

**Course Descriptions/Programs of Studies**  
**Skowhegan Area High School**  
**2024 - 2025**

The Skowhegan Area High School Guidance Department has developed the Course Description/Program of Studies Book to provide parents, students, and community members with important information regarding SAHS academic opportunities and available services. We are proud of the many course choices and support that are offered to SAHS students.

The Guidance Office is available to all students, parents, and teachers to assist in planning academic schedules, career paths, post-secondary education, and dealing with issues of a more personal nature. Trained counselors are available by appointment and on a walk-in basis when possible.

Counselors consult with and make referrals to out-of-school agencies. They work closely with the administration, teaching staff, and parents on behalf of the students.

Students will see their counselors several times during the year whether in groups, classrooms, or individually.

If you have any questions regarding any of the following information, please call 474-5511.

### **GRADUATION REQUIREMENTS**

Please reference [www.msad54.org/sites/default/files/IKF\\_1.pdf](http://www.msad54.org/sites/default/files/IKF_1.pdf)

### **GRADING SCALE**

A+ 99,100	A 95-98	A- 93,94
B+ 91,92	B 87-90	B- 85,86
C+ 84,83	C 78-82	C- 76,77
D+ 74,75	D 71-73	D- 70

### **WEIGHTED GRADING**

Weighted grading will be applied to all SAHS Honors and Advanced Placement (AP) classes. The weighting factor is a 5% addition to the earned grade. Quarterly report card grades will indicate the actual grade earned. However, the GPA of each student involved in an honor and/or AP class will reflect the 5% weighted grades.

### **CLASS RANK**

Class Rank is determined by a student's cumulative grade point average. Cumulative grade point average is calculated four times during the school year at the end of each quarter. Initial class rank will be determined once a student has attended four consecutive quarters at Skowhegan Area High School.

### **HONOR ROLL and ACADEMIC LETTER**

Honor Roll is calculated after each ranking period; and to be eligible, a student must be enrolled in a minimum of 5 courses or its equivalent. Pass/Fail courses do not contribute to honor status. Any student receiving all A's is placed on the All A's honor roll. Any student receiving A's and B's, or all B's with an average of 90 is placed on High Honors.

- **Academic Letter for the Classes of 2024 and 2025:** Any student earning honors or better also earns points toward a Skowhegan Area High School **Academic Letter**, awarded every spring in a special ceremony. 12 points are required to earn an Academic Letter: All A's = 3 points; High Honors = 2 points; Honors = 1 point. All points must be earned at Skowhegan Area High School to qualify for a SAHS Academic Letter.
- **Academic Letter for the Class of 2026 and beyond:** Students who have a cumulative GPA of an 85 or higher at the conclusion of Q3 will earn their Academic Letter. Each year, after receiving their letter, a student will qualify for a pin by meeting the same standard. Students who earn a letter during their first year and a pin for their second and third years will earn a medallion during their fourth year, if they have earned an 85 GPA or higher.

## COURSE SELECTION

Course sequence and elective choice for each year are important matters. They deserve very thorough consideration by students and their parents. Before making final decisions, students should obtain as much help and advice as possible from their teachers, counselor, and parents. Students must remain mindful of the competitive nature of all post-secondary educational opportunities and commit to taking four years of appropriately rigorous and diverse course work. **It is the student's responsibility to keep track of credits earned and to sign up for remaining graduation requirements.**

1. At a formal class meeting, each student will receive a description of course offerings. The general group session will give counselors the opportunity to discuss SAHS courses and other learning opportunities with students. Students will have the opportunity to participate in this discussion. They will then make preliminary elective course selections.
2. Teachers will make appropriate level recommendations for each of their students required academic classes.
3. The counselors will review the course selections. The appropriateness of each student's course selections will be determined based on graduation requirements, student ability and their educational/career plans.
4. At the end of the school year, some changes may be necessary because of low or failing grades. It is the responsibility of the student to contact his/her counselor to make changes. Counselors are available a week after school ends and a week before a new year begins to address needed changes.

