

New CTE
Courses for
8th Graders



Career & Technical Education



Principles of Agriculture, Food and Natural Resources

- What to Expect from the Course:
- Learn about different careers available in agriculture
- Learn about and opportunity to join Montgomery FFA and compete on teams as a Greenhand
- Learn about Agriculture, Livestock, Horticulture and more
- Hands on activities





Future Careers in Ag, Food, and Natural Resources

- Veterinarian
- Vet Technician
- Welder
- Farmer/Rancher
- Ag Equipment Sales (ex: John Deere)
- Ag Teacher
- Golf Course Superintendent
- Florist
- Plant Geneticist
- Animal Breeder
- Animal Geneticist
- Entomologist
- Poultry Scientist
- Ranch Manager
- Horse Trainer

High School
Ag pathways
and Courses
it Leads To:

Animal Science			
Course #	Level	Course Name	Credit (s)
5110	1	Principles of Agriculture, Food, and Natural Resources	1
5124 5121	2 2	Small Animal Management AND Equine Science	0.5 0.5
5122	3	Livestock Production	1
5123 5125 5126/5127 5128	4 4 4 4	Animal Science Veterinary Medical Applications Practicum in Agriculture, Food, and Natural Resources: Animal Science Project Based Research: Animal Science	1 1 2-3 1

Plant Science			
Course #	Level	Course Name	Credit (s)
5110	1	Principles of Agriculture, Food, and Natural Resources	1
5145 5141	2 3	Greenhouse Operations OR Floral Design	1 1
5143 5142	3 4	Horticulture Science OR Advanced Floral Design	1 1
5144 5147/5148 5146	4 4 4	Plant and Soil Science Practicum in Agriculture, Food, and Natural Resources: Plant Science Project Based Research: Plant Science	1 2-3 1

High School Ag pathways and Courses it Leads To:

Agricultural Technology and Mechanical Systems

Course #	Level	Course Name	Credit (s)
5110	1	Principles of Agriculture, Food, and Natural Resources	1
5131	2	Agricultural Mechanics and Metal Technologies	1
5132/5139	3	Agricultural Structures Design and Fabrications/Lab	1-2
5137	4	Agricultural Equipment Design and Fabrication Lab	2
5880/5581	4	Practicum in Agriculture, Food, and Natural Resources: Ag Mechanics	2-3
5138	4	Project Based Research: Agricultural Mechanics	1

Principles of Health Science



What to Expect from the Course:

- Learn about different careers available in the health science field
- Learn about HOSA- the Health Science Student Organization
- Learn about basics of medical terminology, basics of human anatomy and the human body systems, medical procedures, and much more.



Future Careers in Health Science

- Registered Nurses Average Annual Salary in Texas : \$76,800
- LVN Average Annual Salary in Texas: \$48,380

Occupations	Median Wage	Annual Openings	% Growth
Medical Assistants	\$29,598	8,862	30%
Surgical Technologists	\$45,032	1,150	20%
Dental Hygienists	\$73,507	1,353	38%
Physicians and Surgeons	\$213,071	1,151	30%
Dental Assistants	\$34,840	4,422	31%

High School Health Science Courses and Pathway:

Diagnostic and Therapeutic Services			
Course #	Level	Course Name	Credit (s)
5510	1	Principles of Health Science	1
5512	2	Medical Terminology	1
5601	2	Disaster Response	1
5513/5513C	3	Health Science Theory/Health Science Theory Clinical or	1-2
1551	3	Anatomy & Physiology or	1
5515	4	Pathophysiology	1
1551	3	Anatomy & Physiology or	1
5515	4	Pathophysiology or	1
5526/5525	4	Practicum in Health Science- CCMA or	2-3
5517/5516	4	Practicum in Health Science- PCT or *LCHS only*	2-3
5519	4	Practicum in Health Science- EMT	2

Principles of Human Services



- **What to Expect from the Course:**
- Learn about different careers available in the Human Services field which includes but not limited to social workers, mental health professionals and community volunteer workers and how the world of human services better serves and benefits the general public.

