

**Franklin County High School**

**Course Description  
Handbook**

# High School Graduation Requirements

## English – 4 Credits

English I	1 Credit
English II	1 Credit
English III	1 Credit
English IV	1 Credit

## Science – 3 Credits

Biology I	1 Credit
Chemistry or Physics	1 Credit
Lab Science	1 Credit

## Math – 4 Credits

(Students MUST take a math each year)

Algebra I	1 Credit
Geometry	1 Credit
Algebra II	1 Credit
Upper Level Math	1 Credit

## Social Studies – 3 Credits

World History	1 Credit
U.S. History	1 Credit
Economics	.5 Credit
Government	.5 Credit

## P.E. and Wellness – 1.5 Credits

Wellness	1 Credit
P.E.	.5 Credit

## Fine Arts – 1 Credit

Fine Arts	1 Credit
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## Personal Finance - .5 Credit

Personal Finance	.5 Credit
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## Foreign Language – 2 Credits

Must Be Same Language	2 Credits
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## Elective Focus – 3 Credits

Elective Focus	3 Credits
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## ACT Prep - 1 Credit

Local Requirement	
ACT English	.5 Credit
ACT Math	.5 Credit

## 28 Total Credits Required for FCHS Graduation

Students must complete an Elective Focus of 3 units in: a state approved CTE Program of Study; science and math; humanities; fine arts; physical education; or Advanced Placement.

The Fine Arts and Foreign Language requirement may be waived for students who are sure they are not attending a University and be replaced with courses designed to enhance and expand the elective focus.

The ACT Prep requirement may be waived for students with : a score of 27 or above on the ACT test prior to sophomore year or verification of enrollment in math and English honors courses.

**FRANKLIN COUNTY SCHOOLS—FCHS  
BASIC FOUR-YEAR PLAN**

**NAME:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**Tennessee Graduation Requirements:**

English:	4 credits	Wellness:	1 credit
Math:	4 credits	PE:	.5 credit
Science:	3 credits	Fine Arts:	1 credit
Social Studies:	3 credits	Foreign Language:	2 credits
Personal Finance:	.5 credit	Elective Focus:	3 credits

**Franklin County Schools Local Requirement:**

ACT Prep                      1 credit

**FCHS REQUIRES 28 CREDITS FOR GRADUATION**

**9<sup>th</sup> Grade**

1. English I
2. Algebra I
3. Physical Science
4. World History
5. Wellness
6. Elective
7. Elective
8. Elective

**10<sup>th</sup> Grade**

1. English II
2. Geometry
3. Biology I
4. Government/ PE
5. ACT Eng Prep/ ACT Math Prep
6. Fine Arts
7. Elective
8. Elective

**11<sup>th</sup> Grade**

1. English III
2. Algebra II
3. Chemistry
4. U.S. History
5. Foreign Language I
6. Foreign Language II
7. Elective
8. Elective

**12<sup>th</sup> Grade**

1. English IV
2. Upper Level Math
3. Economics/ Personal Finance
4. Elective
5. Elective
6. Elective
7. Elective
8. Elective

# GRADUATION WITH HONORS

## Franklin County High School Honors Scholars\*

Criteria for FCHS Honors Scholars:

### **For class of 2019, 2020, and 2021**

- Minimum grade point average (GPA) of 3.75- not rounded up
- Students are required to have at least ten (10) academic honors courses

### **For class of 2022 and beyond**

- Minimum grade point average (GPA) of 4.0 –not rounded up
- Students are required to have at least twelve (12) academic honors courses in core area

## Franklin County High School Valedictorian\*

Criteria for FCHS Valedictorian:

### **For class of 2019, 2020, and 2021**

- Students must qualify as an FCHS Honors Scholar.
- Students must have attended FCHS for at least five (5) semesters.
- Students must score at or above all of the subject area college readiness benchmarks on the ACT or equivalent score on the SAT.
- Steps to determine valedictorian:
  1. Student(s) meeting the above criteria with the highest grade point average (GPA). If a tie, then
  2. student(s) with the highest composite ACT on a regular national test through the **December** test date of the graduation year. If a tie, then (3)
  3. student(s) with the highest number of honors courses attempted. If a tie, then (4)
  4. the highest numeric average in core academic courses.

### **For class of 2022 and beyond**

#### **VALEDICTORIAN**

Highest Grade Point Average (weighted)  
12 Honors or Above Courses (minimum)  
Graduate with Honors (state)  
FCHS Honors Scholar

#### **SALUTATORIAN**

Second Highest GPA (weighted)  
12 Honors or Above Courses (minimum)  
Graduate with Honors (state)  
FCHS Honors Scholar

### **Steps to determine valedictorian: (2022 and beyond)**

Transfer students must be enrolled in the high school the last four (4) of seven (7) semesters preceding the final semester (must start attending no later than the second semester of his/her sophomore year).

1. The honors scholar student(s) meeting the above criteria with the highest grade point average (GPA). If a tie, then
2. Student(s) with the highest composite ACT on a regular national test through the December test prior to graduation. If a tie, then (3)
3. Student(s) with the highest number of honors courses attempted. If a tie, then (4)
4. The highest numeric average in core academic courses.

## **Tennessee Honors**

Students who score at or above all of the subject area college readiness benchmarks on the ACT or equivalent score on the SAT will graduate with honors.

ACT College Readiness Benchmark Scores:

- English 18
- Mathematics 22
- Reading 21
- Science 24

## **Tennessee Distinction**

Students will be recognized as graduating with “distinction” by attaining a B average and completing at least one of the following:

- Earn a nationally recognized industry certification
- Participate in at least one (1) of the Governor’s Schools
- Participate in one (1) of the state’s All State musical organizations
- Be selected as a National Merit Finalist or Semi-Finalist
- Attain a score of 31 or higher composite score on the ACT
- Attain a score of three (3) or higher on at least two (2) advanced placement exams
- Successfully complete the International Baccalaureate Diploma Programme
- Earn twelve (12) or more semester hours of transcribed post-secondary credit

**\*State/Local requirements could change the criteria for the honors scholars and valedictorian.**

## **HONORS AND ADVANCED PLACEMENT COURSES**

All honors and Advanced Placement (AP) courses will substantially exceed the content standards, learning expectations, and performance indicators approved by the State.

Teachers will model instructional approaches that facilitate maximum interchange of ideas among students: independent study, self-directed research and learning, and appropriate use of technology.

Multiple Assessment exemplifying coursework will be utilized, such as short answer, original or creative interpretations, essays, constructed response prompts, authentic products, portfolios, performance-based tasks, open-ended questions, and analytical writing.

Additionally, an honors course shall include a minimum of five (5) of the following components:

1. Extended reading assignments that connect with the specified curriculum.
2. Research-based writing assignments that address and extend the course curriculum.
3. Projects that apply course curriculum to relevant or real-world situations, i.e. oral presentations, Power Point, etc. Connection to the community is encouraged.
4. Open-ended investigations in which the student selects the questions and designs the research.

5. Writing assignments that demonstrate a variety of modes, purposes, and styles.
  - Mode: narrative, descriptive, persuasive, expository, and expressive
  - Purpose: to inform, entertain, and persuade
  - Style: formal, informal, literary, analytical, and technical
6. Integration of appropriate technology into the course of study.
7. Deeper exploration of the culture, values, and history of the discipline.
8. Extensive opportunities of problem solving, experiences through imagination, critical analysis, and application.
9. Job shadowing experiences with presentations which connect class study to the world of work.

## **DUAL CREDIT AND DUAL ENROLLMENT**

**Dual Credit** is a postsecondary course or a high school course aligned to a postsecondary course that is taught at the high school by high school faculty for high school credit. Students are able to receive postsecondary credit by successfully completing the course, plus passing the assessment developed and/or recognized by the granting postsecondary institution. The institution will grant the credit upon enrollment of the student.

**Dual Enrollment** is a postsecondary course, taught either at the postsecondary institution or at the high school, by the postsecondary faculty (may be credentialed adjunct faculty), which, upon successful completion of the course, allows students to earn postsecondary and secondary credit concurrently. The student must meet dual enrollment eligibility under the Tennessee Board of Regents (TBR) and University of Tennessee (UT) policies.

**Tennessee Dual Enrollment Grant** program is a grant for study at an eligible postsecondary institution that is funded from the state lottery and awarded to students who are attending an eligible high school and who are also enrolled in college courses at eligible postsecondary institutions for which they will receive college credit.

1. Award amount is up to \$300 per semester for 1 course. For an additional course per semester with a total semester amount not to exceed \$600 (\$1200 per academic year), the student must meet the minimum HOPE scholarship academic requirements at the time of dual enrollment.
2. Juniors and seniors eligible
3. Must maintain a 2.75 GPA for all postsecondary courses attempted
4. Only for lower-division courses numbered 100-200 or 1000-2000

[Tennessee Hope Scholarship](#)

[NCAA Quick Guide](#)

[Tennessee Promise](#)

**Some courses listed in this handbook may require a lab fee.**

[Academic Standards](#)  
[EPSO \( Early Post Secondary Opportunity\)](#)

## **LANGUAGE ARTS AND FOREIGN LANGUAGE**

### **ACT PREP ENGLISH**

½ Credit	Prerequisite: None
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**ACT PREP** includes an overview of the ACT and its contents, test-taking strategies, a review of the English focus areas, and full-length test simulation.