## AP/HONORS COURSES

### Philosophy

The Advanced Placement (AP) and Honors programs offer students exposure to college-level materials and accelerated learning opportunities. These courses are designed to challenge highly motivated, committed students. AP and Honors courses require commitment on the part of the student to complete assignments outside the classroom, both during the summer and the school year. AP also provides students an opportunity to demonstrate their learning through performance on an AP exam. Some colleges/universities may award credit to a student earning a designated score (determined by the individual post-secondary institution) on an AP exam.

### Enrollment

Students in AP/Honors courses offered in a classroom setting at SAHS will enroll "in house." Only if a significant scheduling conflict prevents a student from enrolling "in house" will the student be allowed to enroll in an equivalent course via a virtual or other alternate platform.

Initial enrollment in AP/Honors courses will be based on teacher recommendations. If a student or parent/guardian would like to discuss the reasons for the placement recommendation, a meeting among relevant parties (i.e., student, parent/guardian, recommending teacher, AP/Honors teacher, guidance counselor, content area curriculum leader) will take place. If the meeting does not result in consensus concerning the student's placement, the student or parent/guardian may appeal the determination to the principal, who will make the final determination after conferring with relevant parties.

### AP Exam Fees

RSU 54 pays the full cost of each AP exam. Because the College Board charges the district an additional fee for each unused exam, a student who withdraws from an AP course after the exam has been ordered or who has an unexcused absence from an AP exam will be required to pay the additional fee. Documented medical issues or extenuating personal circumstances would be considered in this process.

## ADDING/DROPPING CLASSES

If possible, any needed add/drop should be handled before the start of a school year. Guidance counselors are available a week after the school year ends and a week before the school year begins to address specific scheduling needs.

Although students are expected to remain in a course once a course begins, it may be possible for a student to add or drop a class after the start of a semester. Adding or dropping must happen within the first two weeks of the start of a class unless unusual circumstances arise. Students add/drop may be allowed after thorough consideration of the rationale for the requested change and the student, a parent/guardian, the guidance counselor, and the teacher have all signed the required procedural paperwork. Completion of this paperwork is the responsibility of the student. Until approval for the change occurs, students must stay in and attend the current scheduled class. When a student drops a class after the first two weeks of a year course or a semester course with no logical academic rationale, the course will remain on the student's permanent record with a designation of withdrawn (W).

## **AUDIT**

A course audit is a privilege offered to students who need to strengthen skills and understanding of a subject area. Students who audit a class are expected to attend all classes, complete all assignments, and take all required assessments. Course credit is not earned for an audit. An audit form must be submitted (available in Guidance).

## **INDEPENDENT STUDY**

On occasion independent study courses may be arranged for in-depth study not offered in the curriculum or other isolated circumstances. The student and supervising teacher must submit an independent study proposal (available in Guidance).

## **EXTERNAL COURSES**

SAHS encourages students to pursue external educational opportunities for a variety of reasons including intellectual growth, recovery of credit, to enrich their high school experience, and to help establish pathways toward academic success. External courses must be approved by the principal and the student's guardian prior to enrollment. The approval form is available in the guidance office. It is the student's responsibility to provide his/her guidance counselor with an official transcript following completion of an external course. Approved external learning experiences will be used to determine athletic eligibility. Approved external learning opportunities that are numerically graded will also be used to determine honor roll status and GPA.

## **POST-SECONDARY ENROLLMENT OPTIONS**

Secondary students from RSU 54/MSAD 54 may earn credits towards graduation by taking courses from two-year and four-year post-secondary institutions during the regular school year. Students may take up to two courses per semester. A request for an exception to this requirement will be considered on a case-by-case basis and evaluated by the high school principal and assigned guidance counselor. To be eligible for this opportunity, students must meet the following criteria:

1. Meet the admissions standards for the post-secondary school.
2. Meet course pre-requisites.
3. Maintain at least a B average in his/her courses overall prior to applying.
4. Complete an External Course Approval Form.

