

# ***St. Henry High School***



## ***Registration Guide and Course Descriptions***

***2020-2021***

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## GRADUATION REQUIREMENTS

English Language Arts .....	4 credits
Social Studies .....	3 credits
(Includes 1 unit American History and 1 unit American Government)	
Mathematics .....	4 credits
(Including Algebra II or its equivalent)	
Science (at least one biological, one physical, and one unit of advanced study) .....	3 credits
Personal Finance .....	½ credit
Career Connections .....	½ credit
Physical Education .....	½ credit
Health .....	½ credit
Elective Subjects .....	5 credits
Total .....	21 credits

**Other requirement:** At least two semesters of fine arts (art, band, choir) starting in 7<sup>th</sup> grade year.

### **State Testing and Seals Requirements**

Class of 2021 – go to <http://education.ohio.gov/Topics/Ohio-s-Graduation-Requirements/Earning-an-Ohio-High-School-Diploma-for-the-CI-2>

Class of 2022 - go to <http://education.ohio.gov/Topics/Ohio-s-Graduation-Requirements/Earning-an-Ohio-High-School-Diploma-for-the-CI-2>

Class of 2023 and beyond - <http://education.ohio.gov/getattachment/Topics/Ohio-s-Graduation-Requirements/Sections/Classes-of-2023-and-Beyond-Graduation-Requirements/GradReq2023.pdf.aspx?lang=en-US>

**More information about graduation pathways is available at [education.ohio.gov](http://education.ohio.gov), search *graduation requirements*.**

### Recommended Four-Year College Freshman Admissions Standards

- 4 units of English
- 4 units of mathematics (including Algebra 2 or equivalent)
- 3 units of science
- 3 units of social studies (including American history, American government & economics/financial literacy)
- 1 unit of fine arts
- Some colleges would like to see 2 units of the same foreign language

### **DIPLOMA WITH HONORS**

High school students can gain state recognition for exceeding Ohio's graduation requirements through one of six honors diplomas. Students must meet **all but one** of the following criteria, unless it is a minimum graduation requirement, Students must meet general graduation requirements to qualify for honors diplomas. A "unit" shall be defined as a course in which the student earns 1 or more credits. More details about the Ohio Diploma with Honors can be found on the Ohio Department of Education Website at <http://education.ohio.gov/Topics/Ohio-s-Graduation-Requirements/Honors-Diplomas>.

#### **Academic Honors Diploma**

- 4 units English
- 4 units Mathematics (must include Algebra I, Geometry, Algebra II or equivalent and another higher-level course)
- 4 units Science (must include 2 units of advanced courses)
- 4 units Social Studies
- 3 units of same world language, or 2 units each of two world languages
- 1 unit Fine Arts
- GPA of 3.5
- 27 ACT or 1280 SAT

### **International Baccalaureate Honors Diploma**

- 4 units English
- 4 units Mathematics (must include Algebra I, Geometry, Algebra II or equivalent and another higher-level course)
- 4 units Science (biology, chemistry and at least 1 unit additional advanced science)
- 4 units Social Studies
- 4 units of same world language with at least 2 units each language studied
- 1 unit Fine Arts
- GPA of 3.5
- 27 ACT or 1280 SAT
- Complete a field experience and document the experience in a portfolio specific to the student's area of focus
- Develop a comprehensive portfolio of work based on the student's field experience or a topic related to the student's area of focus that is reviewed and validated by external experts

### **Career Technical Honors Diploma (Tri-Star)**

- 4 units English
- 4 units Mathematics (must include Algebra I, Geometry, Algebra II or equivalent and another higher-level course)
- 4 units Science (must include 2 units of advanced courses)
- 4 units Social Studies
- 2 units of same world language
- 4 units Career-Technical
- GPA of 3.5
- 27 ACT or 1280 SAT or WorkKeys 6 Reading for Information & 6 Applied Mathematics)
- Complete a field experience and document the experience in a portfolio specific to the student's area of focus
- Earn an industry-recognized credential or achieve proficiency benchmark for appropriate Ohio Career-Technical Competency Assessment or equivalent (WebXam)

### **STEM Honors Diploma**

- 4 units English
- 5 units Mathematics (must include Algebra I, Geometry, Algebra II or equivalent and another higher-level course)
- 5 units Science including two units of advanced science
- 3 units Social Studies
- 3 units of same world language, or 2 units each of two world languages
- 1 unit Fine Arts
- 2 units with a focus in STEM courses
- GPA of 3.5
- 27 ACT or 1280 SAT
- Complete a field experience and document the experience in a portfolio specific to the student's area of focus
- Develop a comprehensive portfolio of work based on the student's field experience or a topic that is related to the student's area of focus that is reviewed and validated by external experts

### **Arts Honors Diploma**

- 4 units English
- 4 units Mathematics (must include Algebra I, Geometry, Algebra II or equivalent and another higher-level course)
- 3 units Science including 1 unit of advanced science
- 3 units Social Studies
- 3 units of same world language, or 2 units each of two world languages
- 4 units Fine Arts
- 2 units with a focus in Fine Arts coursework
- GPA of 3.5
- 27 ACT or 1280 SAT
- Complete a field experience and document the experience in a portfolio specific to the student's area of focus
- Develop a comprehensive portfolio of work based on the student's field experience or a topic that is related to the student's area of focus that is reviewed and validated by external experts

## Social Science & Civic Engagement Honors Diploma

- ☐ 4 units English
- ☐ 4 units Mathematics (must include Algebra I, Geometry, Algebra II or equivalent and another higher-level course)
- ☐ 3 units Science including one unit of advanced science
- ☐ 5 units Social Studies (required)
- ☐ 3 additional units of Social Science
- ☐ 3 units of same world language, or 2 units each of two world languages
- ☐ 1 unit Fine Arts
- ☐ GPA of 3.5
- ☐ 27 ACT or 1280 SAT
- ☐ Complete a field experience and document the experience in a portfolio specific to the student's area of focus
- ☐ Develop a comprehensive portfolio of work based on the student's field experience or a topic that is related to the student's area of focus that is reviewed and validated by external experts

## EXTRACURRICULAR ACTIVITIES & ATHLETICS

Students are encouraged to get involved outside the classroom to enhance their high school experience.