### **ENGLISH I**

1 Credit	Prerequisite: None
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**English I** will develop reading skills necessary for word recognition, comprehension, interpretation, analysis, evaluation, and appreciation of the written text. Students will study grammar and usage, composition, various genres of literature, and literature-based vocabulary. The student will take an English I end-of-course test upon completion of the course.

### **HONORS ENGLISH I**

1 Credit	Prerequisite: Entrance Exam
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**English I H** is designed for the accelerated student who wishes to place greater emphasis on literary analysis. The development of critical reading, thinking, and writing skills will be emphasized through class discussions, essays, creative writing, and the research paper. The student will take an English I end-of-course test upon completion of the course.

### **ENGLISH II**

1 Credit	Prerequisite: English I
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**English III** is a review and continuation of grammar fundamentals, introduction to paragraph writing, and a study of representative English, World, and American literature. Students will continue to develop research skills. Besides varied selections of poems, short stories, and non-fiction, the course also includes the study of a novel and a Shakespearean play. The student will take an English II end-of-course test upon completion of the course.

## HONORS ENGLISH II

1 Credit	Prerequisite: see counselor for criteria
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**English II H** is designed for the accelerated student who wishes to concentrate on the reading of selected literary works and to develop his composition and analytical skills. Included is a review of the mechanics of grammar, in-depth analyses of all genres of literature, accelerated vocabulary, and concentration on the writing of expository, narrative, and descriptive paragraphs. Students will continue to develop research skills. Summer reading and projects are required. The student will take an English II end-of-course test upon completion of the course.

## ENGLISH III

1 Credit	Prerequisite: English I and II
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**English III** includes a broad overview of American literature, college-level vocabulary study, a variety of writing techniques, research techniques, grammar techniques, and oral communication techniques. Outside reading and writing are required. The student will take an English III end-of-course test upon completion of the course.

## HONORS ENGLISH III

1 Credit	Prerequisite: see counselor for criteria
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**English III H** is designed for the accelerated student who wishes to concentrate on the reading of selected literary works and to develop his composition and analytical skills. Content includes a broad overview of American literature, SAT-level vocabulary, a variety of writing techniques, research techniques, advanced grammar techniques, and oral communication techniques. Extensive outside reading and writing are required. Summer reading and projects are required.

**EPSO - Motlow DE**

## ENGLISH IV

1 Credit	Prerequisite: English I, II, III
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**English IV** is a course in literature and composition to prepare the student for college English, vocational training, and the job market. Students will read and analyze various works of British authors, present oral presentations, do a career research project, participate in class/group activities and discussions, and work on college and career skills. Composition and reading are strong elements in this course.



## HONORS ENGLISH IV

1 Credit	Prerequisite: see counselor for criteria
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The **Honors English IV** course offers the accelerated student the opportunity to focus on reading works of literary merit by British writers and to refine composition and analytical skills. Accelerated vocabulary study and research techniques are a vital part of the course. Summer reading is required.

**EPSO - Motlow DE**

## ADVANCED PLACEMENT ENGLISH IV

1 Credit	Prerequisite: Honors English IV
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**Advanced Placement English IV** focuses on critical analyses of literature through writing assignments. Students are encouraged to develop critical standards for independent appreciation of literary works and sensitivity to literature as a shared experience. Works of literary merit are read during the year, followed by analytical writing and discussion. Students also study accelerated vocabulary and research techniques. Students prepare to take the Advanced Placement Literature and Composition Examination administered by the College Board to earn college credit. Additional works of literary merit are required for summer reading.

**EPSO - AP**

## JOURNALISM-YEARBOOK

1-2 Credits	Prerequisite: Teacher Approval, Application Required
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**Journalism** consists of student publication of the yearbook. Teacher recommends prior course of art and keyboarding or previous yearbook experience. Open to students in grades 9 – 12, based on application, interview, and teacher ratings of ability, dependability, willingness to work, etc. Duties include taking pictures, preparing layouts, selling advertisements, and writing copy for the yearbook. A student should have computer knowledge and strong writing skills. To meet deadlines and to photograph events, a student may have to work after school.

## FUNDAMENTALS OF SPEECH & COMMUNICATION

1 Credits	Prerequisite: English I, English II
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**Speech & communication** explores a variety of speaking situations (informative, small group, persuasive, and special event speaking) and different types of communication (interpersonal, small group, and public communication) using a variety of digital media (text, audio, and visual) through formal and informal settings. The student will develop the skills to generate ideas, research topics, organize information, and create and evaluate oral presentations.

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## SPANISH I

1 Credit	Prerequisite: None
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**Spanish I** is an introduction to the four areas of communication: speaking, listening, reading, writing, and understanding of the language and culture. The student will do various listening and speaking activities following a conversational format, writing activities that include rote drill and composition development, and reading and video activities focused on cultural elements of various Spanish-speaking countries.

## SPANISH II

1 Credit	Prerequisite: Spanish I
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**Spanish II** is a continuation of the topics learned in *Spanish I* and will include more basic vocabulary and more opportunities to practice conversational skills. Students will strive to build more advanced skills in the four areas of communication from Spanish I.

## SPANISH III HONORS

1 Credit	Prerequisite: Spanish I, Spanish II
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**Spanish III H** is an advanced study of Spanish. Students will focus on grammar and vocabulary with an increased emphasis on the four areas of communication. Students will focus on the study of culture, history and literature associated with the Spanish language.

# MATHEMATICS

All students must take a math course in each year of their high school enrollment.

## ALGEBRA I

1 Credit	Prerequisite: None
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**Algebra I** uses problem situations, physical models, and appropriate technology to extend algebraic thinking and engage student reasoning. Algebra I emphasizes linear and quadratic expressions, equations and functions. This course also introduces students to polynomial, rational and exponential functions with domains in the integers. Students build upon previous knowledge of equations and inequalities to reason, solve, and represent equations and inequalities numerically and graphically. The student will take the Algebra I End-of-Course test upon completion of the course.

## HONORS ALGEBRA I

1 Credit	Prerequisite: Entrance Exam	
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**Algebra I H** includes everything that is in the College Prep *Algebra I*, but goes more depth and is taught at a faster pace. Some Geometry and Algebra II concepts are covered. The student is expected to be self-motivated and capable of doing independent as well as group work. Some of the requirements for Honors Algebra 1 can include research, reading assignments, writing assignments and projects to enhance understanding of the objectives studied in the course and to apply course curriculum to relevant or real-world situations. The student will take the Algebra I End-of-Course test upon completion of this course.

## GEOMETRY

1 Credit	Prerequisite: Algebra I
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**Geometry** emphasizes similarity, right triangle trigonometry, congruence, and modeling geometry concepts in real life situations. Students build upon previous knowledge of similarity, congruence, and triangles to be able to reason mathematically. This course also introduces students to circles. Students show a progression of mastery and understanding of the use and application of surface area and volume.

## HONORS GEOMETRY

1 Credit	Prerequisite: Alg I/Teacher recommendation
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**Geometry H** emphasizes similarity, right triangle trigonometry, congruence, and modeling geometry concepts in real life situations. Students build upon previous knowledge of similarity, congruence, and triangles to be able to reason mathematically. This course also introduces students to circles, right triangle trigonometry, transformations and using

theorems to prove congruence and similarity in shapes. Students will incorporate more problem-solving into all of these areas. Students show a progression of mastery and understanding of the use and application of surface area and volume. Students will learn to construct geometric shapes using given tools. Honors is designed for advanced students who are capable of a more rigorous study at an accelerated pace. Students will apply and analyze constructions, express geometric properties with equations, do more complex proofs and go more in-depth with all topics. This level may also include research, reading and writing assignments and projects to enhance the understanding of the objectives studied in the course and to apply course curriculum to relevant real-world situations.

## ALGEBRA II

1 Credit	Prerequisite: Algebra I and Geometry
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Course length: 1 semester

**Algebra II** is intended for students that do not plan to attend college.

Algebra 2 emphasizes polynomial, rational and exponential expressions, equations, and functions. This course also introduces students to the complex number system, basic trigonometric functions, and foundational statistics skills such as interpretation of data and making statistical inferences. Students build upon previous knowledge of equations and inequalities to reason, solve, and represent equations and inequalities numerically and graphically.

## HONORS ALGEBRA II

2 Credits	Prerequisite: Algebra I and Geometry/Teacher recommendation
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Course length: **2 semesters** (students will earn 1 elective credit and 1 math credit)

\*This course is intended for students that plan to attend college.

**Algebra 2 H** emphasizes polynomial, rational and exponential expressions, equations, and functions. This course also introduces students to the complex number system, basic trigonometric functions, and foundational statistics skills such as interpretation of data and making statistical inferences. Students build upon previous knowledge of equations and inequalities to reason, solve, and represent equations and inequalities numerically and graphically.

Honors classes must also meet the following criteria: It is designed for advanced students who are capable of a more rigorous study of Algebra II at an accelerated pace. In addition to the material covered in Standard Algebra II, students explore more challenging problems. All topics are covered in greater depth and there is a strong emphasis on problem-solving, critical analysis, and application. Students will also cover the ACT math standards. Some of the course requirements for Honors Algebra II include research, reading assignments, writing assignments, and projects to enhance understanding of the objectives studied in the course and to apply course curriculum to relevant or real-world situations.

