment for Career & Technical Education Programs in Montgomery ISD

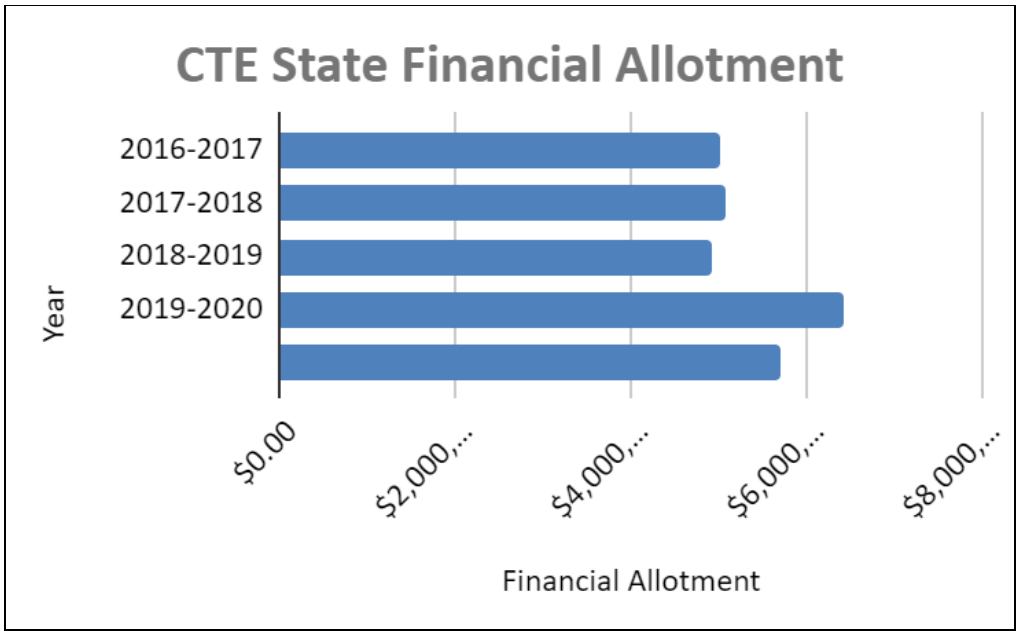
A five year analysis of FTEs shows trends in overall enrollment of CTE programs district wide. Since a direct correlation exists between FTE count and CTE financial allotment, a meaningful study can be applied to staffing, course offerings and facility decisions. The FTE count from the fall of 2016 to the spring of 2021 shows a range in FTE enrollment of 679.733 to 686.867. This analysis reveals a 1.05% increase in CTE FTE's over the past five years. Overall district enrollment increased 7.52% over the same five year period. This result is atypical as students traditionally enroll in multiple CTE courses annually. 2019-2020 numbers include 7-8th graders and advanced FTE counts. The loss of 85 FTEs during the 2021-2021 could be explained by district procedures during the pandemic year.

As expected, the financial allotment trend for CTE matches the FTE count. Montgomery ISD's CTE allotment ranged from $5,021,486.00 in 2016 to $5,712,034.00 in the spring of 2021. Relatively, FTE enrollment and financial allotment for CTE was not consistent with overall enrollment.

Five Year CTE Full Time Equivalent Analysis:

Year	FTE Count	Financial Allotment
2016-2017	679.733	$5,021,486.00
2017-2018	688.856	$5,086,279.00
2018-2019	664.575	$4,907,063.00
2019-2020	771.906	$6,423,056.00
2020-2021	686.867	$5,712,034.00





The summary of finances data includes projected data for the 2021-2022 school year. Legislative projective estimates (LPE) for 20-21 anticipate 793 FTE's with an allotment of $6,485,757. We believe this to be a high projection.

++++++

B. Examination of Service ID Codes Relative to 2021-2022 Texas Education Data Standards.

Reviewing information in a district's student data management system should occur annually. Slight errors may result in loss of funding, incorrect student transcripts, transfer discrepancies and confusion for future data submissions. Texas Education Data Standards (TEDS) change yearly. Great care should be taken to ensure submission data is the most current available. This program evaluation section includes recommendations and best practices for consistency in utilizing course descriptions and data standards codes. References are made to requirements of V1, V2 or V3 funding as outlined in section 5.5 of the Student Attendance Accounting Handbook. https://tea.texas.gov/sites/default/files/2020-2021%20SAAH%20-%20Adopted.pdf

To determine the CTE code to assign to a student, your district must first determine the code to assign to each CTE course. Use the following chart to determine the CTE code to assign to each CTE course.

CTE Course's Average Minutes per Day	CTE Code
45–89	V1
90–134	V2
135–180+	V3

Overall, this was a very clean report. Recommendations to consider are listed below:

Most student information management software systems use the "Voc Ed" code to identify the funding multiplier for students enrolled in courses eligible for the CTE weighted allotment. Recommendations below are based on the PEIMS report provided and the current co22 Table. TWEDS - C022 Code Table (state.tx.us)

Recommendations listed in the section above assume that students are meeting the minute requirements as outlined in the student attendance accounting handbook. In general terms:

- a course being taught for one credit meets one period per day or the equivalent of one period per day, every other day on a block schedule and is a V1,
- a course being taught for two credits meets two periods per day or the equivalent of two periods per day, every other day on a block schedule and
- a course being taught for three credits meets three periods per day or the equivalent of three periods per day, every other day on a block schedule.