### EXTRACURRICULAR ACTIVITIES

Academic (Scholastic Bowl) Team  
 Band  
 Choir  
 Drama Club  
 National Honor Society  
 OFEA (Ohio Future Education Association)  
 SADD (Students Against Destructive Decisions)  
 Science Club  
 Spanish Club  
 Student Government (Council)

### ATHLETICS

Baseball – Boys  
 Basketball – Boys/Girls  
 Cheerleading – Boys/Girls  
 Cross Country – Boys/Girls  
 Football - Boys  
 Golf – Boys/Girls  
 Softball – Girls  
 Track – Boys/Girls  
 Volleyball - Girls  
 Bowling – Club Sport  
 Swimming – Club Sport

## NCAA ELIGIBILITY INFORMATION

If you want to play sports at an NCAA Division I or II school, start by registering for a Certification Account with the NCAA Eligibility Center at [eligibilitycenter.org](http://eligibilitycenter.org). If you want to play Division III sports or you aren't sure where you want to compete, start by creating a Profile Page at [eligibilitycenter.org](http://eligibilitycenter.org).

**ACADEMIC REQUIREMENTS** – To play sports at a Division I or II school, you must graduate from high school, complete 16 NCAA-approved core courses, earn a minimum GPA and earn an ACT or SAT score that matches your core-course GPA.

**CORE COURSES** (Only courses that appear on your high school's list of NCAA core courses will count toward the 16 core-course requirement.)

### LIST OF APPROVED CORE COURSES FOR ST. HENRY HIGH SCHOOL

<p><b>English</b></p> <ul style="list-style-type: none"> <li>• English 200</li> <li>• English 300</li> <li>• English 400</li> <li>• English 500</li> </ul>	<p><b>Natural/Physical Science</b></p> <ul style="list-style-type: none"> <li>• Anatomy &amp; Physiology</li> <li>• Biology</li> <li>• Chemistry</li> <li>• Earth &amp; Space</li> <li>• Environmental Science</li> <li>• Physical Science</li> <li>• Physics</li> </ul>	
<p><b>Social Science</b></p> <ul style="list-style-type: none"> <li>• American History</li> <li>• American Presidents – ½ credit</li> <li>• Contemporary World History – ½ credit</li> <li>• AP Government</li> <li>• Psychology I – ½ credit</li> <li>• Psychology II – ½ credit</li> <li>• Sociology – ½ credit</li> <li>• US Government</li> <li>• World History</li> </ul>	<p><b>Mathematics</b></p> <ul style="list-style-type: none"> <li>• Advanced Math</li> <li>• Algebra I</li> <li>• Algebra II</li> <li>• Algebra 2a – ½ credit</li> <li>• Algebra 2b – ½ credit</li> <li>• AP Calculus</li> <li>• Discrete Math</li> <li>• Geometry</li> <li>• AP Statistics</li> <li>• Statistics</li> </ul>	<p><b>Additional Core Courses</b></p> <ul style="list-style-type: none"> <li>• Spanish I</li> <li>• Spanish II</li> <li>• Spanish III</li> <li>• Spanish IV</li> </ul>
<p>Remember, it is the student's responsibility to make sure that he or she is NCAA eligible.</p>		

Complete 16 core courses in the following areas:

### **Division I**

Complete 10 NCAA core courses, including seven in English, math or natural/physical science, before your seventh semester.

- English – 4 years
- Math (Algebra I or higher) – 3 years
- Natural/Physical Science – 2 years
- Additional (English, math or natural/physical science) – 1 year
- Social Science – 2 years
- Additional Courses (Any area listed above, foreign language or comparative religion/philosophy) – 4 years

### **Division II**

- English – 3 years
- Math (Algebra I or higher) – 2 years
- Natural/Physical Science – 2 years
- Additional (English, math or natural/physical science) – 3 years
- Social Science – 2 years
- Additional Courses (Any area listed above, foreign language or comparative religion/philosophy) – 4 years

**GRADE-POINT AVERAGE** – The NCAA Eligibility Center calculates your grade-point average based only on the grades you earn in NCAA-approved core courses. • DI requires a minimum 2.3 GPA. • DII requires a minimum 2.2 GPA.

**TEST SCORES** - You may take the SAT or ACT an unlimited number of times before you enroll full time in college. Every time you register for the SAT or ACT, use the NCAA Eligibility Center code 9999 to send your scores directly to us from the testing agency. We accept official scores only from the ACT or SAT, and won't use scores shown on your high school transcript. If you take either test more than once, the best subscore from different tests are used to give you the best possible score.

**SLIDING SCALE** - Divisions I and II use sliding scales to match test scores and GPAs to determine eligibility. The sliding scale balances your test score with your GPA. If you have a low test score, you need a higher GPA to be eligible. Find more information about test scores at [ncaa.org/test-scores](http://ncaa.org/test-scores).

## **SCHEDULE CHANGES AND COURSE WITHDRAWALS**

The selection of the appropriate high school courses to prepare a person for a future career and effective citizenship is extremely important. Each student is asked to very carefully consider the matter of course selection. Following the submission of the selection request form, changes can only be made after a conference with the school counselor. The counselor and/or principal may approve the change request if beneficial to the student and within the school's resources.

Students are strongly encouraged to avail themselves of all opportunities and classes that will assist them in their career and educational plans. We require every student to enroll in seven classes so that he/she maintains **no more than one study hall daily unless you have a science lab**. This includes College Credit Plus classes that are taken online.

If a student desires to drop a class after the school year has started, we will abide by the following drop policy: A student may drop a semester class, if s/he is carrying sufficient credits, and if the request to do so is made during the **first three days** of that semester. If a student wishes to drop a year-long class, s/he must be carrying sufficient credits and must request the drop during the **first three days** of the school year. A student, who drops a course at any time other than described above, may receive a failing mark for the semester grade in that course.

## **CAREER-TECHNICAL COURSES – TRI STAR**

Junior and senior students have the opportunity to enroll in career-technical classes offered by Tri Star. Students attend classes at St. Henry High School for a portion of the day and spend the remainder of the day at Tri Star.