Future Careers in Human Services

Occupations	Median Wage	Annual Openings	% Growth
Child, Family, and School Social Workers	\$41,350	2,221	17%
Social and Community Services Managers	\$65,146	608	33%
Marriage and Family Therapists	\$42,266	217	35%
Social and Human Service Assistants	\$32,448	2,822	25%
Mental Health and Substance Abuse and Behavioral Disorder Counselors	\$42,120	576	39%

High School
Human
Services
Courses and
Pathways:

Family and Community Services			
Course #	Level	Course Name	Credit (s)
5410	1	Principles of Human Services	1
H510	2	Lifetime, Nutrition & Wellness and (Offered at JH only)	0.5
H511	1	Dollars and Sense (Offered at JH only)	0.5
0561	1	Professional Communications	0.5
5405	1	Interpersonal Studies	0.5
5411	3	Counseling and Mental Health	1
5426	2	Child Development	1
5412	3	Family and Community Services	1
5413	4	Project Based Research- Community Service	1

Cosmetology and Personal Care Services			
Course #	Level	Course Name	Credit (s)
5410	1	Principles of Human Services	1
5463	2	Introduction to Cosmetology	1
5461	3	Cosmetology I	2
5462	4	Cosmetology II	3



**Business,
Marketing,
& Finance**

Principles of Business, Marketing, & Finance



- **What to Expect from the Course:**

- Learn about different careers available in the business, marketing, and finance
- Learn about BPA- the Business, Marketing & Finance Student Organization
- Learn about basics of Accounting, marketing concepts and basics Microsoft Office Suite.

Future Careers in Business Marketing and Finance



Occupations	Median Wage	Annual Openings	% Growth
Administrative Service Managers	\$96,138	2,277	21%
Management Analysts	\$87,651	4,706	32%
General and Operations Managers	\$107,640	18,679	20%
Operations Research Analysts	\$78,083	1,128	38%
Supervisors of Administrative Support Workers	\$57,616	14,982	20%

Occupations	Median Wage	Annual Openings	% Growth
Accountants and Auditors	\$71,469	14,436	22%
Loan Officers	\$68,598	2,419	19%
Personal Financial Advisors	\$86,965	1,861	52%
Administrative Service Managers	\$96,138	2,277	21%
Insurance Underwriters	\$66,206	594	14%



Occupations	Median Wage	Annual Openings	% Growth
Marketing Research Analysts and Marketing Specialists	\$70,346	4,664	40%
Insurance Sales Agents	\$43,181	5,886	30%
First-Line Supervisors of Retail Sales Workers	\$72,550	2,826	15%
Wholesale and Retail Buyers	\$51,106	1,229	19%

High School
Business,
Marketing, and
Finance Courses
and Pathways:

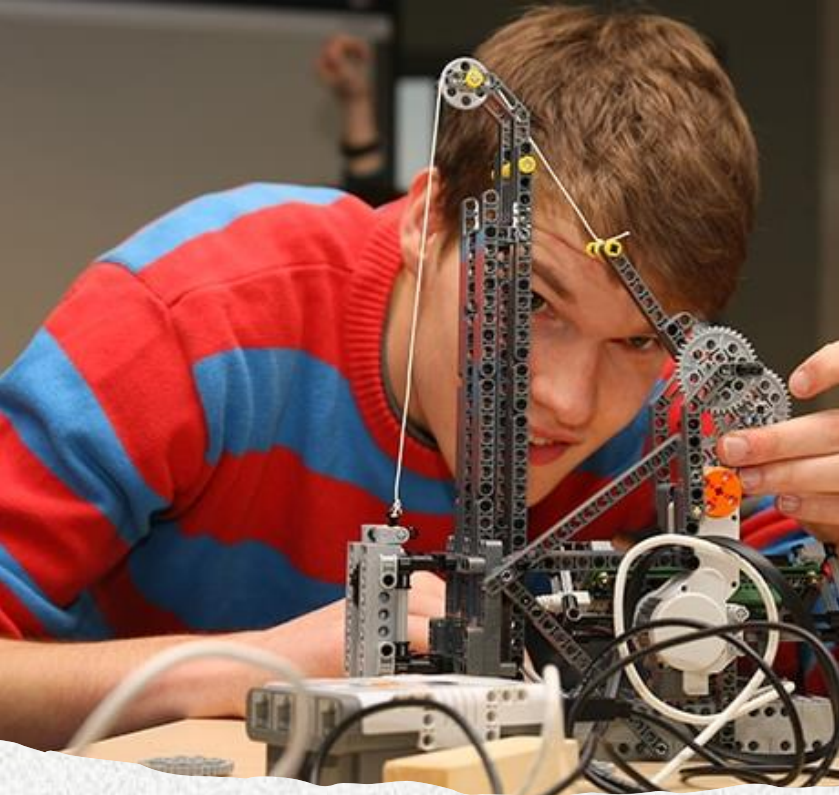
Accounting and Financial Services			
Course #	Level	Course Name	Credit (s)
5310	1	Principles of Business, Marketing, and Finance	1
5311	1	Business Information Management I (BIM I)	1
5320	1	Money Matters or	1
5321	2	Accounting I	1
5320	1	Money Matters or	1
5321	2	Accounting I or	1
5322	3	Accounting II	1
5322	3	Accounting II	1
1035	2	Financial Mathematics	1
5215	4	Practicum in Entrepreneurship	2
5341	4	Career Preparation I	3