B.1 “Peer Coaching” utilizes the service ID code for Project-Based Research (First Time Taken). Consider Identifying this course as “PBR.” Example; PBR-Peer Coaching. Also, the service ID 12701500, is the only PBR course receiving 1.47 tiered funding. Examine enrollment to ensure this is the most effective use of this course.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Course Number	Service ID	Course Title	CTE Hours	Credits Awarded	Sem1 Act	Sem2 Act	AAR Use Cd	Special Consid	Pop Served	Department	Period Control	
2	5811	03580140	FUND COMP SCI	1	1	75	76		Q-ADVANCED (P	05	CT	2	
3	5813	03580850	CYBRSEC	1	1	17	17		Q-ADVANCED (P	05	CT	2	
4	5341	12701305	CAR PREP COOP1	3	3	49	48			05	CT	2	
5	5342	12701405	CAR PREP COOP2	3	3	4	5			05	CT	2	
6	5357	12701500	PROJ BASED RSCH	1	1	1	1			05	CTE	2	
7	5424	12701500	PEER COACHING	1	1	14	15		X-INNOVATIVE C	05	CT	2	
8	5110	13000200	PRIN OF AG	1	1	317	318			05	CT	2	
9	5122	13000300	LIVESTOCK PROD	1	1	91	92	V-VOED		05	CT	2	
10	5124	13000400	SM ANIMAL MG	1	0.5	86	33			05	CT	1	
11	5121	13000500	EQUINE SCI	1	0.5	33	82			05	CT	1	
12	5125	13000600	VET MED APPLIC	1	1	38	38			05	CT	2	

B.2. Examine reasons for coding Livestock Production as “V-VOED.”

7	5424	12701500	PEER COACHING	1	1	14	15		X-INNOVATIVE C	05	CT	2	
8	5110	13000200	PRIN OF AG	1	1	317	318			05	CT	2	
9	5122	13000300	LIVESTOCK PROD	1	1	91	92	V-VOED		05	CT	2	
10	5124	13000400	SM ANIMAL MG	1	0.5	86	33			05	CT	1	
11	5121	13000500	EQUINE SCI	1	0.5	33	82			05	CT	1	
12	5125	13000600	VET MED APPLIC	1	1	38	38			05	CT	2	
13	5123	13000700	ANIMAL SCI	1	1	113	113	X-SCIENCE		05	CT	2	
14	5111	13001500	WILDLIFE FISH	1	1	44	42			05	CT	2	
15	5141	13001800	PRIN FLORAL	1	1	189	185	A-FINE ARTS		05	CT	2	

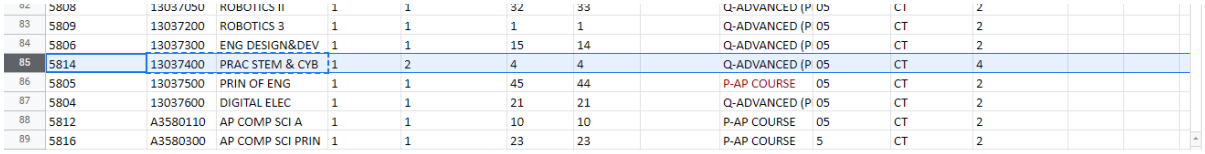
B.3. Examine CTE hour coding of 13004400 INTERIOR DESN 2. If the course is meeting 90-134 minutes per day, CTE hour coding should be a 2.

21	5126	13002500	PRAC IN AFNR	2	2	11	11			05	CT	4	
22	5450	13004210	PRIN OF ARCH	1	1	67	66			05	CT	2	
23	5451	13004300	INTERIOR DESN	1	1	19	17			05	CT	2	
24	5452	13004400	INTERIOR DESN 2	1	2	5	5			05	CT	4	
25	5210	13008200	PRIN ART-AV-TE	1	1	105	103			05	CT	2	
26	5211	13008500	AV PRODUCTION 1	1	1	27	28			05	CT	2	
27	5212	13008600	AV PRODUCTION 2	1	1	6	6			05	CT	2	
28	5213	13008700	PRACAVP1	2	2	6	6			05	CT	4	
29	5441	13009300	FASHION DESN 1	1	1	26	24			05	CT	2	
30	5442	13009410	FASHION DESN 2	2	2	7	7			05	CT	4	

B.4 “Tech Applications” no longer exists as an independent curriculum area.

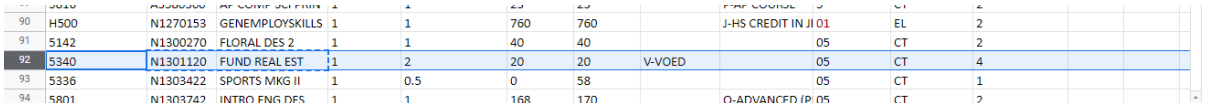
31	0561	13009900	PROF COMM	1	0.5	27	27	D-SPEECH	05	CT	1	
32	5310	13011200	PRIN BUS MKTG	1	1	340	334		05	CT	2	
33	5311	13011400	BUS INFO MGMT 1	1	1	247	250	C-TECH APPLICATIONS	05	CT	2	
34	5312	13011500	BUS INFO MGMT 2	1	1	13	13	C-TECH APPLICATIONS	05	CT	2	
35	5332	13011700	BUSINESS LAW	1	1	14	14		05	CT	2	
36	5313	13011900	HUMAN RES MGMT	1	0.5	30	0		05	CT	1	
37	5331	13012100	BUSINESS MGMT	1	1	76	76		05	CT	2	

B.5. Examine CTE hour coding of 13037400 PRAC STEM & CYB. If the course is meeting 90-134 minutes per day, CTE hour coding should be a 2.