## PRECALCULUS

1 Credit	Prerequisite: Alg. I, II, Geometry 19+ ACT score or Teacher recommendation
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Course length: 1 semester, prerequisites Geometry and Algebra 2

**Precalculus** is designed to prepare students for college level STEM focused courses. Students extend their knowledge of the complex number system to use complex numbers in polynomial identities and equations. Topics for student mastery include vectors and matrix quantities, sequences and series, parametric equations, and conic sections. Students use previous knowledge to continue progressing in their understanding of trigonometric functions and using regression equations to model quantitative data.

## HONORS PRECALCULUS

1 Credit	Prerequisite: Alg. I, II, Geometry 23+ ACT score or Teacher recommendation
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Course length: 1 semester, prerequisites Geometry and Algebra 2

**Precalculus H** is designed to prepare students for college level STEM focused courses. Students extend their knowledge of the complex number system to use complex numbers in polynomial identities and equations. Topics for student mastery include equations, inequalities, properties of functions, models, functions, trigonometric functions, triangles, and circles. All students enrolled in a statewide dual credit course take the online challenge exam, which is used to assess mastery of the postsecondary-level learning objectives. Students which meet or exceed the exam 'cut score' receive college credit that can be applied to ny Tennessee public postsecondary institution.

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## HONORS CALCULUS

1 Credit	Prerequisite: Honors Pre-Calculus
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Course length: 1 semester, prerequisite precalculus

**Calculus H** is designed for students interested in STEM-based careers and builds on the concepts studied in precalculus. The study of calculus on the high school level includes a study of limits, derivatives, and an introduction to integrals.

## ADVANCED PLACEMENT CALCULUS AB

1 Credit	Prerequisite: Honors Calculus
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Course length: 2 semesters (students must take honors calculus first semester then AP Calculus 2nd semester)

**Calculus AP-AB** is designed for students interested in STEM-based careers and builds on the concepts studied in precalculus. The study of calculus on the high school level includes a study of limits, continuity, derivatives, integration, and modeling. It is equivalent to one semester of calculus at most colleges and universities.

ESPO- AP

## ADVANCED PLACEMENT CALCULUS BC

1 Credit	Prerequisite: Honors Calculus AB
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Course length: 1 semester, prerequisite AP Calculus AB

**Calculus AP-BC** is designed for students interested in STEM-based careers and builds on the concepts studied in precalculus. The study of calculus on the high school level includes a study of limits, derivatives, integration, modeling plus others such as parametric, polar, and vector functions, and series. It is equivalent to one year of calculus at most colleges and universities.

ESPO- AP

## HONORS STATISTICS

1 Credit	Prerequisite: Honors Algebra II or Algebra II with teacher recommendation or Advanced Algebra and Trigonometry with teacher recommendation or Pre-Calculus
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**Statistics H** is designed to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. The major themes in Statistics include: interpreting categorical and quantitative data, conditional probability and other rules of probability, using probability to make decisions, and making inferences and justifying conclusions.

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## BRIDGE MATHEMATICS

1 Credit	Prerequisite: Algebra I, Geometry, Algebra II Recommend ACT of 14 or less
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**Bridge** is designed to prepare students for college level mathematics. Included in the course of study are diagrammatic, verbal, symbolic, graphical and numerical mathematics. A new approach will be used to develop concepts, make connections and support concepts through applications with numbers, geometry, functions and data. The Bridge Mathematics course is recommended for students who have not scored a 19 or higher on the ACT by the beginning of the senior year.

## SAILS MATH

1 Credit	Prerequisite: based on Math ACT of 18 or less Recommend ACT of 15, 16, 17, 18
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**SAILS** targets students that have not achieved the college readiness benchmark in math. Students will revisit various algebra and geometry concepts in order to build a stronger foundation and develop a greater depth of knowledge. The course is an on-line course through Motlow and upon completing the SAILS Math program successfully may begin college in credit bearing courses instead of a remedial math course.

# SCIENCE

## ENVIRONMENTAL SCIENCE

1 Credit	
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**ENVIRONMENTAL SCIENCE** provides students with an opportunity to develop an understanding of interrelationships in the natural world. In addition, it allows them to identify natural and man-made environmental problems and design and evaluate possible solutions for these problems. The academic standards for Environmental Science are research-based, supported by the National Research Council's Framework for K-12 Science Education. The standards establish the core ideas and practices of science and engineering that will prepare students to use scientific thinking to examine and evaluate knowledge encountered throughout their lives.

## PHYSICAL SCIENCE

1 Credit	Prerequisite: None
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**Physical Science** is a laboratory course that explores the relationship between energy and matter. The student will investigate force and motion, structure and properties of matter, interaction of matter, and energy through inquiry learning.

## HONORS PHYSICAL SCIENCE

1 Credit	Prerequisite: Entrance Exam
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**Honors Physical Science** includes the same areas of study as Physical Science but is designed for the accelerated student who is able to apply algebraic and problem solving skills. Students will be expected to experience the content of Physical Science through inquiry learning in both classroom and laboratory settings.

## BIOLOGY I

1 Credit	Prerequisite: Physical Science is not required, but most students take Physical Science first.
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**Biology I** is a laboratory science course that investigates the relationship between structure and function from molecules to organisms and systems, the interdependence and interactions of biotic and abiotic components of the environment, and mechanisms that maintain continuity and lead to changes in populations over time. Students explore biological concepts through an inquiry approach. The student will take a Biology I end-of-course test upon completion of the course.

## HONORS BIOLOGY I

1 Credit	Prerequisite: see counselor for criteria
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**Honors Biology I** includes the same areas of study as Biology I but is designed for the student who needs a strong biological foundation for future studies or career choices. The student will be expected to demonstrate high skills in reading, writing and the ability to operate independently and as a group member, both in regular classroom operations, laboratory settings, and special assignments. The student will take a Biology I end-of-course test upon completion of the course.

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## HONORS BIOLOGY II

1 Credit	Prerequisite: Honors Biology I and Honors Chemistry I recommended
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**Honors Biology II** is a laboratory science course in which students engage in an in-depth study of the principles of biology. This course emphasizes internal and external anatomical structures and their functions, the environmental interaction of organisms, processes of living things, mechanisms that maintain homeostasis, biodiversity, and changes in life forms over time. Students will spend a minimum of 25% of instructional time engaged in hands-on laboratory work.

## ADVANCED PLACEMENT BIOLOGY

1 Credit	Prerequisite: Honors Biology II
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**Advanced Placement Biology** is a college-level course for highly motivated students with a high aptitude for science. The course allows the student to investigate specialty areas of biology. The College Board AP program provides the curriculum and course description. Studies will include molecules and cells, heredity and evolution, and organisms and populations. Students prepare to take the Advanced Placement Biology Examination administered by the College Board to earn college credit.

**EPSO - AP**

## CHEMISTRY I

1 Credit	Prerequisite: Algebra I, Physical Science, Biology I
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**Chemistry I** is a laboratory science course in which students investigate the composition of matter and the physical and chemical changes it undergoes. Students use science process skills to study the fundamental structure of atoms, the way atoms combine to form compounds, and the interactions between matter and energy. Students explore chemistry concepts through an inquiry-based approach.



## HONORS CHEMISTRY I

1 Credit	Prerequisite: see counselor for criteria
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This laboratory course is an intense college preparatory course that explores the properties of substances and the changes that substances undergo. Students will investigate atomic structure, matter and energy, interactions of matter, and the properties of solutions and acids and bases. Students will be expected to apply research and algebraic skills in a technology and laboratory rich environment.

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## HONORS CHEMISTRY II

1 Credit	Prerequisite: Honors Chemistry I and Algebra II (or concurrently)
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**Chemistry II** is a laboratory science course that builds on topics introduced in Chemistry I. There are many labs associated with each unit so students see the practical applications of the material covered in class. Students preparing for a career in any field of science will benefit from this course.

## HONORS PHYSICS

1 Credit	Prerequisite: Algebra I, Algebra II, Physical Science, Biology I
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**Honors Physics** is a laboratory science course that examines the relationship between matter and energy and how they interact. Topics include mechanics, thermodynamics, waves and sound, light and optics, electricity and magnetism and atomic & nuclear science.

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# SOCIAL STUDIES

## WORLD HISTORY

1 Credit	Prerequisite: None
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**World History** surveys the history of modern humankind beginning with the Age of Enlightenment and proceeding to the growth of modern nations with a more concentrated focus from the Age of Revolutions and World Wars to the present day with an emphasis on cause and effect. Students will be expected to develop writing, critical reading, and critical thinking skills.

## HONORS WORLD HISTORY

1 Credit	Prerequisite: Entrance Exam
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**Honors World History** is designed for the accelerated student and will utilize different methods that historians use to interpret the past, including points of view and historical context. The honors student will complete class research projects related to the course work and personal interest. The course surveys the history of modern humankind beginning with Spanish Exploration of the 15th Century. A more concentrated focus on Age of Revolutions, World Wars, and the Cold War, will bring the course to present day issues.

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## UNITED STATES HISTORY

1 Credit	Prerequisite: None
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**US History** covers major topics from the Reconstruction period (1870) through the present. This includes, but not limited to, social and political conditions during the industrial revolution, the growth of cities during the progressive era, the trends of traditionalism and modernism in the 1920's, the Great Depression, the economic boom and social transformation during Modern US, and events and trends from the 1980's until present day. There will be a focus on using primary source materials for these topics to enhance writing skills.