**Current offerings include:** (All classes are Tech Prep.)

- Agricultural Industrial Tech
- Animal Health (Vet Tech)
- Automotive Technology
- Career Based Intervention (CBI)
- Construction
- Early Childhood Education
- Engineering Technology (1 year only)
- Graphic Communications
- Interactive Media
- Information Tech/Cybersecurity
- Med Prep
- Precision Machining
- REC Tech (Robotic, Electronic, and Computer Technologies)
- Welding

## AGRICULTURAL DEPARTMENT

### **AGRICULTURE, FOOD & NATURAL RESOURCES (1st year Ag)**

Prerequisite: Must be a dues paying member of the FFA

Credit: 1

Term: 1 year

This first course in the career field is an introduction to Agricultural and Environmental Systems. Students will be introduced to the scope of the Agricultural and Environmental Systems career field. They will examine principles of food science, natural resource management, animal science & management, plant & horticultural science, power technology and bioscience. Students will examine the FFA organization and Supervised Agricultural Experience (SAE) programs. Throughout the course, students will develop communication, leadership and business skills essential to the agriculture industry. There will be a laboratory component to this class where students will learn basic woodworking skills. Students will have the opportunity to design and engrave special projects with the CO2 laser as time permits.

### **LIVESTOCK SELECTION, NUTRITION AND MANAGEMENT (2<sup>nd</sup> year Ag)**

Prerequisite: Must be a dues paying member of the FFA

Credit: 1

Term: 1 year

Students will identify and apply principles and routine husbandry practices to production animal populations. Topics will include principles of nutrition, feed utilization, animal welfare, selection and management of facilities and herd populations. Students will apply knowledge of production animal care to enhance animal growth, selection of breeding stock, and management practices. Throughout the course, students will develop management plans reflecting practices for care and legal compliance. There will be a laboratory component to this class where students will learn basic welding skills.

### **BUSINESS MANAGEMENT FOR AGRICULTURAL & ENVIRONMENTAL SYSTEMS**

Prerequisite: Junior or senior level course and must be a dues paying member of the FFA

Credit: 1

Term: 1 year

Students will examine elements of business, identify organizational structures and apply management skills while developing business plans, financial reports and strategic goals for new ventures or existing businesses. Learners will use marketing concepts to evaluate the marketing environment and develop a marketing plan with marketing channels, product approaches, promotion and pricing strategies. Throughout the course, student will apply concepts of ethics and professionalism while implications of business regulations will be identified. There will be a laboratory component to this class where students will design and market a project. Students will have the opportunity to design and engrave special projects with the CNC router and CO2 laser as time permits. **An average of 3.00 or better in Ag Business I & II qualify for 3 credits Agribusiness Fundamentals (Ag 106) at the University of Northwestern Ohio.**

### **MECHANICAL PRINCIPLES (Ag Shop)**

Prerequisite: Junior or senior level course and Must be a dues paying member of the FFA

Credit: 1

Term: 1 year

Students will engage in the mechanical principles utilized in animal and plant production systems. They will learn electrical theory, design, wiring, hydraulic and pneumatic theory, along with metallurgy in relation to hot and cold metals. Students will apply knowledge of sheet metal fabrication applicable to the agricultural industry along with identify, diagnose, and maintain small air-cooled engines. Throughout the course, students will learn critical components of site and personal safety as well as communication and leadership skills. Students will have the opportunity to design and engrave special projects with the CNC router and CO2 laser as time permits.

### **AGRICULTURAL AND ENVIRONMENTAL SYSTEMS CAPSTONE I**

Prerequisite: One (1) completed agriculture course and currently enrolled in an agricultural course

Must be a dues paying member of the FFA

Grade 12 only

Credit: 1

Term: 1 year

The capstone course is an opportunity for students to solve problems and demonstrate that they have achieved the requisite knowledge and skills in their chosen Agricultural and Environmental Systems career field pathway. The course is designed to assess cognitive, affective and psychomotor learning and to do so in a student-centered and student-directed manner. The capstone requires application of learning to a project that serves as an instrument of evaluation.

Students are strongly encouraged to sign up for this course and will be completing a research project outside of class time. Credit will be given upon completion of up to 270 supervised hours of research on an agricultural topic.

## **AGRICULTURAL AND ENVIRONMENTAL SYSTEMS CAPSTONE II**

Prerequisite: Two (2) completed agriculture courses and currently enrolled in an agricultural course  
Must be a dues paying member of the FFA  
Grade 12 only

Credits: 2  
Term: 1 year

The capstone course is an opportunity for students to solve problems and demonstrate that they have achieved the requisite knowledge and skills in their chosen Agricultural and Environmental Systems career field pathway. The course is designed to assess cognitive, affective and psychomotor learning and to do so in a student-centered and student-directed manner. The capstone requires application of learning to a project that serve as an instrument of evaluation. If a student incurs a failing grade in any course, he or she will not be eligible to leave for work release. Seniors are strongly encouraged to sign up for this course and will be permitted to miss school to do work study in an agriculture related job, or to conduct a research project. Credit will be given upon completion of 540 supervised hours of research or placement in a business providing agricultural services or products.

## **WOODS**

Prerequisite: Grades 10, 11, or 12  
Credit: ½  
Term: 1 semester

This course will consist of primarily of hands-on lab work. Students will be learn how to plan and layout projects; identify different types of woods, wood joints, and fasteners; explain how wood is cut, dried, and graded; use hand tools and power machines properly; apply glues, stains, and finish properly; and demonstrate good safety shop practices.

## **METALS**

Prerequisite: Grades 10, 11, or 12  
Credit: ½  
Term: 1 semester

The course will teach students the technology used in the metal fabricating industry by welders, sheet metal fabricators, and machinists. Major class/shop assignments: shop safety program and test; measurement program, practice, and tests; sheet metal assignments and fabrication; basic welding assignments, practice, and project fabrication; and project construction; and demonstrate good shop safety practices.

## **ART DEPARTMENT**

### **ART I**

Credit: 1  
Term: 1 year

Art 1 presents a series of beginning art experiences and reinforces the basic Elements and Principles of Art. Various artists and styles will be discussed depending on type of media being used. Art Criticism, which includes describing, analyzing, interpreting, and evaluating artwork, will also be introduced. The students will learn vocabulary to coincide with these topics. Students will explore various art careers and present information about numerous artists throughout history. Drawing media, painting media, mixed media and three-dimensional arts will be the core of this introductory art course.

### **ART II (Drawing/Painting)**

Prerequisite: Art I, grades 10, 11, or 12  
Credit: 1  
Term: 1 year

Art II encourages the development of skills and the education of the artist's eye. Art II is an advanced drawing, painting, and mixed media techniques course, which encompasses all free hand and technical drawing concerns, including subject matter and various drawing materials, as well as design and compositional concerns. Method of evaluation may include project grades, class assignments, and homework assignments.