83	5809	13037200	ROBOTICS 3	1	1	1	1	Q-ADVANCED (P	05	CT	2	
84	5806	13037300	ENG DESIGN&DEV	1	1	15	14	Q-ADVANCED (P	05	CT	2	
85	5814	13037400	PRAC STEM & CYB	1	2	4	4	Q-ADVANCED (P	05	CT	4	
86	5805	13037500	PRIN OF ENG	1	1	45	44	P-AP COURSE	05	CT	2	
87	5804	13037600	DIGITAL ELEC	1	1	21	21	Q-ADVANCED (P	05	CT	2	
88	5812	A3580110	AP COMP SCI A	1	1	10	10	P-AP COURSE	05	CT	2	
89	5816	A3580300	AP COMP SCI PRIN	1	1	23	23	P-AP COURSE	5	CT	2	

B.6. Examine CTE hour coding of N1301120 FUND REAL EST. If the course is meeting 90-134 minutes per day, CTE hour coding should be a 2.



90	H500	N1270153	GENEMPLOYSKILLS	1	1	760	760		J-HS CREDIT IN JI	01	EL	2
91	5142	N1300270	FLORAL DES 2	1	1	40	40			05	CT	2
92	5340	N1301120	FUND REAL EST	1	2	20	20	V-VOED		05	CT	4
93	5336	N1303422	SPORTS MKG II	1	0.5	0	58			05	CT	1
94	5801	N1303742	INTRO ENG DES	1	1	168	170		Q-ADVANCED (P	05	CT	2

++++++++++++++++++++++++++++

Make sure the dual credit college hours being earned at the Institute of Higher Education (IHE) are being recorded in the student data management system. Dual credit hours reflect in the A-F accountability system.

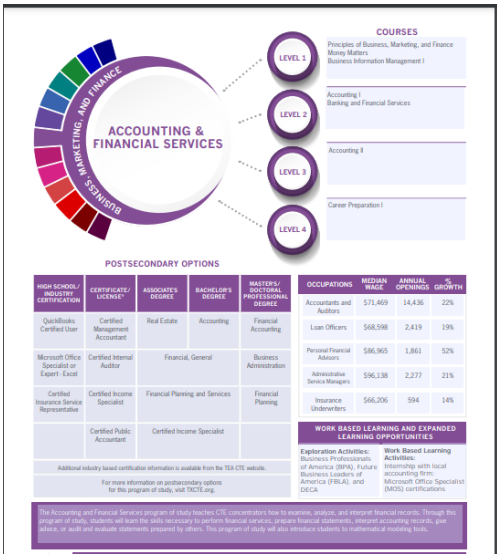
++++++++++++++++++

C. Course Catalog Examination with Review of TEA Approved Programs of Study

Course catalogs are generally reviewed and revised every year. CTE is usually a large section of the document. The need for accuracy in course catalogs cannot be overstated. Students, parents and other stakeholders rely on it's veracity in developing pathways to graduation and post-secondary transitions.

Montgomery ISD course catalogs are presented in a thorough and logical format. District staff should be commended for their time and effort in developing a strong catalog. Courses are grouped by curriculum area. This program evaluation offers discussion points only relating to CTE.

C.1. CTE has a strong website. It lists the Montgomery ISD Programs of Study; each linking to an informative one page resource document aligning to the TEA approved resources.



C.2. Considering restructuring the CTE website to reflect the hierarchy for programs of study versus simply listing them in alphabetical order.

1. Endorsements,
2. Career Cluster then
3. Programs of Study

C.3. The CTE website links to the now outdated 2020-2021 course catalog. Consider linking to the district website that will usually have the most current version.

C.4. The course catalogs are located on the counselors website from each campus. The following graphic explains the process of graduating and earning an endorsement under the Foundation High school Program.

GRADUATION PROGRAMS

Passed by the 83rd Texas Legislature, House Bill 5 (HB5) revises the graduation program for a **STUDENT ENTERING GRADE 9 IN THE 2014-2015 SCHOOL YEAR AND ALL SUBSEQUENT YEARS. HB5 states that the Foundation Plan with an Endorsement is the default high school graduation plan for all students. This plan requires that a student entering grade 9 specify in writing which endorsement he/she will earn.**