Credits for courses taken under this option will be determined as follows:

1. The course must meet for one semester or its equivalent.
2. The student must earn a passing grade in that course and must submit a transcript to the guidance department.
3. Credits awarded may not exceed one SAHS credit for each three-credit semester college course.

Attendance Policy: Attendance must satisfy the post-secondary instructor's requirements. Post-secondary institutions may levy book fees, lab fees or other expenses. Any fees or expenses will be the responsibility of the student.

## **ALTERNATIVE EDUCATION**

The Marti Stevens Learning Center (MSLC) provides alternative education programming to appropriately placed Skowhegan Area High School students. MSLC will provide academic, social, and vocational experience with an emphasis on project-based learning. Students interested in attending MSLC should see their guidance counselor for more information.

## **ADMISSION OF RESIDENT STUDENTS**

School Administrative District #54 shall admit as students those children of legal school age who live with parents or legal guardians residing within the municipalities of Canaan, Cornville, Mercer, Norridgewock, Smithfield and Skowhegan. Adequate proof of residency will be required and verified.

Guardianship shall be substantiated by a copy of a court order appointing the resident as guardian of the student. If the appointment of guardianship has not been made when the student enters school, the appointment must be completed within 45 days. No student shall be accepted for enrollment on the basis of guardianship established by a power of attorney.

State wards shall be considered a resident of the district for purposes of school enrollment. Students who have attained the age of 18 or who are emancipated under Maine Statutes shall be considered residents of the district for school purposes.

Students whose parents have purchased housing within the district may begin the semester with permission of the Superintendent. Students whose parents are moving from the district may complete a semester with the permission of the Superintendent.

In the case where this policy presents an extreme hardship, the affected individuals may appeal to the Board of Directors for a waiver on a case-by-case basis submitting a written request for a waiver to the Chairperson.

## **STUDENT WITHDRAWAL FROM SAHS**

When a student is intending to withdraw or transfer from Skowhegan Area High School the following procedures will be followed:

1. Student and/or parent will notify guidance and meet with the appropriate counselor to acquire the withdrawal/transfer form.
2. Parent must sign a withdrawal/transfer form. If the parent is not available for signature, the counselor will contact the parent for confirmation.
3. Student will obtain a clearance signature from the Media Center.
4. Student will see an administrator for a signature.
6. Student will return one copy of the withdrawal/transfer form to the guidance office and keep one copy to take to the receiving school.
7. If additional records are requested, the student may have copies of necessary information to take to the receiving school.
8. If health records are requested at the time of withdrawal, the student/parent will be referred to the school nurse.
9. Official school records will be sent to the receiving school when an official request is received from that school.

## **STUDENT RECORDS**

Maine School Administrative District #54 adheres to all aspects of the Family Educational Rights and Privacy Act (FERPA). This Act affords parents and students over the age of 18 certain rights with respect to student educational records. To access the details of FERPA go to: <http://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html>

## **HOME SCHOOL**

Please consult the MSAD 54 home page and click the policy link under administration for information related to home school students. Detailed information about the Maine Department of Education steps to establish a home school program and home school student participation in MSAD 54 programming is listed. The policy files are IHBG and IHBGA.

## **SAMPLE PROGRAMS OF STUDY LEADING TO POST-SECONDARY ACCESS**

Regardless of career pathway or post-secondary educational pathway, students should always engage in coursework that matches their abilities, challenges their intellectual limits and prepares them for their future to the greatest extent possible.