### **ADVANCED DRAWING**

Prerequisite: Art I, Art II, grades 11 or 12, and teacher's approval  
Credit: ½  
Term: 1 Semester

Advanced Drawing students will enhance their drawing skills by completing more advanced projects in an advanced drawing course. A variety of drawing mediums will be introduced. Projects will range from an emphasis on realism to the freedom of exploring abstraction through color and design. Method of evaluation may include project grades, class assignments, and homework assignments.



## **ADVANCED PAINTING**

Prerequisite: Art I, Art II, grades 11 or 12, and teacher's approval

Credit: ½

Term: 1 Semester

Advanced Painting students will enhance their painting skills by completing more advanced projects in an advanced painting course. A variety of painting mediums will be introduced. Projects will range from an emphasis on realism to the freedom of exploring abstraction through color and design. Method of evaluation may include project grades, class assignments, and homework assignments.

## **CERAMICS**

Prerequisite: Grades 10, 11, and 12

Credit: ½

Term: 1 Semester

Ceramic students will explore hand-building techniques, such as creating coils, pinch pots, and free form slab construction. Because clay is the oldest art form, the role in pottery in various cultures will be explored. Students will enhance their pottery with the use of colored slips, glazes and paint.

## **PORTFOLIO**

Prerequisite: Advanced art students only, grade 12, and teacher's approval

Credit: 1

Term: 1 year – Independent Study

Portfolio is a course for those students interested in pursuing an art degree in college. Students will have the freedom to create projects of their choice with approval from the art teacher. They will focus on their own style and should be expected to discuss their work and the work of their peers through critiques. The workload is difficult and the expectations are high. Students must be dedicated and serious about their art.

## **YEARBOOK**

Prerequisite: Grades 9, 10, 11, and 12; approval from advisor through the application process

Credit: 1 (course may be taken every year for credit, but must reapply.)

Term: 1 year

Yearbook is a unique course of study. Students will be introduced to the sales and marketing, writing, layout, editing, and photographic techniques used in the making of a school yearbook, with production of the SH yearbook as the culminating project each year. Students will work with Photoshop, Josten's web-based yearbook program, and digital photography. Advertising sales are a portion of quarter's grade. Students will be expected to sell ads to businesses and travel to school events as a part of their course requirement. This work is directly involved with the production of the yearbook and an individual must be self-motivated to complete such tasks.

# **BUSINESS DEPARTMENT**

## **ACCOUNTING I**

Prerequisite: Grades 10, 11 and 12

Credit: 1

Term: 1 year

Training in accounting helps students make personal financial decisions. The class teaches students how to maintain checking accounts, banking records, and payroll records. Students learn to keep records for small service and retail businesses operating as proprietorships and/or corporations. Students will be introduced to automated accounting. This class is a must for students who plan to attend college or technical school in any business major. Students enrolling in non-business Tri Star programs should consider this course since recordkeeping is an essential part of most technical careers. **An average of 3.00 or better in Accounting I & II qualify for 4 credits for Accounting I (ACC114) at the University of Northwestern Ohio.**

## **ACCOUNTING II**

Prerequisite: Accounting I

Credit: 1

Term: 1 year

Accounting II is concerned primarily with accounting for partnerships and corporations. The students in this course must have been successful in Accounting I and should have an interest in a business career. Building off of Accounting I, Accounting II goes more into depth with adjustments and finishes up with a computer simulation. Accounting II is highly recommended for anyone considering post-secondary or college business programs. An average of 3.00 or better in Accounting I & II qualify for 4 credits for Accounting I (ACC114) at the University of Northwestern Ohio. **An average of 3.00 or better in Accounting I & II qualify for 4 credits for Accounting I (ACC114) at the University of Northwestern Ohio.**

## **FINANCE & INVESTMENTS**

Prerequisite: Grades 11 and 12

Credit: ½

Term: 1 semester

This course will discuss the concepts of business finance and cover various investment options that include bonds, IRAs, and CDs. Students will learn about the basic finance topics such as credit card debt, compound interest, identity theft and stocks. Students will participate in a stock market challenge where they will compete against fellow classmates to see who can make the best investments based on information gathered from the past. This course is recommended for anyone.

## **MARKETING & MANAGEMENT**

Prerequisite: Grades 11 and 12

Credit: ½

Term: 1 semester

This course will discuss the basics of marketing and the basics of managing a business including human resources. Students will cover the functions of marketing: product and service management, distribution, selling, marketing-information management, financing, pricing, and promotion. Students may complete a simulation that will allow them to engage in a realistic marketing situation. This course is recommended for any students that are planning to enter any business/office related occupation.

## **WEB PAGE DESIGN I**

Prerequisite: Grades 10, 11 and 12

Credit: 1

Term: 1 semester

This course introduces students to HTML (Hypertext Markup Language) and CSS (Cascading Style Sheets), two of the core technologies for building web pages. HTML provides the structure of the page, CSS the (visual and aural) layout, for a variety of devices. HTML5 features are designed to make it easy to include and handle multimedia and graphical content on the web without having to resort to proprietary plugins and APIs. Along with graphics and scripting, HTML and CSS are the basis for building web pages and web applications. This is a hands on course. Classwork will contribute to a student portfolio.

## **WEB PAGE DESIGN II**

Prerequisite: Web Page Design I

Credit: ½

Term: 1 semester

A continuation of Web Page Design I class. The students in this course will be required to design, update, and maintain the district web site and teams/clubs pages for the high school.

## **PERSONAL FINANCE**

Prerequisite: Grades 10, 11, and 12

Credit: 1

Term: 1 semester

Personal finance provides students with a basic understanding of personal money management problems, consumer credit, personal insurance planning, securities analysis, Medicare, Social Security benefits, etc.

# **ENGLISH DEPARTMENT**

## **CAREER CONNECTIONS**

Credit: ½

Term: 1 semester

A variety of career paths will be presented and explored so that students can identify the numerous career paths available to them. Students will complete self-assessments in the areas of interests, skills and personality, eventually being able to match up with a variety of careers to explore more specifically in regards to their future. Students will begin looking at education paths in order to better schedule the rest of their high school education.