## HONORS UNITED STATES HISTORY

1 Credit	Prerequisite: None
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This course is meant to challenge and prepare (and hopefully encourage) students for further historical and political study. The focus of the course will be establishing and analyzing major historical, political, social, economic, cultural and intellectual trends in US history.

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## UNITED STATES GOVERNMENT

½ Credit	Prerequisite: None
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**Government** focuses upon the founding principles and beliefs of the United States. Students will study the structure, functions, and powers of government at the national, state, and local levels. The study of our political and legal process will better prepare the students to assume the responsibilities that come with living in a democratic society.

**ESPO - Motlow DE**

## ECONOMICS

½ Credit	Prerequisite: None
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**Economics** is designed to help students understand how people, businesses, and governments choose to use resources. The following topics are addressed: consumer decision-making, supply and demand, market organization, economic measurements, financial structures, unemployment and inflation, monetary and fiscal policies, and globalization.

**ESPO - Motlow DE**

## Personal Finance

½ Credit	Prerequisite: None
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**Personal Finance** is a course designed to help students understand the impact of individual choices on occupational goals and future earnings potential. Topics covered will include income, money management, spending and credit, as well as saving and investing.

**ESPO - Motlow DE**

## SOCIOLOGY

1 Credit	Prerequisite: None
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In **Sociology** students will explore the ways sociologists view society, and also how they study the social world. In addition, students will examine culture, socialization, deviance and the structure and impact of institutions and organizations. Also, students will study selected social problems and how change impacts individuals and societies.

**SDC**

**ESPO - Motlow DE**

## PSYCHOLOGY

1 Credit	Prerequisite: None
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In **Psychology** students will study the development of the individual personality. The six social studies standards of culture, economics, geography, government, history, and group dynamics will be integrated into the study of the science of human behavior.

**SDC**

**ESPO - Motlow DE**

# FINE ARTS

## ART APPRECIATION (DE)

1 Credit	Prerequisite: None
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**Art Appreciation** is an exploration of visual art forms and their cultural connections for the student with little experience in the visual arts. It includes a brief study of art history and in depth studies of the elements, media, and methods used in creative processes and thought. In this course, students will learn how to develop a five-step system for understanding visual art in all forms

## VISUAL ART I

1 Credit	Prerequisite: None
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In **Art I** is an introduction course that covers the elements of drawing, color theory, painting, clay and sculpture. Students will apply various media, techniques, and processes in the creation and analysis of artworks. Students will strive to achieve technical mastery in the areas of art production, art criticism, aesthetics, and art history.

## VISUAL ART II

1 Credit	Prerequisite: Visual Art I
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**Visual Art II** builds on the concepts learned from Visual Art I and is designed for students who enjoy art and are interested in advancing their skill level. The project work is more rigorous and the concepts addressed are more advanced and comprehensive. Students will create, evaluate, and research the historical context of works of art.

## VISUAL ART III

1 Credit	Prerequisite: Visual Art I, Visual Art II
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**Visual Art III** builds on Visual Art II and is designed for the motivated student who wishes to study and practice quality visual art in a studio setting.

## CONCERT BAND

1 Credit	Prerequisite: Instructor Approval
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**Concert Band** will provide an opportunity for brass, woodwind, and percussion students to learn and perform concert band music, some contemporary and popular music, and marches. Some class time will be devoted to skill development, although not at the beginning level. This course may require after school rehearsals, performances and/or field trip(s) that will be used as part of the evaluation process. Students are required to participate in all band activities.

## MARCHING BAND

1 Credit	Prerequisite: Instructor Approval
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**The Marching Band** will perform at all designated football games, pep rallies, parades, marching contests, concerts, and festivals. This course may require after school rehearsals, performances and/or field trip(s) that will be used as part of the evaluation process. Attendance at band camp, all outside-of-school rehearsals, and performances is required.

## JAZZ BAND

1 Credit	Prerequisite: Instructor Approval
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**JAZZ Band** will provide an opportunity for brass, woodwind, and percussion students to learn and perform jazz band music, some contemporary and popular music. Some class time will be devoted to skill development, although not at the beginning level. This course may require after school rehearsals, performances and/or field trip(s) that will be used as part of the evaluation process. Students are required to participate in all band activities.

## THEATRE ARTS I

1 Credit	Prerequisite: None
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**Theatre Arts 1** is a course designed to enrich students on the basic of theatre arts. This includes the different types of theatrical works, essentials of acting, improvisation, and the behind the scenes aspects of productions.

## VOCAL MUSIC (Concert Choir)

1 Credit <b>FINE ART CREDIT</b>	Prerequisite: None
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**Vocal Music** is designed to build the knowledge of vocal music elements such as sight-reading, basic music theory, and vocal repertoire from various genres including classical, jazz, musical theatre, acapella, etc. This course also gives students the opportunity to build connections through the community.

## SHOW CHOIR

1 Credit	Prerequisite: By Audition in Spring only.
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**SHOW CHOIR** is for those who wish to participate in the art of vocal music as well as the art of dance. This group will also compete in various competitions including solo and ensemble as well as actively participate in the community. This course requires outside commitment from class including and not limited to Saturday rehearsals.

# HEALTH AND PHYSICAL EDUCATION

## LIFETIME WELLNESS

1 Credit	Prerequisite: None
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**Wellness** is a required course. It stresses a lifelong process of positive lifestyle management that seeks to integrate the social, emotional, intellectual, and physical self for a more productive, quality lifestyle. Wellness contains the following modules: nutrition, personal fitness and related skills, mental health, disease prevention and control, sexuality and family life, substance use and abuse, and safety and first aid.

## PHYSICAL EDUCATION

1 Credit or ½ Credit	Prerequisite: None
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**Physical Education** provides students with the knowledge and skills necessary to perform a variety of physical activities, to maintain physical fitness, and to value as well as enjoy physical activities as an ongoing part of a healthy lifestyle.

## PERSONAL FITNESS

1 Credit	Prerequisite: None
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**Personal Fitness** continues on with and expands on the skills taught in wellness. In addition students have the opportunity to develop skills in various lifetime games that they can play throughout their life at any age. Some of these include frisbee golf, golf, horseshoes and bowling.

## RECREATIONAL GAMES

1 Credit	Prerequisite: None
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**Recreational Games** provides students the opportunity to develop skills and knowledge in individual and team based sports and activities. These consist of, but not limited to, basketball, badminton, pickleball, table tennis, ultimate frisbee, ultimate football, softball, baseball, weight training, power walking, speedminton, teambuilding, exercise, collaborative games, cornhole and volleyball.

## WEIGHTLIFTING

1 Credit	Prerequisite: None
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**Weightlifting** is a physical education class that involves weight training and agility. It emphasizes improvement in the student's athletic abilities with the athletic coaches choosing the training program that best fits the student.

# CAREER AND TECHNICAL EDUCATION

CTE Career Clusters & Standards

Career and Technical Education (CTE) is an integral part of a student's overall educational experience. Graduation requirements include three (3) credits in a focus area. CTE Pathways satisfy this requirement.

# ADVANCED MANUFACTURING

## Focus Areas

Machining Technology	Mechatronics	Welding
<ul style="list-style-type: none"> <li>• Principles of Manufacturing</li> <li>• Principles of Machining I</li> <li>• Principles of Machining II</li> <li>• <b>TCAT DE/DC Machining Technology</b> <b>I.C. NIMS &amp; OSHA 10, Nissan</b></li> </ul>	<ul style="list-style-type: none"> <li>• Principles of Manufacturing</li> <li>• Robotics &amp; Automated Systems</li> <li>• Mechatronics I</li> <li>• Mechatronics II</li> <li>• <b>I.C. NIMS &amp; OSHA 10</b> <b>TCAT DE/DC Industrial Maintenance Automation</b> <b>Nissan MSCC DE</b></li> </ul>	<ul style="list-style-type: none"> <li>• Principles of Manufacturing</li> <li>• Welding I</li> <li>• Welding II</li> <li>• Welding III</li> <li>• <b>TCAT DE/DC Welding</b> <b>AWS/ SENSE OSHA 10</b> <b>Nissan</b></li> </ul>

### MACHINING TECHNOLOGY

#### Principles of Manufacturing

1 Credit	Prerequisite: None Grades 9-10
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***Principles of Manufacturing*** focuses on the essential principles that must be mastered for a person to be effective in manufacturing production work. This course is intended for students more interested in production than engineering.

#### Principles of Machining I

1 Credit	Prerequisite: Principles of Manufacturing Grades 10-12
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***Principles of Machining I*** is designed to provide students with the skills and knowledge to be effective in production environments as a machinist, CNC operator, or supervisor. Upon completion of this course, proficient students will demonstrate safety practices concerning machining technology, proper measurement and layout techniques, reading and interpreting drawings and blueprints, production design processes, and quality control procedures. Upon completion of this course, students will be knowledgeable about potential postsecondary education and career opportunities related to machining technology and will be prepared to enroll in more advanced machining courses in high school.