**A typical year class load is between 6 and 7 credits leaving room for one or two study halls.**

### **2 year college/trade school/ Apprenticeship**

#### **Recommended Courses to be taken at the most rigorous level possible (College Options and College when possible)**

4 English

4 Math (through Algebra II,  
Senior Tech Math, Senior  
College Algebra)

4 Science (Biology, Physics,  
Chemistry, Science elective)

4 Social Studies (Geography,  
Electives, US History I,  
Government)

SCTC Course(s) in field of  
Interest

.5 Health  
1 Physical Education  
1 Fine Art  
.5 Career & College Prep  
.5 Financial Literacy

Additional Electives to  
broaden learning experience  
or enhance relevant skills

### **4 year college moderately selective: UMaine, Husson Thomas**

#### **Recommended Courses to be taken at the most rigorous level possible (College, Honors, and AP when possible)**

4 English

4 Math (through Algebra II  
minimum +Trig/Pre-Calc,  
Statistics, Senior College  
Algebra)

4 Science (Biology, Physics,  
Chemistry and additional  
electives)

4 Social Studies (Geography,  
Electives, US History I,  
Government)

2-4 same World Language  
(French, German, Spanish)

.5 Health  
1 Physical Education  
1 Fine Art  
.5 Career & College Prep  
.5 Financial Literacy

Additional Electives to  
broaden learning experience  
or enhance relevant skills

### **4 year college highly selective Bowdoin, Colby, Ivy League Schools**

#### **Recommended Courses to be taken at the most rigorous level possible (Honors, and AP when possible)**

4 English

4 Math (through Trig/Pre-  
Calc or Calc +Statistics or  
Calc AB)

4 Science (Biology, Physics,  
Chemistry and additional  
electives)

4 Social Studies (Geography,  
Electives, US History I,  
Government)

4 same World Language  
(French, German, Spanish)

.5 Health  
1 Physical Education  
1 Fine Art  
.5 Career & College Prep  
.5 Financial Literacy

Additional Electives to  
broaden learning experience  
or enhance relevant skills

## **EARLY GRADUATION**

A student who has completed their second year of high school may decide to complete their diploma requirements in three years. Skowhegan Area High School's philosophy is that a four-year high school experience, and the maturity gained in that time, best prepares a student for post-secondary success. Skowhegan Area High School also recognizes that for varying reasons, a student may choose to graduate in three years. An Early Graduation Application must be completed before classes begin junior year. See your Guidance Counselor if interested.

## **CANCELLATION OF COURSES**

Courses may not be offered if they are under enrolled or if financial constraints cause reduction in programming.

## APPLIED AND FINE ARTS DEPARTMENT

### Applied Art

#### Advanced Woods (.5 credit)

- Prerequisite: Woods I

The purpose of Advanced Woods is to give the student the opportunity to develop new skills and expand learning experiences gained in Woods I. This course is a more in-depth study in the area of woodworking. The emphasis is on the construction of student projects.

#### Early Childhood Education & Parenting (.5 credit)

- Prerequisite: Health, Grades 10, 11, 12

The course explores the physical, social, emotional, and intellectual development of the child. Students will explore the necessary skills to create a nurturing environment inside and outside the home. Students will be introduced to a variety of careers in the child development field, as well as to the complex changes caregiving and parenting have on individuals and relationships. A variety of hands-on projects and experiences, as well as traditional coursework will be required.

#### Foods 1 (.5 credit)

This is an introductory course in basic food preparation skills. Units may include food safety, kitchen safety, equipment terminology, reading food labels, nutritional needs, and consumerism and foods. Students will learn to plan and prepare a wide variety of foods. All lab experiences will incorporate kitchen safety, food sanitation, and proper use of equipment, food presentation, and kitchen cleanliness! Traditional coursework is also required.

#### Foods 2 (.5 credit)

- Prerequisite: Foods 1

This advanced foods course includes a detailed study of food preparation, cooking and garnishing techniques. Students will work in teams to prepare nutritious appetizers, salads, soups, breads, meats, garnishes, and gifts from the kitchen. Students will explore career paths in the foodservice industry through lab participation, demonstrations, group and individual projects and reflections.