## **ENGLISH 200**

Prerequisite: Grade 9

Credit: 1

Term: 1 year

English 200 focuses on developing 21<sup>st</sup> Century literacy skills through reading, writing, and oral communication. Grammatical and literary terms will be studied formally to provide students with a common vocabulary with which to discuss literature and their writing with teachers and peers. Through multiple genres of world literature, students will study the elements of fiction, nonfiction, poetry and drama. The essential skills emphasized within those texts include expanding vocabulary, working with words as they function in texts, reading closely for analysis and interpretation, building on prior knowledge of character development, and understanding and using more complex figurative language. In addition to literature, students will also learn and practice writing as a process of skills, strategies, and practices that allow them to develop their organization, focus, research, evaluation, and revision process. The research in English 200 focuses on finding and evaluating reliable and credible sources, taking notes, combining one's own ideas within research to develop and prove a thesis, and utilizing appropriate citing according to the MLA style. Students will use all of these language arts skills to think critically, to communicate with others, and to understand cultures in the world today, along with preparing them for the next generation assessments and their future English education.

## **ENGLISH 300**

Prerequisite: Grade 10

Credit: 1

Term: 1 year

In this reading and writing-intensive class, students will actively read informational and literary texts—ranging from small-scale works to class novels. After reading the texts, students will be expected to write, think, and communicate critically about what they have read. Drawing from and analyzing outside sources will complement various papers we write as well as the works we read. Developing a strong vocabulary, integrating writing techniques, and mastering rhetorical devices will provide a common thread to bolster our writing and discussions.

## **ENGLISH 400**

Prerequisite: Grade 11

Credit: 1

Term: 1 year

This course presents a survey of American literature from the period of exploration and settlement to the present. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts (novels, short stories and informational texts) will be selected from among a diverse group of authors for what they reflect and reveal about the evolving American experience and character. There will also be online components for grammar and writing assignments that help improve our students' 21st century skills.

## **ENGLISH 500**

Prerequisite: Grade 12

Credit: 1

Term: 1 year

This course focuses on the study of literature and writing as well as professional/business writing, contemporary fiction, American literature, multicultural texts, and informational works. Skills such as critical thinking, questioning, researching, presenting, collaborating, and communicating are all emphasized as a part of 21st century learning. In addition, there is a focus on vocabulary development. The writing portion of this course focuses on a variety of formats in order to prepare students for college and the work force. Students will be required to write narratives, persuasive essays, research papers, and expository essays, along with shorter, more informal writing assignments. Students will also learn job skills by creating resumes and cover letters as well as learn about the process of interviewing and how to prepare themselves for the job market in the technological age.

## **ENGLISH COMPOSITION**

Prerequisites: Grade 11 and B or better in English 400.

Rhodes State College requires an ACT English score of 18, or ACT Reading score of 22, or a Reading Placement test.

Credit: 1

Term: 1 semester

Practice of sound organization and effective expression of ideas in original expository and argumentative compositions as well as the research paper. There will be an extensive discussion of rhetorical modes and editing techniques. **CCP through Rhodes State (COM 1110 — English Composition).**

## **COMPOSITION AND LITERATURE**

Prerequisite: COM 1110 (from Rhodes)

Credit: 1

Term: 1 semester

This course builds on the writing foundational skills introduced in COM-1110 and emphasizes critical thinking and communication skills to promote skilled academic writing. Academic writing can promote student academic success across the curriculum and into the professional and personal lives of students. The basic premise of this course is that accomplished student writing matters. Students learn to write and write to learn. Using literature as the course content, students focus upon essay writing in multiple genres. This course aims to develop the student's ability to communicate ideas about literature effectively by using the principles of the writing process. A process approach to the teaching of writing endorses two principles: writing to learn and collaborative learning. **CCP through Rhodes State (COM 2400 — Composition and Literature).**

## **PUBLIC SPEAKING**

Prerequisite: Grade 10, 11, or 12

Credit: 1

Term: 1 semester

Demonstrating the speaking, listening, and interpersonal skills necessary to be effective communicators in an academic settings, the workplace, and the community is the overarching goal of this class. Together with the analysis of contemporary issues, this course will focus on the creation of research-based and special occasion public speaking experiences. Upon completion of the course, students will be able to prepare and deliver well-organized speeches and actively participate in group discussions. **CCP through Rhodes State (COM 2110 — Public Speaking).**

## **FAMILY AND CONSUMER SCIENCE DEPARTMENT**

### **CHILD DEVELOPMENT I: Birth – Age 3**

Prerequisite: Grades 10, 11, or 12

Credit: ½

Term: 1 semester

This is a class designed to introduce students to the developmental stages of an infant and their needs. Students will gain an understanding of the physical, emotional, social and intellectual development of the infant. They will learn about infant care, bonding and attachment, and activities needed for healthy development. Students will identify the dynamics of family life in America and learn what it takes to raise children in a healthy manner. The meaning of parenthood, managing work and family responsibilities, building positive parent-child relationship and using positive guidance are some areas that are taught in the parenting focus. Opportunities will be provided to have hands-on experience and interaction with children. This course would be good for general parenting information as well as for those interested in pursuing a career focused on working with small children.

### **CHILD DEVELOPMENT II: Age 4 – 12**

Prerequisite: Grades 10, 11, or 12

Credit: ½

Term: 1 semester

This is a class designed to acquaint students with the developmental stages of a toddler through age twelve and the needs associated with each stage. Students will gain an understanding of the physical, emotional, social and intellectual development of the toddler and the school age child. Some topics of study will be child nutrition, make believe play, readiness for school, peer pressure, middle childhood and early adolescence. Students will identify a variety of special challenges that children face. They will become familiar with children who face disabilities, children who encountered abuse/neglect and those who have faced the stress with death of a parent or divorce of a parent. Opportunities will be provided to have hands-on experience and interaction with children. This course would be good for those who enjoy spending time with children and it would benefit those who are interested in pursuing a career working with young and school age children.

### **INTERIOR DESIGN**

Prerequisite: Grades 10, 11, 12

Credit: ½

Term: 1 semester

The application of information learned will be presented through hands on activities that involve working with elements and principles of design. Students will also design interior environments with a focus on completing scale drawings of an efficient floor plan. Identifying and working with ergonomics of furniture, furniture styles, lighting and accessories, backgrounds and home maintenance will also be included in the interior environments. Opportunities to analyze differences in the costs of materials for the home will be given. An upcycling project will be included.