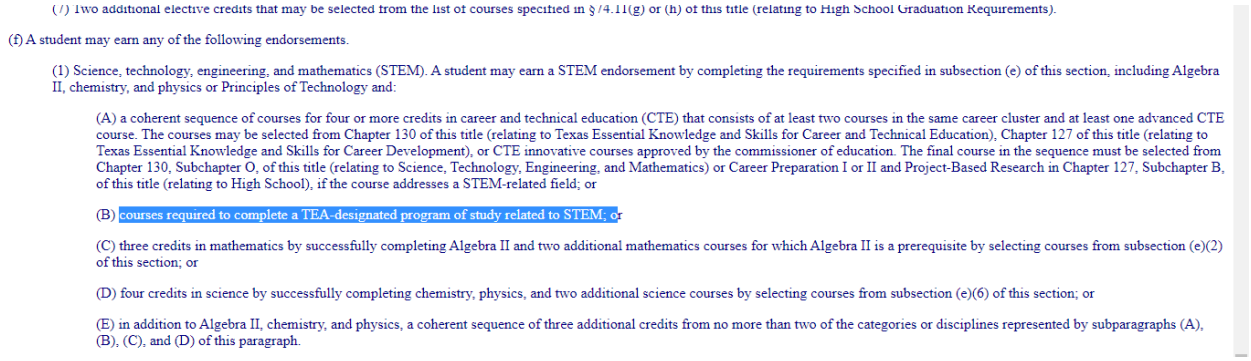
DISCIPLINE	FOUNDATION HIGH SCHOOL PROGRAM
ENGLISH	**4 Credits:** English I, II, III, and one additional English course
MATHEMATICS	**3 Credits:** Algebra I, Geometry, and one additional math course
SCIENCE	**3 Credits:** Biology, IPC or an advanced science course, and one additional science course
SOCIAL STUDIES	**3 Credits:** World Geography or World History, U.S. History, U.S. Government/Economics
PHYSICAL EDUCATION	**1 Credit:** Physical Education or state approved alternative (athletics, marching band, etc.)
FINE ARTS	**1 Credit:** Fine Arts
LANGUAGE OTHER THAN ENGLISH	**2 Credits:** both credits in the same language
ELECTIVES	**4 Credits:** Electives
	TOTAL = 21
1 FOUNDATION HSP WITHOUT AN ENDORSEMENT *(Committee Approval is Required)*	**+ 3 Credits: Elective Credits**
	TOTAL CREDITS WITHOUT ENDORSEMENT = 24
2 FOUNDATION HSP WITH AN ENDORSEMENT *(The 5 Endorsements are listed in detail below)*	**+ 5 CREDITS - A STUDENT MAY EARN AN ENDORSEMENT BY SUCCESSFULLY COMPLETING:** • **Four credits in mathematics** • **Four credits in science** • **Three additional elective credits**
STEM	**Includes courses directly related to:** • science, including environmental science • technology, including computer science • engineering (PLTW) • advanced math • robotics
BUSINESS & INDUSTRY	**Includes courses directly related to:** • database management • information technology • communications • accounting • finance • marketing • graphic design • architecture • construction • welding • culinary arts and hospitality • automotive technology • agricultural science
PUBLIC SERVICES	**Includes courses directly related to:** • health sciences and medical occupation • education and training • military service in the armed forces (to include the Coast Guard and National Guard) • law enforcement
ARTS & HUMANITIES	**Includes courses directly related to:** • political science • world languages • cultural studies • English literature • history • fine arts
MULTIDISCIPLINARY STUDIES	Allows a student to select courses from the curriculum of each endorsement area and earn credits in a variety of advanced courses from multiple content areas sufficient to complete the distinguished level of achievement.
	TOTAL CREDITS WITH ENDORSEMENTS = 26
3 DISTINGUISHED ACHIEVEMENT *(Eligible for College Automatic Admissions)*	• **four credits in math, including credit in Algebra II** • **four credits in science** • **completion of curriculum requirements for at least one endorsement**
	TOTAL CREDITS WITH ENDORSEMENTS = 26
PERFORMANCE ACKNOWLEDGEMENT	**A student may earn a performance acknowledgment on the student's transcript...** **1. For outstanding performance:** ✓ in a dual credit course ✓ in bilingualism and bi-literacy ✓ on an AP test or IB exam ✓ on the PSAT, the ACT-Plan, the SAT, or the ACT **2. For earning a nationally or internationally recognized business or industry certification or license**

Consider adding the following statement to provide a more detailed overview of earning a FHSP endorsement using a CTE course sequence.

- An endorsement utilizing a CTE course sequence should include four or more credits in career and technical education (CTE) that consists of at least two courses in the same career cluster and at least one advanced CTE course. The final course in the sequence must be selected from the selected endorsement area or Career Preparation or Project-Based Research.
- Students may also earn an endorsement utilizing CTE by passing a sequence of courses required to complete a TEA-designated program of study
- http://ritter.tea.state.tx.us/rules/tac/chapter074/ch074b.html

“Programs of Study” are now tied to accountability and CTE funding levels. They are directly tied to CTE career clusters. Approved programs of study are clearly identified on the TEA website.
https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/approved-cte-programs-of-study

Additionally, completing a program of study is listed as a separate method in Texas Administrative Code to earn a FHSP endorsement.



(7) Two additional elective credits that may be selected from the list of courses specified in §74.11(g) or (h) of this title (relating to High School Graduation Requirements).

(f) A student may earn any of the following endorsements.

(1) Science, technology, engineering, and mathematics (STEM). A student may earn a STEM endorsement by completing the requirements specified in subsection (e) of this section, including Algebra II, chemistry, and physics or Principles of Technology and:

(A) a coherent sequence of courses for four or more credits in career and technical education (CTE) that consists of at least two courses in the same career cluster and at least one advanced CTE course. The courses may be selected from Chapter 130 of this title (relating to Texas Essential Knowledge and Skills for Career and Technical Education), Chapter 127 of this title (relating to Texas Essential Knowledge and Skills for Career Development), or CTE innovative courses approved by the commissioner of education. The final course in the sequence must be selected from Chapter 130, Subchapter O, of this title (relating to Science, Technology, Engineering, and Mathematics) or Career Preparation I or II and Project-Based Research in Chapter 127, Subchapter B, of this title (relating to High School), if the course addresses a STEM-related field; or

(B) courses required to complete a TEA-designated program of study related to STEM; or

(C) three credits in mathematics by successfully completing Algebra II and two additional mathematics courses for which Algebra II is a prerequisite by selecting courses from subsection (e)(2) of this section; or

(D) four credits in science by successfully completing chemistry, physics, and two additional science courses by selecting courses from subsection (e)(6) of this section; or

(E) in addition to Algebra II, chemistry, and physics, a coherent sequence of three additional credits from no more than two of the categories or disciplines represented by subparagraphs (A), (B), (C), and (D) of this paragraph.

The CAREER AND TECHNICAL EDUCATION (CTE) section of the catalog lacks an introductory statement for CTE. Having all CTE courses in the same sections of the course catalog clearly communicates the curriculum area. Also, students and parents utilizing the document identify all courses associated with professional education.

C.5. Consider adding the following statement to the beginning of the CTE sections. Montgomery ISD proudly offers a wide variety of Career and Technical Education courses. Career and technical education programs offer a sequence of courses that provides students with coherent and rigorous content. CTE content is aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in current or emerging professions.

C.6. Consider adding a statement relative to the importance of earning an industry based certification.

- A certification is a validation that an individual possesses certain skills, usually related to an occupation and measured against a set of accepted standards. An individual earns a certification by successfully passing a test or battery of tests.
- Earning an IBC is one of the multiple ways students can prove they are College, Career, and Military Ready for A-F accountability.