#### Foreign Foods (.5 credit)

- Prerequisite: Foods 1

The major goal of this course is to explore and research foods and traditions from around the world! American cultures, regional and local cultures will also be included. Be prepared to try some of the same foods you usually eat but with different spices or different cooking methods! Traditional course work and basic food preparation labs are required.

#### Interior Design (.5 credit) counts as a Fine Arts credit

Students will explore exterior and interior basic design principles and design elements. Students will examine the relationship between human needs and the influence these needs have on housing choices. Housing history, architectural styles, floor plans, decorating schemes will be researched. Individual projects applying knowledge of the above concepts will be required. Traditional course work is also required.

#### JMG (1 credit)

JMG is a full year class with focus on career development, job attainment and job survival. Skill development in the areas of leadership, team building, communication, time management, and financial literacy will be the focus of the course. These skills will be developed through community service-learning experiences. Enrollment will be determined by recommendation, application, and an interview. Grades 9 and 10

### JMG II (1 credit)

JMG II is a credited class meeting over the course of the school year (2 semesters) that will assist students in graduating from high school and preparing them for the world of work. This is a competency-based curriculum in which students will learn basic skills, career development, job attainment, and retention. Students will learn how to write powerful resumes and cover letters to better their chances of getting a job. Aside from in-class tasks, students will be asked to actively participate in community service, focus on college searches, recommendation profile, student profile, essay writing, FAFSA, college applications, interviewing, financial aid, scholarship searches and college campus visits. After graduation, a Job Specialist will follow-up on the JMG Seniors for 12 months to make sure they all achieve a positive outcome (full-time job, technical school, college, part-time job, etc.). Students must be willing and able to participate in every phase of the program. Enrollment will be determined by recommendation, application, and an interview. Grades 11 and 12

### Maine Foods & Phrases (.5 credit)

- Prerequisite: Foods 1

Students with a love of words and a passion for cooking will be attracted to a class that combines reading, writing, cooking and eating, all with a Maine flavor. While exploring a variety of Maine themes, foods, and authors, students will use food and cooking to represent, explore, and explain their thoughts and ideas. Students will engage in literary activities to help improve their reading and writing skills, while also practicing kitchen safety, sanitation, and cooking methods.

### Upcycled Arts (.5 credit) counts as a Fine Arts credit

Reduce! Reuse! Recycle! Upcycle! Refuse! Recover! Repair! Repurpose! Using project-based activities, while applying the elements of art and principles of design, students will explore traditional art, as well as create new art with modern materials. Traditional coursework will also be incorporated.

### Textiles & Construction (.5 credit)

This is an introductory course in concepts related to fibers, fabrics, fashion, color, clothing selection, and clothing care. The course begins with topics such as color schemes, the elements and principles of design, and fabric and fiber types. Students will apply these design basics into a variety of projects that include skills such as hand-stitching, machine stitching, and knitting. Students will have the opportunity to create clothing and other textile items, read and apply pattern directions to garment construction, and will become environmentally conscious in their textile choices.

### Woods I (.5 credit)

The purpose of Woods I is to give the student a basic understanding of woodworking. In this course the student will develop basic skills in the use of tools, materials, and processes as they relate to woodworking.

## **Fine Arts**

### Digital Photography (.5 credit)

This course is an exploration of digital photography and digital image-editing using Adobe Photoshop. During the semester you will work toward the following goals: gain an understanding of digital photography, processes, and concepts, learn to apply the Elements and Principles of Design to create interesting and strong compositions, apply these new understandings toward creating original, strong, interesting digital images, and expand your knowledge and vocabulary as it relates to digital imagery and photo manipulation and enhancement.

### Foundations of Art (1 credit)

Foundations of Art covers the basic knowledge and skills necessary for the development and appreciation of the visual arts. Students learn the fundamentals of drawing, painting, printmaking, crafts, and art history. This is primarily a studio class and students will keep a sketchbook and a portfolio.