## **FOOD SCIENCE**

Prerequisite: Grades 10, 11, 12

Credit: ½

Term: 1 semester

In this course, students will apply basic culinary practices and understand how flavor, texture and appearance are affected during food preparation. Students will evaluate chemical reactions as they occur in cooking methods and assess how to control high-risk food safety situations. Food safety and sanitation techniques will be emphasized. Students will have the opportunity to expand their food preparation skills, participate in experimental food labs, and expand their understanding of the science behind food preparation. Opportunities to build other life skills may occur.

## **PRINCIPLES OF FOOD AND NUTRITION (FORMERLY NUTRITION & WELLNESS)**

Prerequisite: Grades 10, 11, 12

Credit: ½

Term: 1 semester

In this course, students will use principles of nutrition to ensure a healthy body throughout the life cycle. An emphasis will be placed on planning and preparing meals with an understanding of nutrients and their benefits, portion control, and dietary needs. Additional information may include steroid and supplemental use, body weight and management, and the importance of physical activity to maintain a healthy lifestyle. Other topics may include fighting disease with food, GMO's (genetically Modified Organisms), food allergies, and proper etiquette. Food laboratory practice will allow students to learn principles of food cookery, gain skills in food preparation, and learn how to prepare food products with minimal loss of nutritional content.

## **FOREIGN LANGUAGE DEPARTMENT**

### **SPANISH I**

Credit: 1

Term: 1 year

The Spanish I class is designed to introduce all students to the basics of the Spanish language. A foundation in the four skills of reading, writing, listening, and speaking is offered, as well as a solid understanding of the rules of grammar. Spanish culture and current information about the Spanish speaking countries are covered throughout the course. Textbooks, workbooks, movies, videos, tapes, and computer software are used as instructional aides. Studying Spanish can offer many opportunities for future job positions and for traveling. It is recommended that those who plan to attend a four-year college take at least two years of the same foreign language.

### **SPANISH II**

Prerequisite: Spanish I

Credit: 1

Term: 1 year

(Spanish II builds on the introductory Spanish course.) In this course, students will continue the grammar study started in Spanish I. A more in-depth practice of written expression, oral fluency, and cultural exposure will reinforce prior learning. The practical application of vocabulary learned in this course will allow students to feel comfortable when traveling in a Spanish-speaking country. Supplementary materials will be used in this course and students will continue working with the computer software applications used in Spanish I. It is recommended that Spanish II be taken immediately after Spanish I. Students planning to pursue a four year degree should take at least Spanish I and II.

### **SPANISH III**

Prerequisite: Spanish II – with a "B" in both semesters

\*Prior teacher approval **MUST** be given before registering for Spanish III.

Credit: 1

Term: 1 year

Spanish III completes the grammatical study begun in Spanish I and Spanish II and focuses on the practical applications of Spanish through conversation, comprehension skills, skits, short speeches, compositions, role-playing activities and cultural studies, as well as reading short stories and novels in the target language. Completing this advanced language course could allow students to test out of beginning Spanish study at a college or university. A third credit in a foreign language is one component needed to receive an honors diploma. The class will be instructed in the target language the majority of the time.

### **SPANISH IV**

Prerequisite: Spanish III – with a "B" average (\*Prior teacher approval **MUST** be given before registering for Spanish IV.)

Credit: 1

Term: 1 year

Spanish IV stresses the mastery of listening, speaking, writing, and reading skills. Total language immersion is the goal. The fourth year will assure the final preparation for college proficiency testing. The class will be instructed in the target language the majority of the time.

## HEALTH AND PHYSICAL EDUCATION DEPARTMENT

### **HEALTH**

Credit:  $\frac{1}{2}$

Term: 1 semester – preferably grade 9 or 10

The Health class meets every day during the second semester. Topics to be studied include the physical, emotional, and mental aspects of an individual. Discussion may include drugs, first aid, nutrition and fitness, mental illness, lifestyle diseases, sexuality/reproduction, and infectious disease. There are also state mandated topics including abusive relationships, abstinence based program, opioid dangers and decision-making skills.

### **PHYSICAL EDUCATION**

Credit:  $\frac{1}{2}$

Term: 1 semester – preferably grade 9 or 10

The Physical Education class meets every day during the first semester. The major emphasis is placed on the recreational and lifetime activities that are aligned with the PE standards adopted by the State Department of Education. Students will be required to assemble a personal fitness plan based on their scores from the Fitnessgram test results. Topics may include ultimate frisbee, golf, fitness, badminton, basketball, square dancing, archery and football.

## MATHEMATICS DEPARTMENT

### **ALGEBRA I**

Prerequisite: None

Credit: 1

Term: 1 year

Algebra I will include the study of set theory and the study of the real number system, variables, equations, inequalities, functions (linear, non-linear, and quadratic), and graphing. The curriculum is based on the ODE standards and also includes geometry, data analysis and probability topics. Algebra I is an indispensable tool in other branches of mathematics such as calculus and the sciences.

### **GEOMETRY**

Prerequisite: Algebra I

Credit: 1

Term: 1 year

Geometry deals with figures that lie within a single plane. It deals with squares, triangles, circles, and parallelograms. It is not a subject that has resulted from the intensive genius of a few people. Rather, it has grown gradually from the beginnings of civilization. Counting led to arithmetic and algebra; measuring and studying the form of things led to geometry. It is essentially a part of mathematics, the branches of which cannot be completely separated. In studying arithmetic in the elementary school students often dealt with geometric shapes, learning to compute perimeters, areas, and to apply this knowledge to practical problems. Later, in Algebra they discovered that many of the formulas studied concerned geometric figures. Without further study about these figures, the understanding of mathematics is one-sided. Geometry is a subject that not only helps individuals to better understand their environment, or to gain knowledge of important facts, but also to improve thinking habits and to develop reasoning and proofs.

### **ALGEBRA II**

Prerequisite: Algebra I, Geometry

Credit: 1

Term: 1 year

This course is designed for the college bound student. This course is designed to build on algebraic and geometric concepts. It develops advanced algebra skills such as systems of equations, advanced polynomials, imaginary and complex numbers, quadratics, exponential and logarithmic functions, and the study of trigonometric functions.

### **DISCRETE MATHEMATICS (formerly Algebra 2A)**

Prerequisite: Geometry and permission of current math teacher

Credit: 1

Term: 1 year

This course will include and reinforce skills from Algebra (linear functions & systems, polynomials) and Geometry (transformations, triangles), provide an introduction to Probability and Statistics (counting methods & probability, data analysis), and expose the student to a variety of topics in Consumer Mathematics.