- https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education

C.7. Consider adding a list of approved Industry Based Certifications offered in MISD and the sequence of courses in which they may be obtained.
https://tea.texas.gov/sites/default/files/2019-2020%20Industry-based%20Certification%20List%20for%20Public%20School%20Accountability%202.pdf

C.8. The course catalog does not directly address Programs of Study.

- Programs of study should match current Perkins V and Texas Education Agency (TEA) direction.
- References should align with https://www.txcte.org/ and the career cluster live binder https://www.txcte.org/binder/career-cluster-pages . These sites are powered by TEA and provide the most current information.
- Students identified as program of study completers take 3 or more courses for 4 or more credits within an approved POS.

Changes in administrative code specify the number of Texas Education Agency-designated programs of study required to be offered as determined by enrollment.

(i) one program of study for a district with fewer than 500 students enrolled in high school ;
(ii) two programs of study for a district with 501-1,000 students enrolled in high school ;
(iii) three programs of study for a district with 1,001-2,000 students enrolled in high school ;
(iv) four programs of study for a district with 2,001-5,000 students enrolled in high school ;
(v) five programs of study for a district with 5,001-10,000 students enrolled in high school ; and
(vi) six programs of study for a district with more than 10,000 students enrolled in high school .

https://tea.texas.gov/sites/default/files/COI1%20Chap%2074.1%20and%2074.3%20Curr%20Requirements_attach.pdf

TEA revised and mandated programs of study went into effect for the 2020-2021 school year and allowed Texas to meet the federal program approval requirements within the Strengthening CTE for the 21st Century Act (Perkins V).

The following pdf from TEA provides a comprehensive overview.
https://tea.texas.gov/sites/default/files/Programs_of_Study_Overview_9_06_2019_Final.pdf

C.9. Consider adding a statement relative to the new requirements relating to programs of study.

- Programs of study (POS) go into effect for the 2020-2021 school year and will allow Texas to meet the federal program approval requirements within the Strengthening CTE for the 21st Century Act (Perkins V).
- Course sequences within approved programs of study align with occupations that meet labor market criteria, projected job growth and annual job openings.
- POS align programs of study to endorsements and lead to postsecondary education and training opportunities.
- https://tea.texas.gov/sites/default/files/Programs_of_Study_Overview_9_06_2019_Final.pdf

CTE courses in the current Montgomery ISD catalog are generally organized by general CTE electives and programs of study.

C.10. Programs of Study should be listed in the course catalog and align with those approved by the TEA. Montgomery offers a robust and effective CTE program. Programs of study alignment with Perkins V are relatively seamless.

Alignments of programs of study to endorsements are available on the TEA website.
https://tea.texas.gov/sites/default/files/Programs_of_Study_Endorsement_Crosswalk_April_2020.pdf
Approved programs of study with correlating individual information sheets in pdf format may be found at this site.
https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/approved-cte-programs-of-study

C.11. Consider restructuring the CTE section to present courses in a hierarchy that reflects a structure aligned with TEA. Proposed hierarchy:

- Career & Technical Education
  - Endorsement Area
    - Career Cluster
      - Program of Study

Examples of hierarchy listing:

Career and Technical Education
Programs of Study

Business & Industry Endorsement

Agriculture, Food, and Natural Resources
The Agriculture, Food, and Natural Resources (AFNR) Career Cluster® focuses on the essential elements of life—food, water, land, and air. This career cluster includes a diverse spectrum of occupations, ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist. It also includes non-traditional agricultural occupations like wind energy, solar energy, and oil and gas production.

Agribusiness

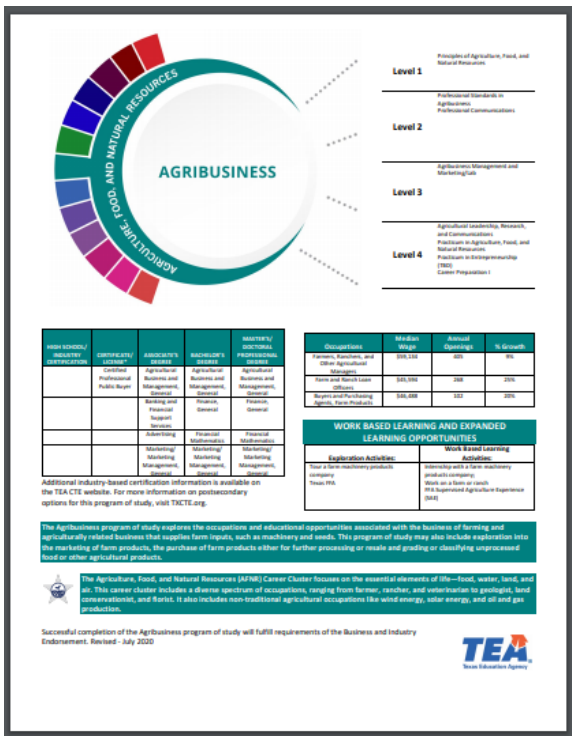
Course #	Course Name	Credit(s)
17040	Principles of Agriculture, Food, and Natural Resources	1
17048 17209	Professional Standards in Agribusiness AND Professional Communication	.5 .5
17049	Agribusiness Management and Marketing	1
17098 17087 17021	Agriculture Leadership and Communication OR Practicum in Agriculture, Food, and Natural Resources OR Career Preparation	1 2 3