#### Principles of Machining II

1 Credit	Prerequisite: Principles of Manufacturing, Machining 1 Grades 9 - 10
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***Principles of Machining II*** is an advanced level contextual course that builds on the introductory skills learned in the entry-level manufacturing and machining courses, stressing the concepts and practices in a production environment supported by advanced machining and engineering facilities. Working with the course instructor and team members in a cooperative learning environment, students will design, produce, and maintain products that are defined by detailed technical specifications. Emphasis is placed on quality control, safety and engineering codes and standards, and production-grade machining systems, building on the learner's past knowledge, current experiences, and future conduct as a career machinist. Upon completion of this course, proficient students will be able to examine blueprints and specification drawings to plan and implement the manufacture of products, machine parts to specifications using both manual and computer controlled machine tools, and measure, examine, and test completed products to check for defects and conformance to specifications.



# **MECHATRONICS**

## **PRINCIPLES OF MANUFACTURING**

1 Credit	Prerequisite: None Grades 9-10
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**Principles of Manufacturing** focuses on the essential principles that must be mastered for a person to be effective in manufacturing production work. This course is intended for students more interested in production than engineering.

**EPSO-TCAT DE**

## **DIGITAL ELECTRONICS**

1 Credit	Prerequisite: Principles of Manufacturing Grades 10-12
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**Digital Electronics** is intended to provide students with an introduction to the basic components of digital electronic systems and equip them with the ability to use these components to design more complex digital systems. Proficient students will be able to (1) describe basic functions of digital components (including gates, flip flops, counters, and other devices upon which larger systems are designed), (2) use these devices as building blocks to design larger, more complex circuits, (3) implement these circuits using programmable devices, and (4) effectively communicate designs and systems. Students develop additional skill in technical documentation when operating and troubleshooting circuits. Upon completion of the Digital Electronics course, proficient students will be able to design a complex digital system and communicate their designs through a variety of media.

## **MECHATRONICS I**

1 Credit	Prerequisite: Principles of Manufacturing Grades 9 - 10
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**Mechatronics I** is an applied course in the manufacturing cluster for students interested in learning more about careers as a mechatronics technician, maintenance technician, electromechanical technician, and manufacturing engineer. This first of two courses covers basic electrical and mechanical components of mechatronics systems as well as their combined uses with instrument controls and embedded software designs. Upon completion of this course, proficient students are able to describe and explain basic functions of physical properties and electrical components within a mechatronic system. They can logically trace the flow of energy through a mechatronic system and can communicate this process to others. They know how to effectively use technical documentation such as data sheets, schematics, timing diagrams, and system specifications to troubleshoot basic problems with equipment. Finally, they develop strategies to identify, localize, and correct malfunctioning components and equipment.

## **MECHATRONICS II**

1 Credit	Prerequisite: Principles of Manufacturing, Mechatronics I Grades 11-12
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**Mechatronics II** is an advanced course in the manufacturing career cluster for students interested in learning more about such careers as mechatronics technician, maintenance technician, or electromechanical technician. Following the groundwork of mechanics and electronics laid in Mechatronics I, this course covers basics of pneumatic, electro pneumatic, and hydraulic control circuits in a complex mechatronic system. In addition, the course addresses basic digital logic and Page 2 programmable logic controllers (PLCs) employed in the mechanical, electronic, and control systems in a

mechatronics system. Upon completion of this course, proficient students are able to explain the inter-relationships of components and modules within a complex mechatronic system. They understand the differences between hydraulic and pneumatic fluid power and can explain the scientific principles that apply. They also use technical documentation (such as datasheets, circuit diagrams, displacement step diagrams, timing diagrams, and function charts) to troubleshoot and resolve malfunctioning pneumatic and hydraulic components and circuits. They demonstrate understanding of the role of programmable logic controllers (PLC) in mechatronic systems and the ability to write, debug, and run basic ladder logic.

## **WELDING**

### **PRINCIPLES OF MANUFACTURING**

1 Credit	Prerequisite: None Grades 9-10
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***Principles of Manufacturing*** focuses on the essential principles that must be mastered for a person to be effective in manufacturing production work. This course is intended for students more interested in production than engineering.  
**EPSO-TCAT DE**

### **WELDING I**

1 Credit	Prerequisite: Principles of Manufacturing Grades 10-12
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***Welding I*** is a course in which students will learn basic skills and knowledge related to cutting and welding applications used in advanced manufacturing industry. Topics include fundamental safety practices in welding, interpreting drawings, creating computer aided drawings, identifying and using joint designs, efficiently laying out parts for fabrication, basic shielded metal arc welding, mechanical and thermal properties of metals, and quality control.

### **WELDING II**

1 Credit	Prerequisite: Principles of Manufacturing, Welding I Grades 10-12
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***Welding II*** is designed to provide students with opportunities to effectively perform cutting and welding applications of increasingly complexity used in the advanced manufacturing industry. Students will build on the knowledge and skills of the *Welding I* course and apply them to novel environments.

### **WELDING III**

1 Credit	Prerequisite: Principles of Manufacturing, Welding I, Welding II Grades 10-12
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***Welding III*** is designed to provide students with opportunities to effectively perform cutting and welding applications of increasingly complexity used in the advanced manufacturing industry. Students will build on the knowledge and skills of the *Welding I & II* course and apply them to novel environments.

# AGRICULTURE, FOOD & NATURAL RESOURCES

## Focus Areas

Horticulture Science	Veterinary and Animal Science
<ul style="list-style-type: none"> <li>• Agriscience</li> <li>• Principles of Plant Science and Hydroculture</li> <li>• Greenhouse Management</li> <li>• Landscaping and Turf Science</li> </ul>	<ul style="list-style-type: none"> <li>• Agriscience</li> <li>• Small Animal Science</li> <li>• Large Animal Science</li> <li>• Veterinary Science</li> </ul>

## HORTICULTURE

### PRINCIPLES OF PLANT SCIENCE AND HYDROCULTURE

1 Credit	Prerequisite: Agriscience Grades 10-12
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***Principles of Plant Science and Hydroculture*** focuses on essential knowledge and skills related to the science of plant growth. This course covers principles of plant health, growth, reproduction, and biotechnology, as well as fundamental principles of hydroponics and aquaponics.

### GREENHOUSE MANAGEMENT

1 Credit	Prerequisite: Agriscience Grades 10-12
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***Greenhouse Management*** is designed to prepare a student to manage a greenhouse operation. Students in this class will learn to produce various ornamental crops and food crops. An understanding of structures, crop selection, and growing systems will be explored. As populations continue to expand, the importance of food production in a climate controlled environment increases.

### LANDSCAPING AND TURF SCIENCE

1 Credit	Prerequisite: Agriscience Grades 10-12
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***Landscaping and Turf Science*** includes standards to prepare students for creating beautiful environments for homes and businesses. This course includes site analysis and preparation, landscape drawing, plant selection, and installation. Maintenance of healthy attractive landscapes and turf areas will be emphasized. With the increase of urban sprawl these career opportunities are increasing daily.

# **VETERINARY AND ANIMAL SCIENCE**

## **AGRISCIENCE**

1 Credit	Prerequisite: None Grades 9-10
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**Agriscience** is an introductory course that prepares students for subsequent agriculture courses. This course helps students understand the important role that agricultural science and technology serves in the 21<sup>st</sup> century.

## **SMALL ANIMAL SCIENCE**

1 Credit	Prerequisite: Agriscience Grades 10-12
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**Small Animal Science** is for students interested in learning more about becoming a veterinarian, vet tech, vet assistant, or pursuing a variety of scientific, health, or agriculture professions. This course covers anatomy and physiological systems of different groups of small animals, as well as careers, leadership, and history of the industry.

## **LARGE ANIMAL SCIENCE**

1 Credit	Prerequisite: Agriscience Grades 10-12
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**Large Animal Science** is for students interested in learning more about becoming a veterinarian, vet tech, vet assistant, or pursuing a variety of scientific, health, or agriculture professions. This course covers anatomy and physiological systems of different groups of large animals, as well as careers, leadership, and history of the industry.

## **VETERINARY SCIENCE**

1 Credit	Prerequisite: Agriscience Grades 11-12
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**Veterinary Science** challenges students to use advanced technologies and medical treatments to maintain the health of animals. This course covers principles of health and disease, basic animal care and nursing, clinical and laboratory procedures, and additional industry-related career and leadership knowledge and skills.

# ARCHITECTURE AND CONSTRUCTION

## Focus Areas

<b>Residential &amp; Commercial Construction</b>	<b>Mechanical, Electrical &amp; Plumbing Systems (MEP)</b>	<b>Architectural and Engineering Design</b>
<ul style="list-style-type: none"> <li>• Fundamentals of Construction</li> <li>• Residential &amp; Commercial Construction I</li> <li>• Residential &amp; Commercial Construction II</li> <li>• <b>OSHA 10, TCAT DC</b></li> <li>• <b>COMPUTER AIDED DESIGN TECHNOLOGY</b></li> </ul>	<ul style="list-style-type: none"> <li>• Fundamentals of Construction</li> <li>• MEP Systems</li> <li>• <b>OSHA 10, TCAT DC HVAC/R</b></li> <li>• <b>OSHA 10, TCAT DC/DE</b></li> <li>• <b>INDUSTRIAL ELECTRICITY</b></li> </ul>	<ul style="list-style-type: none"> <li>• Architectural and Engineering Design I</li> <li>• Architectural and Engineering Design II</li> <li>• Architectural and Engineering Design III</li> </ul>

### **FUNDAMENTALS OF CONSTRUCTION**

1 Credit	Prerequisite: None Grades 9-10
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**Fundamentals of Construction** will cover essential knowledge, skills, and concepts required for careers in construction. Students will be able to employ tools safely and interpret construction drawings to complete projects demonstrating proper measurement and application of mathematical concepts.