### **APPLIED ALGEBRA II (formerly Algebra 2B)**

Prerequisite: Discrete Math

Credit: 1

Term: 1 year

This course is designed to build on algebraic and geometric concepts. It develops algebra skills such as systems of equations, advanced polynomials, imaginary and complex numbers, quadratics, exponential and logarithmic functions, and the study of trigonometric functions.

### **ADVANCED MATH**

Prerequisite: Algebra II

Credit: 1

Term: 1 year

This course is primarily designed to acquaint the student with a variety of mathematical concepts that develop a background for further work in mathematics. The course will cover a variety of topics in mathematics including: Trigonometry, an extensive review of functions and their graphs, conic sections, exponential and logarithmic functions, sequences and series, plus more advanced topics not considered in Algebra II.

### **ADVANCED PLACEMENT CALCULUS AB**

Prerequisite: Successful completion of Advanced Math with teacher recommendation

Credit: 1

Term: 1 year

AP Test – Cost for 2020 exam was \$85

AP Calculus will cover the concepts of limits, derivatives, and integrals along with their applications. This will be approximately equivalent to one semester of college calculus. Students will have the chance to earn college credit through the Advanced Placement program. A sufficient score on AP exam in May could qualify the student to receive college credit or advanced placement, depending on the college and the chosen major.

### **STATISTICS**

Prerequisite: Must meet one of the following: ACT Math score of 21 OR 3.0 or higher AND "B" or higher in Algebra 2, OR take a Math placement test.

Credit: 1

Term: 1 semester

A study of the basic elements of statistical analysis: data collection, frequency distribution, graphs, measures of central tendency and dispersion, probability concepts, probability distributions, sampling distributions, confidence intervals, hypothesis testing, analysis of variance, and correlation and regression analysis. A specific calculator requirement will be made by the instructor on the first day of class. **CCP through Rhodes State (MTH 1260 — Statistics).**

## **MUSIC DEPARTMENT**

### **CHOIR**

Credit: 1

Term: 1 year

This is a performing group of both female and male voices. Students will be required to participate in performances and activities outside the school day. Uniforms will be worn at various concerts and performances. An optional overnight trip may be taken during the year. Choir develops skills in music reading, rehearsal techniques, and performance procedures. Choir promotes a sense of teamwork and cooperation. Choir members are exposed to various styles and types of music. Participation in fundraisers to defray the cost of activities is requested.

### **INSTRUMENTAL MUSIC (BAND)**

Prerequisite: Students must have some prior playing experience and be able to pass a playing audition demonstrating minimum playing levels, and a written audition demonstrating a minimum knowledge of key signatures, term, counting, and time signatures.

Credit: 1

Term: 1-year (36 weeks) plus summer work

Classes will meet five (5) days a week for one period. Music of many different styles is a part of the curriculum. Students are encouraged not only to play but also to understand the music and styles being experienced. Independent playing is stressed through preparation of solos and ensembles for contest and concert performances. The Marching Band is also a part of the responsibilities of the course. The summer obligations include band camp, competitions, parades, concerts, and fair appearances. Participation in evening, weekend, and summer band activities is required of all members. Participation will be a factor in determining grade and credit earned. Students must pass "8<sup>th</sup> grade band levels" before they can participate in high school band. Band levels consist of the 12 major scales and a written test covering rhythms in 4/4, 3/4, 2/4, and 6/8.

## **SCIENCE DEPARTMENT**

### **BIOLOGY**

Prerequisite: None

Credit: 1

Term: 1 year (7 periods per week)

The biology course focuses on the study of living things. This study is divided into several different main areas that include a comprehensive study of the cell and its components and processes, genetics, evolution, classification of living things and the differences between the different kingdoms to which all living things belong. To meet the Prerequisite of the curriculum students will be required to perform laboratory procedures. It is expected that a student taking biology can work well cooperatively and independently as well as turn in work that is of good quality at all times. Those students who plan to attend post high school education are encouraged to take this course.

## **CHEMISTRY**

Prerequisite: Biology (minimum grade of C), and permission of instructor  
Algebra IIA or Algebra II (can be currently enrolled) or permission of instructor

Credit: 1

Term: 1 year (7 periods per week)

Chemistry covers dimensional analysis, atomic structure, chemical bonding, chemical reactions, states of matter, the mole, stoichiometry, solution chemistry, acid/base chemistry and pH, and an introduction to organic chemistry and biological chemistry. Students should have good study skills and be motivated. The course incorporates algebra II concepts to help explain and understand the chemistry topics. This class is open to sophomores, juniors and seniors. This class is highly suggested for students who will be attending a post-secondary institution.

## **ANATOMY & PHYSIOLOGY**

Prerequisite: Chemistry (minimum grade of C or permission of the instructor)

Credit: 1

Term: 1 year (7 periods per week)

Students interested in taking Anatomy will learn about the human body and its eleven organ systems. Thorough discussions as well as laboratory procedures relating to the systems will be performed including the dissection of various organs and a dissection of the cat.

## **PHYSICS**

Prerequisite: Chemistry, Advanced Math (currently enrolled in or have already taken)

Credit: 1

Term: 1 year (7 periods per week)

Physics is a class for students who are highly motivated in the sciences, especially those considering engineering, science, or medical related courses of study at a post-secondary institution. It covers topics such as force, motion, acceleration, waves, sound, light magnetism, and electricity from a theoretical viewpoint. Physics involves considerable math skills and will challenge the student's problem-solving ability.

## **ENVIRONMENTAL SCIENCE**

Prerequisite: Biology and permission of instructor

Credit: 1

Term: 1 year (7 periods per week)

This course incorporates biology, chemistry, physics and physical geology and introduces students to key concepts, principles and theories within environmental science. Investigations are used to understand and explain the behavior of nature in a variety of inquiry and design scenarios that incorporate scientific reasoning, analysis, communication skills, and real-world applications. Focus will also be placed on how human interactions have made an impact on the environment.

# **SOCIAL STUDIES DEPARTMENT**

## **AMERICAN HISTORY**

Prerequisite: Grade 9

Credit: 1

Term: 1 year

This course will focus on American History from Reconstruction to the present. It is a continuation of American History studied in the 8<sup>th</sup> grade. This course will integrate the study of historical events, world interactions, citizenship, democratic principles, as well as people and societies. Students will be actively involved in learning through technology, current events, projects, simulations and scenarios.