Business Management			
Course #	Level	Course Name	Credit (s)
5310	1	Principles of Business, Marketing, and Finance	1
5311	1	Business Information Management I (BIM I) or	1
5332	2	Business Law	1
5312	2	Business Information Management II (BIM II) or	1
5331	3	Business Management	1
5215	4	Practicum in Entrepreneurship	2
5341	4	Career Preparation I	3

High School
Business,
Marketing, and
Finance Courses
and Pathways:

Marketing and Sales			
Course #	Level	Course Name	Credit (s)
5310	1	Principles of Business, Marketing, and Finance	1
5333	3	Advertising AND	.5
5334	3	Social Media Marketing	.5
5335	2	Sports and Entertainment Marketing I AND	.5
5336	3	Sports and Entertainment Marketing II	.5
5337	2	Marketing	1
5215	4	Practicum in Entrepreneurship	2
5341	4	Career Preparation I	3
5342	-	Career Preparation II	3

Real Estate			
Course #	Level	Course Name	Credit (s)
5310	1	Principles of Business, Marketing, and Finance	1
0561	1	Professional Communications	0.5
5332	2	Business Law	1
5337	2	Marketing	1
5451	2	Interior Design I *LCHS only*	1
5340	3	Fundamentals of Real Estate	2
1035	2	Financial Math	1
5343/5344	4	Practicum in Real Estate	2-3



Principles of Manufacturing

What to Expect from the Course:

- Learn about different careers available in the Robotics and Manufacturing fields of study
- Learn about the basics of Robotics and the software used and the PLTW pathway in High School.

HS Manufacturing pathways and the courses it leads to



Robotics and Automation Technology			
Course #	Level	Course Name	Credit (s)
H505	1	Principles of Manufacturing (offered at JH only)	1
5817	1	Principles of Applied Engineering	1
5807	2	Robotics I	1
5808	3	Robotics II	1
5818	3	Engineering Design & Presentation I (Robotics III)	1
5815/5819	4	Practicum in Manufacturing: Robotics	2-3



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Principles of Applied Engineering

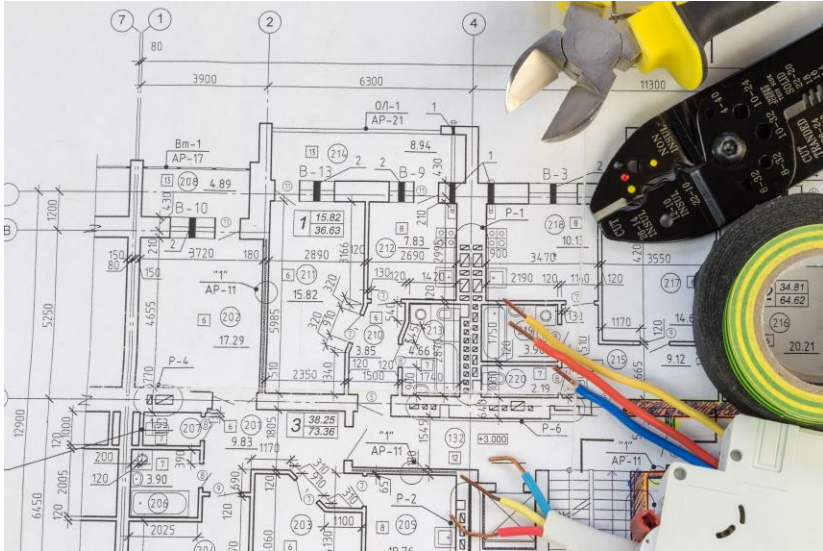


- **What to Expect from the Course:**

- Learn about different careers available in Engineering Fields of Study
- Learn about the basics of Engineering and the software used and the PLTW pathway in High School.