### **RESIDENTIAL & COMMERCIAL CONSTRUCTION I**

1 Credit	Prerequisite: Fundamentals of Construction Grades 10-11
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**Residential & Commercial I** is a course that will introduce students to basic skills and knowledge in the earlier phases of building construction, including site layout, foundation systems, concrete, framing systems, and electrical systems. Students will be able to perform concrete work; frame walls, ceilings, and floors of a structure; and install proper wiring while safely employing tools and interpreting construction drawings to complete projects.

### **RESIDENTIAL & COMMERCIAL CONSTRUCTION II**

1 Credit	Prerequisite: Fundamentals of Construction, Residential & Construction I Grades 11-12
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**Residential & Construction II** is a course in which students extend their skills and knowledge in the later phases of building construction including roofing systems, exterior finish, stair framing systems, masonry systems, and plumbing systems. Students will be able to perform masonry work; frame roofs; install shingles on roofs; apply exterior finishes; and install proper piping for plumbing systems while safely employing tools and interpreting construction drawings to complete projects.

## MECHANICAL, ELECTRICAL, & PLUMBING SYSTEMS (MEP)

1 Credit	Prerequisite: Fundamentals of Construction Grades 10-11
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**MEP** prepares students for electrical, plumbing, and HVAC careers by introducing students to the physical principles of these systems and the fundamental skills needed to work with them.

## ARCHITECTURAL AND ENGINEERING DESIGN I

1 Credit	Prerequisite: None Grades 9-10
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**Architectural & Engineering Design I** is a foundational course for students interested in a variety of engineering and design professions. Upon completion of this course, proficient students will be able to create technical drawings of increasing complexity.

## ARCHITECTURAL AND ENGINEERING DESIGN II

1 Credit	Prerequisite: Architectural and Engineering Design I Grades 10-11
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**Architectural & Engineering Design II** allows students to build their skills in developing and representing design ideas using technical drawing and modeling techniques, and apply the design process to solve design problems.

## ARCHITECTURAL AND ENGINEERING DESIGN III

1 Credit	Prerequisite: Architectural and Engineering Design I and II Grades 11-12
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**Architectural & Engineering Design III** prepares students to apply technical drawing and design skills developed in the previous courses to specific architectural and mechanical design projects and contexts. In the process, students will expand their problem-solving and critical-thinking skills by assessing the requirements of a project alongside the available resources in order to accomplish realistic planning.

## ARTS, AUDIO/VISUAL TECHNOLOGY & COMMUNICATION Focus Areas

<b>Audio/Visual Production (Broadcasting)</b>
<ul style="list-style-type: none"><li>• A/V Production I</li><li>• A/V Production II</li><li>• A/V Production III</li><li>• Applied Arts Practicum</li></ul>

## AUDIO/VISUAL PRODUCTION I

1 Credit	Prerequisite: None Grades 9-10
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**A/V Production I** is the entry-level course to prepare students for the media industry. Course content provides a broad-based exposure to audio, video, journalism and broadcasting within the media industry.

## AUDIO/VISUAL PRODUCTION II

1 Credit	Prerequisite: A/V Production I Grades 10-11
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**A/V Production II** focuses on electronic media production (EMP) technologies utilizing simulated and/or real-life projects. The course content centers on production of various EMP products, including commercials, news, music, interactive, and industrial programming. The student will gain valuable insight into the many facets of EMP production, including, but not limited to concept creation, scripting, sound design, visual design, engineering, editing, budgeting, and producing, as well as exploring some of the latest advances in industry technology.

## AUDIO/VISUAL PRODUCTION III

2 Credits	Prerequisite: A/V Production I and II Grades 11-12
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**A/V Production III** focuses on simulated real-life electronic broadcasting media production and management activities and productions. Projects center on in-house production of newscasts, special events, and original programming. The student will gain valuable insight into both audio and video sides of the electronic media industry. Course content is composed of scripting, broadcasting, reporting, directing, editing, budgeting, and producing, as well as, cameras, lights, sound, and set design. Upon completion of this course, students will be prepared to pursue postsecondary education or enter the electronic media industry in an entry level position.

## APPLIED ARTS PRACTICUM

2 Credits	Prerequisite: A/V Production I and II and III Grade 12
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**Applied Arts Practicum** is a capstone course intended to provide students with the opportunity to apply the skills and knowledge learned in previous A/V courses within a professional, working environment. Students learn to refine their skills in problem solving, research, communication, teamwork, and project management through the completion of a course-long project.

## BUSINESS MANAGEMENT Focus Areas

<b>Business Management</b>	<b>Office Management</b>
<ul style="list-style-type: none"> <li>● Introduction to Business &amp; Marketing</li> <li>● Business Communications</li> <li>● Business Management</li> </ul>	<ul style="list-style-type: none"> <li>● Computer Applications</li> <li>● Business Communications</li> <li>● Business Management</li> <li>● Adv. Computer Apps.</li> </ul> <p style="text-align: center; margin: 0;"><b>OSHA 10 TCAT DC ADMINISTRATIVE OFFICE TECHNOLOGY</b> <b>CERTIPORT Microsoft Office/Excel</b></p>

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## INTRODUCTION TO BUSINESS AND MARKETING

1 Credit	Prerequisite: None Grades 9-10
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**Introduction to Business and Marketing** helps students prepare for the growing complexities of the business world by examining basic principles of business, marketing, and finance in addition to exploring key aspects of leadership, ethical and social responsibilities, and careers.

## BUSINESS COMMUNICATIONS

1 Credit	Prerequisite: Computer Applications Grades 10-12
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**Business Communications** prepares students for oral and electronic business communications in the 21<sup>st</sup> century including social media as well as developing skills in electronic publishing, design, layout, composition, and video conferencing.

## BUSINESS MANAGEMENT

1 Credit	Prerequisite: Introduction to Business and Marketing Grades 10-12
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**Business Management** focuses on the development of the planning, organizing, leading, and controlling functions required for the production and delivery of goods and services. This course addresses the management role of utilizing the businesses' resources of employees, equipment, and capital to achieve an organization's goals.

## COMPUTER APPLICATIONS

1 Credit	Prerequisite: None Grades 9-12
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**Computer Applications** is designed to develop computer technology skills. Students will develop skills that will assist them in using *Microsoft Word, PowerPoint, Publisher, and Excel*.

## ADVANCED COMPUTER APPLICATIONS

1 Credit	Prerequisite: Computer Applications Grades 10-12
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**Advanced Computer Applications** provides advanced training for students pursuing a career in administrative and information support, and prepares students to continue postsecondary training in business-related programs

# EDUCATION & TRAINING



## Focus Areas

### **Educational Support Careers**

- Fundamentals of Education
- Teaching as a Profession I
- Teaching as a Profession II

## **FUNDAMENTALS OF EDUCATION**

1 Credit	Prerequisite: None Grades 9-10
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***Fundamentals of Education*** is a foundational course for students interested in learning more about becoming a school counselor, teacher, librarian, or speech-language pathologist. This course covers the history of education in the United States, careers in education, and the influence of human development on learning.

## **TEACHING AS A PROFESSION I**

1 Credit	Prerequisite: Fundamentals of Education Grades 10-12
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***Teaching as a Profession I*** covers the components of instruction, teaching strategies, types of assessments, student learning, special populations, and educational technology.

## **TEACHING AS A PROFESSION II**

1 Credit	Prerequisite: Fundamentals of Education, Teaching as a Profession I Grades 10-12
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***Teaching as a Profession II*** (TAP II) is an applied-knowledge course for students interested in learning more about becoming a teacher, school counselor, trainer, librarian, or speech-language pathologist. This course covers classroom management, concepts of higher order thinking, differentiating instruction, and strategies of effective classroom planning. Students in this course will demonstrate their skills in laboratory settings while building a course portfolio of work, which will carry with them throughout the program of study. Upon completion of this course, profici

## Finance Focus Areas

### **Educational Support Careers**

- Introduction of Business & Marketing
- Accounting I
- Accounting II

## INTRODUCTION TO BUSINESS AND MARKETING

1 Credit	Prerequisite: None Grades 9-10
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**Introduction to Business and Marketing** helps students prepare for the growing complexities of the business world by examining basic principles of business, marketing, and finance in addition to exploring key aspects of leadership, ethical and social responsibilities, and careers.

## ACCOUNTING I

1 Credit	Prerequisite: Introduction to Business and Marketing Grades 10-12
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**Accounting I** introduces concepts and principles based on a double-entry system of maintaining the financial records of a sole proprietorship, partnership, and corporation. It includes analyzing business transactions, journalizing, posting, and preparing worksheets and financial statements.

## ACCOUNTING II

1 Credit	Prerequisite: Introduction to Business and Marketing, Accounting I Grades 11-12
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**Accounting II** is an advanced study of concepts, principles, and techniques that build on the competencies acquired in *Accounting I*. Departmental, management, cost, and not-for-profit accounting systems are explored.