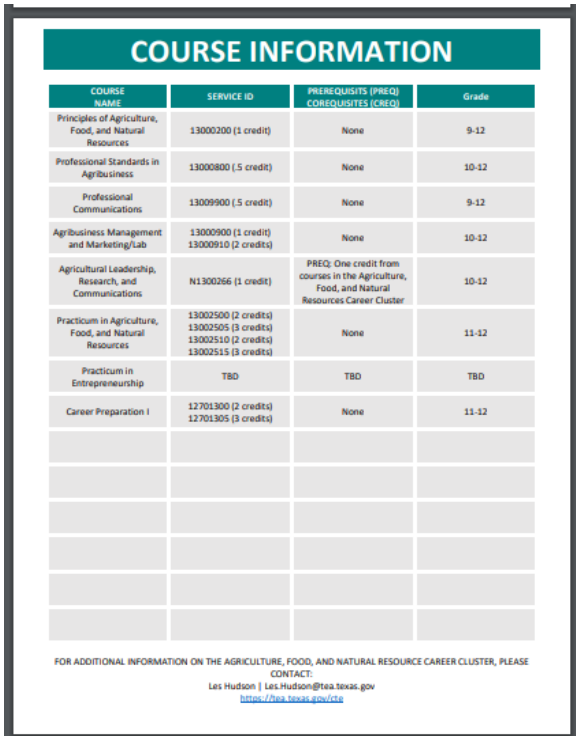
Animal Science

Course #	Course Name	Credit(s)
17040	Principles of Agriculture, Food, and Natural Resources	1
17043 17044	Small Animal Management AND Equine Science	.5 .5

- This format highlights new statewide CTE initiatives and educates stakeholders on logistical progressions of CTE courses.
- Career clusters should not be disregarded in the course catalog. They serve an important role in the FHSP program graduation requirements and in structuring programs of study.

Each program of study (POS) approved by the Texas Education Agency (TEA) has a corresponding one page (front and back) fact sheet which contains essential information for all CTE stakeholders. These support documents include approved courses, course levels, occupational outlook, wage expectations, post-secondary options and alignment to relevant industry based certifications. Below is a sample of the fact sheet for the Agribusiness POS. https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/approved-cte-programs-of-study





COURSE INFORMATION

COURSE NAME	SERVICE ID	PREREQUISITS (PREQ) COREQUISITES (CREQ)	Grade
Principles of Agriculture, Food, and Natural Resources	13000200 (1 credit)	None	9-12
Professional Standards in Agribusiness	13000800 (.5 credit)	None	10-12
Professional Communications	13009900 (.5 credit)	None	9-12
Agribusiness Management and Marketing/Lab	13000900 (1 credit) 13000910 (2 credits)	None	10-12
Agricultural Leadership, Research, and Communications	N1300266 (1 credit)	PREQ: One credit from courses in the Agriculture, Food, and Natural Resources Career Cluster	10-12
Practicum in Agriculture, Food, and Natural Resources	13002500 (2 credits) 13002505 (3 credits) 13002510 (2 credits) 13002515 (3 credits)	None	11-12
Practicum in Entrepreneurship	TBD	TBD	TBD
Career Preparation I	12701300 (2 credits) 12701305 (3 credits)	None	11-12

FOR ADDITIONAL INFORMATION ON THE AGRICULTURE, FOOD, AND NATURAL RESOURCE CAREER CLUSTER, PLEASE CONTACT:
Les Hudson | Les.Hudson@tea.texas.gov
https://tea.texas.gov/cte

Additionally, editable word documents exist in a zip file provided by TEA which allow districts to customize these fact sheets to match exact local course offerings.

C.12. **Montgomery ISD does a fantastic job in utilizing the editable word documents to develop and market local programs of study.** These new documents could be linked from the course catalog.

a. TEA authorized programs of study include;
   i. Courses from the approved list for the selected POS
   ii. The ability to earn four credits from three or four courses
   iii. At least one advanced level three or four course
b. It's important to only remove courses from the editable frameworks NOT being taught locally.
c. Refrain from adding courses to the documents. Only those courses on each list are approved through TEA for individual programs of study.
d. https://tea.texas.gov/sites/default/files/2020%20program-of-study-framework-word-documents.zip

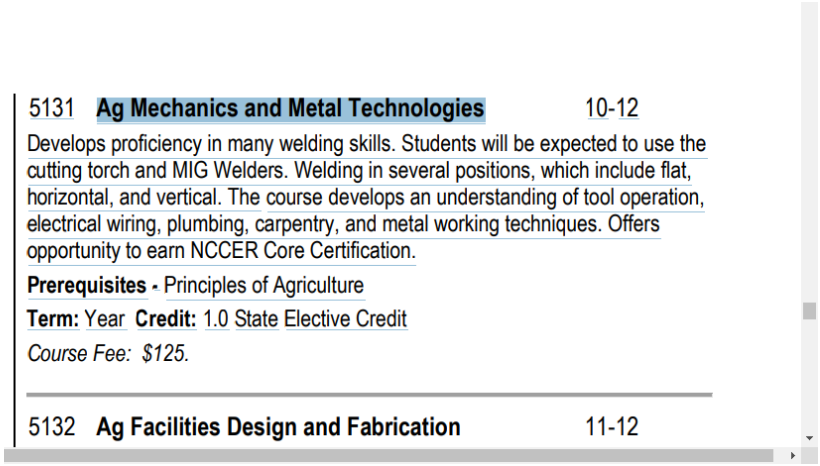
Many districts choose to retain courses falling outside a specific program of study offered by the LEA. Consider listing these courses under a category named "additional courses" from the specific career cluster.

Course descriptions and prerequisites

Overall, course descriptions and prerequisites match the language found in the Texas Essential Knowledge and Skills (TEKS). Course prerequisites are located in §130.X (a) in the TEKS for all CTE offerings. Recommended prerequisites are just that, recommended. If the TEKS read "prerequisite" then it is a mandate. Districts may add prerequisites but those found in the TEKS are a mandated state minimum. http://ritter.tea.state.tx.us/rules/tac/chapter130/index.html https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/cte-texas-essential-knowledge-and-skills-for-2017-2018

Overall, course descriptions and prerequisites match the language found in the Texas Essential Knowledge and Skills (TEKS). Course descriptions are located in §130.X (b)(3) in the TEKS for all CTE offerings. http://ritter.tea.state.tx.us/rules/tac/chapter130/index.html

C.13. The graphic below depicts a typical course listing in the course catalog.