## **WORLD HISTORY**

Prerequisite: Grade 10

Credit: 1

Term: 1 year

This class will focus on World History from the Enlightenment to the present. Topics such as the Enlightenment, the Industrial Revolution, Imperialism, World War I, Totalitarianism, World War II, the Cold War, as well as various contemporary conflicts may be covered. Students will be actively involved through technology, current events, projects, simulations and scenarios.



## **U.S. GOVERNMENT**

Prerequisite: Grades 11

Credit: 1

Term: 1 year

This course explores the structure and dynamics of American national government, providing a broad-based introduction to the ideas and institutions that shape politics in the United States. Students will examine: civic involvement, civic participation and skills, basic principles of the U.S. Constitution, structure and functions of the federal government, the role of the people, Ohio's state and local government, public policy as well as economic principles. Each student is required to complete three hours of community service per nine weeks. Students will be actively involved through technology, current events, projects, simulations and scenarios.

## **ADVANCED PLACEMENT U.S. GOVERNMENT & POLITICS**

Prerequisite: Grades 11 or 12 and teacher's recommendation

Credit: 1

Term: 1 year

AP Test – Cost for 2020 exam was \$85

This class is equivalent to a one-semester college introductory course in U.S. Government and Politics. The course meets the senior civics Prerequisite. The student must take the American Government portion of the AP exam. By passing the AP exam and the course, the student will be eligible for college credit toward a two- or four-year degree. This course will cover, but is not limited to the role of the U.S. Constitution in the U.S. Government, political beliefs and behavior, political parties, interests groups, mass media, the institution of national government, public policy, and civil liberties. The student will also compete in a state level mock congressional hearing.

## **PSYCHOLOGY I**

Prerequisite: Grades 11 and 12

Credit:  $\frac{1}{2}$

Term: 1 semester

This course concerns the scientific study of behavior and mental processes. It examines the basic reasoning behind our thinking processes, emotions and actions. The topics of study include: the history of psychology, fields and occupations in psychology, research methods, developmental psychology, the brain and behavior, sleep and dreams, as well as sensation and perception. This class will provide useful insights into human behavior to help you see yourself, as well as others, in a new way.

## **PSYCHOLOGY II**

Prerequisite: Grades 11 and 12 and a passing grade in Psychology I

Credit:  $\frac{1}{2}$

Term: 1 semester

This course continues to explore the scientific study of behavior, mental processes and reasoning as discussed in Psychology I. Some topics of study will include: Learning, personality, psychological disorders, diagnosis and therapy, social psychology, and current events in the field of psychology. Upon completion of this course, the students will have a better understanding of the psychological disorders that are identified in the DSM V, the various forms of treatment as well as social implications. This elective course stresses the application of academic content to the student's life.

## **AMERICAN PRESIDENCY**

Prerequisite: Grades 11 or 12, and have passed American History and World History

Credit:  $\frac{1}{2}$

Term: 1 semester

The course looks at the American Presidency from the beginning of the 20<sup>th</sup> century to modern-day, and highlights the achievements of the most significant presidents. Structured chronologically, it emphasizes the growth and transformation of the office and how it has come to assume such a dominant place in American Politics. Also, students will compete in a presidential tournament throughout the semester where they will research selected presidents, debate with other students, and help to determine America's most influential president.

## **TECHNOLOGY DEPARTMENT**

### **INTRODUCTION TO ENGINEERING DESIGN (IED)**

Prerequisites: none

Credit: 1

Term: 1 year

Introduction to Engineering Design (IED) is a high school level course for students who are interested in design and engineering. The major focus of the IED course is to expose students to design process, research and analysis, teamwork, communication methods, global and human impacts, engineering standards, and technical documentation. IED gives students the opportunity to develop skills and understanding of course concepts through activity-, project-, and problem-based learning. Concepts introduced will include modeling and simulation, virtual reality, 3D printing, robotics, electrical engineering and programming with microcontrollers, among others.

### **PRINCIPLES OF ENGINEERING (POE)**

Prerequisite: Physics (can be taken concurrently) or permission of instructor

Credit: 1

Term: 1 year

Through problems that engage and challenge, students explore a broad range of engineering topics, including mechanisms, the strength of structures and materials, and automation. Students develop skills in problem solving, research, and design while learning strategies for design process documentation collaboration, and presentation.

### **CIVIL ENGINEERING AND ARCHITECTURE (CEA)**

Prerequisite: IED

Credit: 1

Term: 1 year

Students learn important aspects of building and site design and development. They apply math, science, and standard engineering practices to design both residential and commercial projects and document their work using 3D architecture design software.

### **ENGINEERING DESIGN AND DEVELOPMENT (EDD)**

Prerequisites: Grade 11 or 12 or permission of instructor

Credit: 1

Term: 1 year

The knowledge and skills students acquire through engineering classes come together in EDD as they identify an issue and then research, design, and test a solution, ultimately presenting their solution to a panel of engineers. Students apply the professional skills they have developed to document a design process to standards, completing EDD ready to take on any post-secondary program or career.

### **ROBOTICS I**

Credit:  $\frac{1}{2}$

Term: 1 semester

Students will build robots with motors and sensors that perform tasks and react to their environment. Students will learn basic mechanical principles used in robotics. Students will be introduced to concepts of logic and programming using either an icon- or script-based programming language. Students begin work using a base kit to master the mechanics and programming of basic movements, and then progress to more difficult challenges, culminating with a student-developed capstone robot.

### **ROBOTICS II**

Prerequisites: Robotics I

Credit:  $\frac{1}{2}$

Term: 1 semester

Students will continue to build robots with motors and sensors that perform tasks and react to their environment. Students will learn basic mechanical principles used in robotics. Students will be introduced to concepts of logic and programming using either an icon- or script-based programming language. Students begin work using a base kit to master the mechanics and programming of basic movements, and then progress to more difficult challenges, culminating with a student-developed capstone robot.

### **SCIENTIFIC RESEARCH METHODS**

Prerequisites: Grade 11 or 12; or permission of the instructor

Credit: 1

Term: 1 year

This course will allow students to conduct advanced scientific research on topics of their choice as a project for presentation, publication, and competition. This inquiry-driven course will leverage a student's application of knowledge, creativity, and critical thinking in order to research, design an experiment, and analyze and interpret data to answer a question or solve a problem. Students will be introduced to methods of scientific research, experimental design, technical writing, statistics, and project management similar to what is expected in college-level science courses and STEM-related careers.