Future Careers in Engineering



Occupations	Median Wage	Annual Openings	% Growth
Aerospace Engineers	\$110,843	481	9%
Industrial Engineers	\$97,074	1,263	10%
Mechanical Engineers	\$91,107	1,535	11%
Chemical Engineers	\$112,819	474	9%
Electrical Engineers	\$98,405	1,137	10%

High School Engineering Pathway and the courses it leads to:

You still must take PLTW Introduction to Engineering Design in High School as your first engineering course

Engineering Foundations			
Course #	Level	Course Name	Credit (s)
5817	1	Principles of Applied Engineering (JH only)	1
5801	1	PLTW Introduction to Engineering Design	1
5805	3	PLTW Engineering Science	1
5802	3	PLTW Civil Engineering and Architecture	1
5803	3	PLTW Aerospace Engineering	
5804	3	PLTW Digital Electronics * LCHS only*	
5806	4	PLTW Engineering Design and Development	1
5814/5809	4	Practicum in Science, Technology, Engineering and Mathematics (STEM): Engineering	2-3

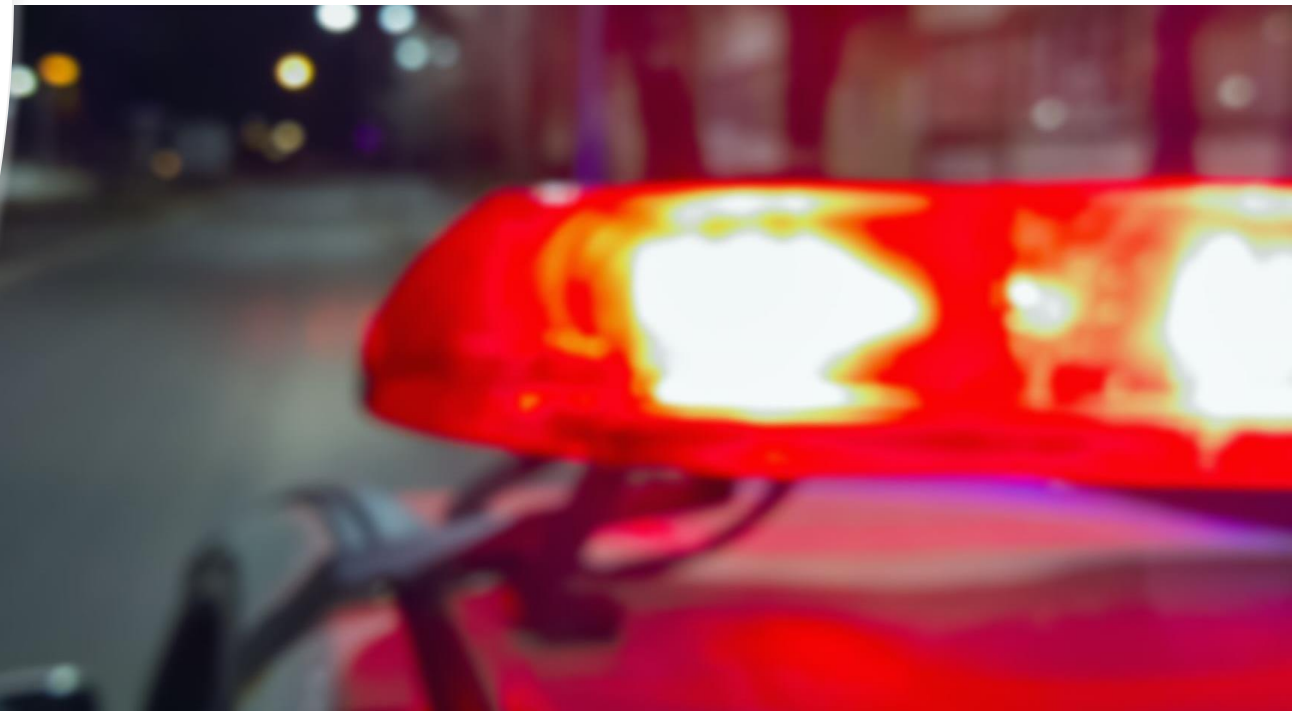
High School
Robotics Pathway and
the courses it leads to:

Robotics and Automation Technology			
Course #	Level	Course Name	Credit (s)
H505	1	Principles of Manufacturing (offered at JH only)	1
5817	1	Principles of Applied Engineering	1
5807	2	Robotics I	1
5808	3	Robotics II	1
5818	3	Engineering Design & Presentation I (Robotics III)	1
5815/5819	4	Practicum in Manufacturing: Robotics	2-3

Principles of Law, Public Safety, Corrections, and Security

What to expect in this class:

- Learn about careers in law enforcement or legal fields of study
- Hands-on activities
- Participate in mock court trials and police procedures





Occupations	Median Wage	Annual Openings	% Growth
Police and Sheriff's Patrol Officers	\$60,112	5,241	13%
Probation Officers and Correctional Treatment Officers	\$44,054	793	9%
Correctional Officers and Jailers	\$40,186	4,683	9%
Immigration and Customs Inspectors	\$78,104	1,236	9%
First-Line Supervisors of Police and Detectives	\$91,312	253	25%

Occupations	Median Wage	Annual Openings	% Growth
Lawyers	\$126,131	2,801	19%
Paralegal and Legal Assistants	\$50,544	2,837	19%

Future Careers in Law Enforcement and Legal Studies

HS Law and
Legal Studies
pathway and
the courses it
leads to

Law Enforcement			
Course #	Level	Course Name	Credit (s)
5610	1	Principles of Law, Public Safety, Corrections and Security	1
5611	2	Law Enforcement I	1
5613	3	Correctional Services	1
5411	4	Counseling and Mental Health	1
5415	3	Law Enforcement II or	1
5616	3	Dual Credit Criminal Justice (Lone Star College)	1
5614	4	Forensic Science	1
5602/5603	4	Practicum in Law, Public Safety, Corrections and Security: Law Enforcement	2-3

Legal Studies			
Course #	Level	Course Name	Credit (s)
5610	1	Principles of Law, Public Safety, Corrections and Security	1
5612	2	Court Systems and Practices	1
5332	2	Business Law	1
5614	4	Forensic Science	1
5619/5620	4	Practicum in Law, Public Safety, Corrections and Security: Legal Studies	2-3
5600	4	Project Based Research- Legal Studies	1



PRINCIPLES OF ARTS, AUDIO/VIDEO TECHNOLOGY, AND COMMUNICATIONS

What to expect from this course:

- Learn about careers in the audio visual (AV) and graphic design fields of study
- Participate in hands on activities with AV equipment and graphic design software

Future careers in Audio Visual and Graphic Design fields of study:

Occupations	Median Wage	Annual Openings	% Growth
Sound Engineering Technicians	\$39,562	79	27%
Camera Operators, Television, Video, and Motion Picture	\$50,024	129	9%
Audio and Video Equipment Technicians	\$40,581	757	29%
Film and Video Editors	\$47,382	118	23%

Occupations	Median Wage	Annual Openings	% Growth
Graphic Designers	\$44,824	1,433	15%
Multimedia Artists and Animators	\$67,392	186	21%

HS Audio Visual and Graphic Design pathways and the courses it leads to:

Digital Communications			
Course #	Level	Course Name	Credit (s)
5210	1	Principles of Arts, Audio/Video Technology and Communications	1
0561	1	Professional Communications	0.5
5211/5217	2	Audio/Video Production I/Lab	1-2
5212/5218	3	Audio/Video Production II/Lab	1-2
5213/5219	4	Practicum in Audio Video Production	2-3

Graphic Design and Interactive Media			
Course #	Level	Course Name	Credit (s)
5210	1	Principles of Arts, Audio/Video Technology & Communications	1
5214	2	Graphic Design and Illustration I	1
5216/5220	3	Graphic Design and Illustration II/Lab	1-2
5221/5222	4	Practicum in Graphic Design and Illustration: Graphic Design	2-3