5131 **Ag Mechanics and Metal Technologies** 10-12

Develops proficiency in many welding skills. Students will be expected to use the cutting torch and MIG Welders. Welding in several positions, which include flat, horizontal, and vertical. The course develops an understanding of tool operation, electrical wiring, plumbing, carpentry, and metal working techniques. Offers opportunity to earn NCCER Core Certification.

Prerequisites - Principles of Agriculture

Term: Year **Credit:** 1.0 State Elective Credit

Course Fee: $125.

5132 **Ag Facilities Design and Fabrication** 11-12

Note that the prerequisite for Ag. Mechanics is Principles of Agriculture. The description appears to be district developed. It has a course fee of $125.00 and does not list the service ID code.

Relevant information may be pulled from the Texas CTE Master Course list. This document provides the essential information, as pulled from the TEKS for each course, for all CTE classes. See the graphic below.

Agricultural Mechanics and Metal Technologies

TSDS PEIMS Code: 13002200 (AGMECHMT)
Grade Placement: 10–12
Credit: 1
Prerequisite: None.
Recommended Prerequisite: Principles of Agriculture, Food, and Natural Resources.
Agricultural Mechanics and Metal Technologies 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. To prepare for careers in agricultural power, structural, and technical systems, students must attain academic skills and knowledge; acquire technical knowledge and skills related to power, structural, and technical agricultural systems and the industry; and develop knowledge and skills regarding career opportunities, entry requirements, industry certifications, and industry expectations.

CTAT recommends districts use this resource for developing course catalogs.

“Prerequisites,” as described in the TEKS for each course, are mandatory. “Recommended prerequisites” are just that, recommended. Districts may also have locally developed prerequisites. A distinction should be clearly defined.

C.14. Fees and admittance process

Numerous courses require fees and approval from an admissions committee to be placed in the course.

5213 **Practicum in Audio Video Production** 12

Students in this class will develop advanced knowledge and skills in the field of audio and video production. Students will develop their portfolio of work that will assist them in gaining entry level employment, earning admittance into college film/video, television/radio broadcasting, and audio production programs, as well as securing post-secondary scholarships. Additional time beyond regular school hours is required.

Prerequisites - Principles of Arts, AV Technology, AV Production I and II, and Admissions Committee Approval

Term: Year **Credit:** 2.0 State Elective Credit

Expected cost to student for this course: $30.

Consider eliminating these two practices. Course fees often serve as barriers to underrepresented student groups.

Instead of using an Admissions Approval Committee, list specific criteria for course entry. Example, “Students needing this course to complete an approved program of study will be given

priority in placement." You may also list "indicators of success." Example, "students with a B or higher average have a higher likelihood of success in A/V Practicum."

C.14. Certifications

Consider adding "certifications page" to the course catalog and web site. Distinction should be made for approved Industry-Based Certifications under Public School Accountability, A-F in the student achievement domain. TEA vetted and approved a list of 244 certifications for A-F accountability. Denoting state approved certifications will serve as an important communication point for district staff, parents and students. It's importance should be emphasized as heavily as EOC testing.

Certifications students earn under each program of study should be listed in the course catalog along with the sequence of courses. Consider identifying which certifications are local and which certifications are on the TEA approved list for A-F accountability.

According to the 2021 College, Career, and Military Readiness report, 5.0% of graduates earned an industry-based certification from the approved list. The state average was approximately 13.2 percent. In order to continue growth in this domain, the district should continue funding the cost of students earning industry-based certification from the approved list. https://tea.texas.gov/sites/default/files/2019-2020%20Industry-based%20Certification%20List%20for%20Public%20School%20Accountability_2020.pdf

	Annual Graduates	
	Count Credit	Percent
Texas Success Initiative (TSI) Criteria		
Met TSI criteria in both ELA/Reading and Mathematics	312	50%
TSI Criteria - ELA/Reading		
Met TSI criteria for at least one indicator in ELA/Reading	406	65%
Met TSI assessment criteria	234	37%
Met ACT criteria	135	22%
Met SAT criteria	341	54%
Earned credit for a college prep course	0	0%
TSI Criteria - Mathematics		
Met TSI criteria for at least one indicator in Mathematics	328	52%
Met TSI assessment criteria	169	27%
Met ACT criteria	129	21%
Met SAT criteria	242	39%
Earned credit for a college prep course	25	4%
AP/IB Examination		
Met criterion score on an AP/IB exam in any subject	111	18%
Dual Course Credits		
Earned credit for at least 3 hours in ELA or Mathematics or 9 hours in any subject	164	26%
Industry-Based Certifications		
Earned an industry-based certification from approved list	32	5%
Level I or Level II Certificate		
Earned a level I or level II certificate in any workforce education area	1	0%
Associate Degree		
Earned an associate degree while in high school	0	0%

Dual Credit

Montgomery ISD currently offers a variety of dual credit opportunities through CTE.

C.15. Consider revisiting the memorandum of understanding (MOU) with the local community college to include more opportunities through CTE. Students enrolled in such programs acquire valuable college credit and potentially earn a level one certification. Welding may be an easy addition.