## HEALTH SCIENCES Focus Areas

Therapeutic Clinical Services	Emergency Services	Nursing Services	Sports & Human Performance
<ul style="list-style-type: none"> <li>• Health Science Education</li> <li>• Rehabilitation Careers</li> <li>• Medical Therapeutics</li> <li>• Anatomy and Physiology</li> <li>• Clinical Internship</li> </ul>	<ul style="list-style-type: none"> <li>• Health Science Education</li> <li>• Anatomy and Physiology</li> <li>• Emergency Medical Services</li> </ul>	<ul style="list-style-type: none"> <li>• Health Science Education</li> <li>• Anatomy and Physiology</li> <li>• Medical Therapeutics</li> <li>• Nursing Education</li> </ul>	<ul style="list-style-type: none"> <li>• Health Science Education</li> <li>• Anatomy and Physiology</li> <li>• Rehabilitation Careers</li> <li>• Clinical Intership</li> </ul>

## HEALTH SCIENCE EDUCATION

1 Credit	Prerequisite: None Grades 9-10
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**Health Science Education** is an introduction to broad topics that serve as the foundation for the health science cluster. The topics covered include growth and development, nutrition, medical terminology, history of health care, careers in health care and their educational requirements, safety measures, CPR, and first aid.

## REHABILITATION CAREERS

1 Credit	Prerequisite: Health Science Education Grades 10-12
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**Rehabilitation Careers** focus on enabling the person to live to the fullest capacity possible. Units will include sports medicine, physical therapy, occupational therapy, speech / language therapy, sports medicine, art, music, dance therapy, and others.

## ANATOMY AND PHYSIOLOGY

1 Credit	Prerequisite: Health Science Education Grades 10-12
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**Anatomy and Physiology** will examine human anatomy and physical functions. Students will analyze descriptive results of abnormal physiology and evaluate clinical consequences.

## CLINICAL INTERNSHIP

1 Credit	Prerequisite: Application and Teacher Approval Required Grade 12
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**Clinical Internship** is the hands on experience the student receives after the completion of the previous courses. This class is designed to be completed in a "hospital setting." The hands-on program allows the student to see their prospective career first hand and prior to graduation. Eligibility includes the successful completion of 3 health science courses including Health Science Education and one of the following courses: Rehabilitation Careers, Medical Therapeutics, or Emergency Medical Services.

## EMERGENCY MEDICAL SERVICES

1 Credit	Prerequisite: Health Science Education Grades 10-12
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**Emergency Medical Service (EMS)** is designed for students interested in a career in pre-hospital or emergency patient care. Career options may include Emergency Room Physician, Emergency Medical Technician, Paramedic, or Emergency Room Nurse.

## MEDICAL THERAPEUTICS

1 Credit	Prerequisite: Health Science Education Grades 10-12
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**Medical Therapeutics** provides knowledge and skills to maintain or change the health status of an individual. It includes career research of various health care professions and their scope of practice, medical legal requirements, monitoring the patient status by various methods based on age, and physical and social needs. The student learns various skills including vital signs, CPR, basic first aid, and basic pharmacology. They also learn the ingredients to a healthy life style by use of fundamentals of wellness and disease prevention.

## NURSING EDUCATION

1 Credit	Prerequisite: Health Science Education Grades 10-12
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**Nursing Education** is a capstone course designed to prepare students to pursue careers in the field of nursing. Upon completion of this course, a proficient student will be able to implement communication and interpersonal skills, maintain residents' rights and independence, provide care safely, prevent emergency situations, prevent infection through infection control, and perform the skills required of a nursing assistant. At the conclusion of this course students may sit for the Certified Patient Care Technician (CPCT) exam, or if students have logged 40 hours of classroom instruction and 20 hours of classroom clinical instruction, and if they have completed 40 hours of site-based clinical with at least 24 of those hours spent in a long-term care facility through a Tennessee Department of Health approved program, they are eligible to take the certification examination as a Certified Nursing Assistant. (CNA)

## HUMAN SERVICES

### Focus Areas

Social Health Services	Cosmetology
<ul style="list-style-type: none"><li>• Introduction to Human Studies</li><li>• Lifespan Development</li><li>• Family Studies</li></ul>	<ul style="list-style-type: none"><li>• Principles of Cosmetology</li><li>• Design Principles of Cosmetology</li><li>• Chemistry of Cosmetology</li></ul>

## SOCIAL HEALTH SERVICES

### INTRODUCTION TO HUMAN STUDIES

1 Credit	Prerequisite: None Grades 9-10
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**Introduction to Human Studies** is a foundational course for students interested in becoming a public advocate, social worker, dietitian, nutritionist, counselor, or community volunteer. This course covers the history of counseling, career investigation, stress management, mental illness, communication, and the counseling process.

## LIFESPAN DEVELOPMENT

1 Credit	Prerequisite: Human Studies Grades 10-12
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**Lifespan Development** builds basic knowledge in human growth and development. The course standards include developmental theory, principles of growth, behavior of children conception through adolescence, adult development and aging, and death and dying.

## FAMILY STUDIES

1 Credit	Prerequisite: Human Studies Grades 10-12
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**Family Studies** examines the diversity and evolving structure of the modern family. Course standards focus on the demographic, historical, and social changes of interpersonal relationships, as well as parenting, and the effect of stressors on the family.

## COSMETOLOGY

### PRINCIPLES OF COSMETOLOGY I

1 Credit	Prerequisite: None Grades 9-10
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**Principles of Cosmetology I** is the first level of cosmetology, and it prepares students with work-related skills for advancement into the *Design Principles of Cosmetology* course. Content provides students the opportunity to acquire basic fundamental skills in both theory and practical applications of leadership and interpersonal skill development. Content stresses safety, environmental issues, and protection of the public and designers as integrated with principles of hair design, nail structure, and cosmetic procedures. Laboratory facilities and experiences simulate those found in the cosmetology industry.

### DESIGN PRINCIPLES OF COSMETOLOGY II

2 Credits	Prerequisite: Principles of Cosmetology Grades 10-11
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**Design Principles of Cosmetology II** is the second level of cosmetology and prepares students for work-related skills and advancement into the *Chemistry of Cosmetology* course. Content provides students the opportunity to acquire knowledge and skills in both theory and practical application. Advanced knowledge and skills in hair design, nail artistry, and cosmetic applications will be enhanced in a laboratory setting, which duplicates cosmetology industry standards. Upon completion and acquisition of 600 hours, students are eligible to take the Tennessee Board of Cosmetology manicuring examination for a Tennessee Manicure License.

### CHEMISTRY OF COSMETOLOGY III

2 Credits	Prerequisite: Principles of Cosmetology, Design Principles of Cosmetology Grades 11-12
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**Chemistry of Cosmetology III** prepares students to perform work-related services using chemicals in the cosmetology industry. Content provides students the opportunity to acquire knowledge and skills in both theory and practical application. Upon completion of 1500 hours, students are eligible to take the Tennessee Board of Cosmetology examination for a Tennessee Cosmetology License.

## **CYBERSECURITY** **Focus Areas**

<ul style="list-style-type: none"> <li>• Computer Science Foundations</li> <li>• Cybersecurity I</li> <li>• Cybersecurity II</li> <li>• <b>OSHA 10, TCAT DC, INFORMATION TECHNOLOGY &amp; INFRASTRUCTURE MANAGEMENT</b></li> </ul>
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### **COMPUTER SCIENCE FOUNDATIONS**

1 credit	Prerequisite: None Grade 9 - 10
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**Computer Science Foundations (CSF)** is a course intended to provide students with exposure to various information technology occupations and pathways such as Networking Systems, Coding, Web Design, and Cybersecurity. As a result, students will complete all core standards, as well as standards in two of four focus areas. Upon completion of this course, proficient students will be able to describe various information technology (IT) occupations and professional organizations. Moreover, they will be able to demonstrate logical thought processes and discuss the social, legal, and ethical issues encountered in the IT profession. Depending on the focus area, proficient students will also demonstrate an understanding of electronics and basic digital theory; project management and teamwork; client relations; causes and prevention of Internet security breaches; and writing styles appropriate for web publication. Upon completion of the CSF course, students will be prepared to make an informed decision about which Information Technology program of study to pursue.

### **CYBERSECURITY I**

1 Credit	Prerequisite: Computer Science Foundations Grade 10-12
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**Cybersecurity I** is a course intended to teach students the basic concepts of cybersecurity. The course places an emphasis on security integration, application of cybersecurity practices and devices, ethics, and best practices management. The fundamental skills in this course cover both in house and external threats to network security and design, how to enforce network level security policies, and how to safeguard an organization's information. Upon completion of this course, proficient students will be demonstrate and understanding of cybersecurity concepts, identify fundamental principles of networking systems, understand network infrastructure and network security, and be able to demonstrate how to implement various aspects of security within a networking system.

## CYBERSECURITY II

2 Credits	Prerequisite: Computer Science Foundations, Cybersecurity I Grades 11-12
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**Cybersecurity II** challenges students to develop advanced skills in concepts and terminology of cybersecurity. This course builds on previous concepts introduced in Cybersecurity I while expanding the content to include malware threats, cryptography, wireless technologies and organizational security. Upon completion of this course, proficient students will be demonstrate and understanding of cybersecurity ethical decisions, malware threats, how to detect vulnerabilities, principles of cryptology, security techniques, contingency plan techniques, security analysis, risk management techniques, and advanced methods of cybersecurity .

## LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY

### Focus Areas

Law Enforcement Services
<ul style="list-style-type: none"><li>• Criminal Justice I</li><li>• Criminal Justice II</li><li>• Criminal Justice III: Investigation</li><li>• <b>OSHA 10, TCAT DC Criminal Justice</b></li></ul>

### CRIMINAL JUSTICE I

1 Credit	Prerequisite: Principles of Law, Corrections and Security Grades 10-11
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**Criminal Justice I** focuses on areas comprised of planning, managing, and providing judicial, legal, and protective services. The course is an overview of the legal justice system and builds a better understanding of the development of laws on state, federal, and international levels.

### CRIMINAL JUSTICE II

1 Credit	Prerequisite: Principles of Law, Corrections and Security; Criminal Justice I Grades 10-12
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**Criminal Justice II** will provide students the opportunity to analyze local, state, federal, and international laws. Students will participate in mock trials and field trips with legal and protective service careers emphasis. Course content will introduce new technology, effects of forensic analysis, and career opportunities.

## CRIMINAL JUSTICE III: INVESTIGATION

1 Credit	Prerequisite: Principles of Law, Corrections and Security; Criminal Justice I and II Grades 11-12
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**Criminal Justice III** will focus on research exercises. The course will call upon students to engage in a variety of professionally used information-gathering techniques, including conducting interviews, making observations at courthouses, researching, formulating, and evaluating statistical data through Place-Based Learning. This program uses as its foundation workplace related experiences. Students are expected to travel outside the classroom as part of their research-gathering activities that will provide more context, detail, and real-life activities. This course is designed for seniors in preparation for continuing education in the areas of legal and protective service careers.

## SCIENCE, TECHNOLOGY, ENGINEERING AND MATH (S.T.E.M.)

### Focus Areas

<b>STEM Education</b>
<ul style="list-style-type: none"><li>• STEM I: Foundation</li><li>• STEM II: Applications</li><li>• STEM III: STEM in Context</li></ul>

### STEM I: FOUNDATION

1 Credit	Prerequisite: None Grades 9-10
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**STEM I** is a foundational course in the STEM cluster for students interested in learning more about careers in science, technology, engineering, and mathematics. Upon completion of this course, proficient students are able to identify and explain the steps in both the engineering design and the scientific inquiry processes.

### STEM II: APPLICATIONS

1 Credit	Prerequisite: STEM I Grades 10-12
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**STEM II** is a project-based learning experience for students who wish to further explore the dynamic range of STEM fields. This course asks students to apply the scientific inquiry and engineering design processes to a course-long project selected by the instructor with the help of student input.



### STEM III: STEM IN CONTEXT

1 Credit	Prerequisite: STEM II Grades 10-12
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**STEM III** is an applied course in the STEM cluster which allows students to work in groups to solve a problem or answer a scientific question drawn from real-world scenarios within their schools and communities. Proficient students will be able to effectively use skills such as project management, team communication, leadership, and decision making.

## TRANSPORTATION, DISTRIBUTION AND LOGISTICS Focus Areas

Maintenance and Light Repair	Automotive Collision Repair	Aviation Flight
<ul style="list-style-type: none"> <li>● Maintenance and Light Repair I</li> <li>● Maintenance and Light Repair II</li> <li>● Maintenance and Light Repair III</li> <li>● Maintenance and Light Repair IV</li> <li>● <b>OSHA 10 TCAT DC/DE Collision Repair Technology</b></li> <li>● <b>AES Certification</b></li> </ul>	<ul style="list-style-type: none"> <li>● Introduction to Collision Repair</li> <li>● Non-Structural</li> <li>● Painting and Refinishing</li> <li>● Damage Analysis, Estimating &amp; Customer Service</li> <li>● <b>OSHA 10 TCAT DC/ Automotive Technology</b></li> <li>● <b>AES Certification</b></li> </ul>	<ul style="list-style-type: none"> <li>● Introduction to Aerospace</li> <li>● Aviation I: Principles of Flight</li> <li>● Aviation II: Advanced Flight</li> </ul>

### MAINTENANCE AND LIGHT REPAIR I

1 Credit	Prerequisite: None Grades 9-10
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**Maintenance and Light Repair I** explores career opportunities and requirements of a professional service technician. Content emphasizes beginning transportation service skills and workplace success skills.

### MAINTENANCE AND LIGHT REPAIR II

1 Credit	Prerequisite: Maintenance and Light Repair I Grades 10-12
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**Maintenance and Light Repair II** explores automotive general electrical systems, starting and charging systems, batteries, lighting, and electrical accessories. Upon completing all of the Maintenance and Light Repair courses, students may enter automotive service industry as an ASE Certified MLR Technician.

## MAINTENANCE AND LIGHT REPAIR III

1 Credit	Prerequisite: Maintenance and Light Repair II Grades 10-12
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**Maintenance and Light Repair III** students will study and service suspension and steering systems and brake systems. Upon completing all of the Maintenance and Light Repair courses, students may enter automotive service industry as an ASE Certified MLR Technician. Through an articulation agreement with the University of Northwestern Ohio, students completing this course may be eligible for advanced placement credit.

## MAINTENANCE AND LIGHT REPAIR IV

1 Credit	Prerequisite: Maintenance and Light Repair I, II and III Grades 11-12
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**Maintenance and Light Repair IV** students will study and service automotive HVAC systems, engine performance systems, automatic and manual transmission/transaxle systems, and practice workplace soft skills. Upon completing all of the Maintenance and Light Repair courses, students may enter automotive service industry as an ASE Certified MLR Technician

## INTRODUCTION TO COLLISION REPAIR

1 Credit	Prerequisite: None Grades 9-10
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**Introduction to Collision Repair** is a foundational course for students interested in learning more about automotive collision repair technician careers. Upon completion of this course, students will be able to identify and explain the basic steps in the collision repair process, emphasizing the tools, equipment, and materials used.

## COLLISION REPAIR: NON-STRUCTURAL

1 Credit	Prerequisite: Introduction to Collision Repair Grades 10-11
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**Collision Repair: Non-Structural** prepares students to analyze non-structural collision damage to a vehicle, determine the extent of the damage and the direction of impact, initiate an appropriate repair plan, and correctly use equipment to fit metal to a specified dimension within tolerances. Course content includes metal finishing, body filling and glass panel replacements. Students completing this course are eligible to take the Automotive Service Excellence (ASE) written examination for Non-Structural Analysis and Damage Repair.

## COLLISION REPAIR: PAINTING AND REFINISHING

1 Credit	Prerequisite: Introduction to Collision Repair Grades 10-12
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**Collision Repair: Painting and Refinishing** prepares students to use plastics and adhesive in the repair and refinish processes and to apply automotive paint to a vehicle. Students learn to diagnose automotive paint finish problems and to perform the appropriate manufacturer-required techniques and processes to refinish the affected area or the complete vehicle. Course content provides the student with training in mixing, matching, and applying paint and finish to vehicles. Students completing the course are eligible to take the ASE written examination for Paint and Refinish and for Plastics and Adhesives.

## COLLISION REPAIR: DAMAGE ANALYSIS, ESTIMATING, AND CUSTOMER SERVICE

1 Credit	Prerequisite: Introduction to Collision Repair, Non-Structural, Painting & Refinishing Grade 11-12
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**Collision Repair: Damage Analysis, Estimating, and Customer Service** is intended to prepare students for careers in the automotive repair industry. Students will learn to assess collision damage, estimate repair costs, and work with vehicle owners in a professional setting.

## INTRODUCTION TO AEROSPACE

1 Credit	Prerequisite: None Grades 9-10
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**Introduction to Aerospace** is a comprehensive foundational course for students interested in pursuing careers in aviation. This course covers the basic principles governing flight and the regulation of flight that every aviation professional must know regardless of his or her occupation—as a pilot or an engineer, a salesperson or a specialist, a mechanic or a statistician.

## AVIATION I: PRINCIPLES OF FLIGHT

1 Credit	Prerequisite: Introduction to Aerospace Grades 10-11
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**Aviation I: Principles of Flight** builds on the fundamental knowledge and skills learned in Introduction to Aerospace while teaching students the essential competencies needed for flight under normal conditions. Upon completion of this course, proficient students will be able to apply knowledge, skills, and procedures in a variety of simulated flight environments.

## AVIATION II: ADVANCED FLIGHT

1 Credit	Prerequisite: Introduction to Aerospace and Aviation I Grades 11-12
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**Aviation II: Advanced Flight** is the capstone course in the Aviation Flight program of study intended to prepare students for careers in aviation. While continuing to build upon the knowledge, skills, and competencies acquired in Introduction to Aerospace and Aviation I, students in Aviation II will receive rigorous instruction in preparation to take the Federal Aviation Administration (FAA) Private Pilot written exam. This course goes beyond the mastery of procedures under normal conditions learned in Aviation I: Principles of Flight and introduces students to the troubleshooting and diagnostic Page 2 techniques used by pilots and other aircraft personnel to assess and correct for malfunctions, make adjustments in hazardous weather conditions, and perform other crucial emergency procedures.

For more complete descriptions and course standards go to:  
[www.tn.gov/education/standards](http://www.tn.gov/education/standards)