Dual credit college hours being earned at the Institute of Higher Education (IHE) should be recorded in the student data management system. Dual credit hours reflect in the A-F accountability system.
++++++++++++++

D. Budget Review – Revenue vs Expense and Planning

The immediate prior year final allocations from the TEA summary of finances, usually provides the best working numbers for a budget review in a program evaluation. The 2020-2021 final allotment was $5,712,034.00. Texas Education Code (TEC), §48.106 mandates at least 55 percent of the funds allocated under this section must be used in providing career and technology education programs in grades 7 through 12. Montgomery ISD's revised 2021-2022 budget allocation for CTE totals $3,789,419.00. MISD meets the state mandate by allotting 55 + percent of generated revenue to direct instruction for CTE.

https://texas.public.law/statutes/tex._educ._code_section_48.106

Account Classification	Budgeted
6100 - Payroll	$3,180,326
6200 - Contracted Services	$11,129
6300 - Supplies & Materials	$411,241
6400 - Other & Travel	$186,723
6500 - Debt Services	$0.00
6600 - Capital Outlay Fixed	$0.00
Total	$3,789,419.00

Developing budgets by career cluster encourages teacher input and provides data relating to individual program cost relative to enrollment. ++++++++++++

E. On Site Visit and Recommendations:

During the onsite review, Lake Creek High School, Montgomery High School and the Agriscience feeding facility were toured. The campuses are well kept, modern facilities. Lake Creek HS opened in 2017-2018 and has an enrollment of 1,618. The new Montgomery HS building opened in 1999 and has an enrollment of 1,552.

Recommendations:

E. 1. CTE staff need to develop strategic plans for incorporating industry based certifications (IBC's) into all programs of study offered. A few program areas provide numerous opportunities for IBC attainment, but these opportunities are inconsistent across career cluster areas. These plans should be presented to campus and district level CTE administration. https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/industry-based-certification-resources

E. 2. Some Career and Technical Student Organizations (CTSO's) thrive in Montgomery ISD. CTSO's from some program areas need to be energized. As an example, FFA and BPA have students participating on multiple levels of enrichment activities, while other CTSO participation is non-existent.

Each program of study in Texas aligns with an established CTSO. "The State of Texas and the Texas Education Code recognizes the value of career and technical student organizations by emphasizing the importance of participation by students and teachers in activities of career and technical student organizations supported by the agency and the State Board of Education (Sec. 29.182)."

The list of CTSO's in Texas include:

- Business Professionals of America (BPA)
- DECA, Texas Association
- Future Business Leaders of America (FBLA)
- Family, Career and Community Leaders of America (FCCLA)
- Health Occupations Students of America (HOSA)
- SkillsUSA Texas
- Texas Association of Future Educators
- Texas FFA Association
- Texas Technology Students Association (TSA)

Establish a task force to examine the current district ctso opportunities. This task force should include members from various campuses and CTE teaching fields

Using input from this task force, establish a clear, well defined set of expectations for CTE teachers in regard to the implementation of CTSOs.

Establish stipends commensurate with time and effort expectations for implementing quality CTSOs.

E.3. Programs of Study have quickly become concreted in the Texas CTE landscape. Currently, legislation is pending to tie POS completers to A-F accountability. Additional pending legislation proposes funding CTE courses on tiers of approved POS courses. **It's imperative that courses not be added to campus offerings without the approval of CTE staff. Accountability and funding levels are impacted.**

E.4. CTE facilities help students uncover their passion through hands-on learning, empowering them with a comprehensive skill set for a successful future. CTE facilities should meet industry standards and enable students to attain technical skills necessary for success in the 21st century.

Currently, CTE facilities across the district generally mirror each other on each campus.. Districts with multiple secondary campuses usually incorporate one of three facility options for CTE.

1. All campuses are comprehensive and contain the same program areas. This method is great if affordable to districts and enrollment is consistent across all campuses regardless of geography and student demographics.
2. Each campus commits to specific programs of study and forms "academies." No two high schools would have duplicate CTE programs. This method is financially efficient but limits students to only participating in career programs that fall within their attendance zone

3. Career Centers house programs requiring expensive equipment and labs. Each campus may have low enrollment in these traditional trades and industrial areas, but the aggregate of all campus enrollment create robust programs. Strategic geographical placement and creativity in scheduling are critical elements for success.

Recommendations 1. Establish a task force for developing short and long term solutions to improve CTE facilities. The task force should include industry partners, teachers, administration, parents and other stakeholders.

Recommendation 2. Commit to visiting regional and state programs with exemplary CTE facilities. Ideally a facility for a program of this quality should include classrooms, teacher and student collaboration areas, storage and labs to simulate industry.

The task force should report back to administration with recommendations.

Recommendation 3. Consider building a Career Center to house advanced courses for “share” programs. Automotive, Audio/Video, Specialized Health Science, Manufacturing, Cosmetology, Construction and Robotics are common programs to Career Centers in districts across the state.

E.5. The district offers N1303742 Introduction to Engineering Design (PLTW) as an introductory course. This course falls under the Engineering program of study but does not fall into the Advanced Manufacturing and Machinery Mechanics program of study, which promotes the district's robotics program.

Consider using 13036200 Principles of Applied Engineering as the course of record. This will allow all students to complete a program of study, without a drastic change in curriculum and instruction.

E.6. The Agriscience feeding facility is a great facility. Students are fortunate to have this space for projects. A general recommendation is to develop and post a cleaning schedule for common areas.

Concluding Remarks: Montgomery ISD clearly strives to provide excellent educational experiences for students. The district provides robust CTE course offerings. Students are given opportunities to earn industry certifications, attain technical skills and pursue post-secondary education and training. CTAT is proud to work with such an outstanding school.

Questions regarding this program evaluation should be addressed to:

Mark Bosher | Director of Technical Assistance and Training
Career & Technical Association of Texas
1108 Lavaca, Suite 110-486 | Austin, TX 78701
W 512-810-7230
mark@ctat.org
www.ctat.org CTAT is unified with the Association for Career & Technical Education