### Personal Directions in Visual Art (1 credit)

This is a class for students that are passionate about the Visual Arts as a lifelong learning experience or as a student that wants to prepare a Portfolio for post-secondary education in the Visual Arts. Students will study any aspect of the Visual Arts that they wish, while identifying their own Standards and Performance Indicators from the Maine Learning Results. They will keep a journal furthering their creative thinking skills and a notebook documenting their individual studies. They will also keep a sketchbook each quarter with a minimum of ten studies per quarter. They will complete a creative problem-solving challenge quarterly as determined by the instructor with student input. Each student will be working individually and collaboratively. At least one project must be completed each quarter. Students will learn how to participate in the critique of their quarterly work. Students may have to purchase some materials on their own. (Prerequisite: Foundations of Art or instructor permission)

### Portfolio Preparation (.5 credit)

This is a course designed for the serious art student who is considering art as a college major. Students will prepare a portfolio of artwork using computer technology and digital equipment. No computer technology experience is necessary to participate in this class. Students will expand their art knowledge through an in-depth study of an artist or an art movement that is of interest to the student.

### Printmaking (.5 credit)

This course will involve students in the art and history of printmaking from Japanese prints to the present-day screen printing. Included in this course will be activities such as: relief prints, silk screening, linoleum, and woodblock printing.

### 3-D Design (.5 credit)

Students will explore 3-Dimensional Design in a variety of media. We'll document our projects in a digital portfolio. If you like making things this is the course for you.

## **BUSINESS CAREER TECHNOLOGY DEPARTMENT**

### Accounting AC111 (1 SAHS credit / 3 potential Thomas College credits) (Grades 11 & 12)

Are you interested in one of the most dynamic and fastest growing professions in the business world? Accounting is the "Language of Business." Are you interested in a profession that can channel you into countless career options? Do you like working with figures and learning how to manage, invest, and make financial decisions that will help to make a profit for the company that employs you? Do you wish to pursue a career that will pay you a good salary and provide excellent benefits? Then the field of accounting should interest you. This is an accelerated course that is designed to provide the college preparatory student with a sound foundation for accounting in college. In this class, you will learn accounting and spreadsheet software to prepare financial documents for sole proprietorships, partnerships, and corporations. Everyone who is aspiring to a position with responsibility in business should have a basic knowledge of the fundamentals of accounting. This course is highly recommended for all students considering business administration, economics, computer science, accounting, and finance careers. A student must earn a C or better to earn Thomas College credit.

### Career and College Prep (.5 credit) – Graduation Requirement (Grade 11)

This course is all about YOU! It is designed to assist students in successfully establishing and achieving education, career, and life goals. Using a variety of techniques and assessments, students will discover what they value, what skills they have, what their interests are, and how to match these attributes to a career. Students will select and research several careers of interest and explore colleges through websites, video presentations, and speakers. Students will practice filling out college applications, job applications, creating an effective resume, effective interviewing skills, financial aid and scholarship research will also be included. Students will develop a personal employment/career portfolio. Various technology programs will be used to enhance the learning of career research/planning.



### Financial Literacy (.5 credit) – Graduation Requirement (Grade 12)

Do you want to make money and have money when you need it? This course is a necessity for life! You will learn life-long skills to prepare you for financial success, security, and know-how. How do I balance a checkbook? What is credit? How do I stay out of debt? How do credit cards work? What is a credit report? What are my rights and responsibilities? How do I avoid bankruptcy? How can I save if I don't have any money? What is a budget? How do I set financial goals? These questions and many more will be answered in this course. This course prepares you to manage your savings, checking, credit, insurance, budgets, taxes, and other personal financial issues you must know in order to make it on your own in the real world. This course will prepare you for "life after high school." technology.

### Introduction to Sports Management (.5 credit)

Like to be down in front—courtside, ringside, or on the sidelines at the 50-yard line? If you're not game to be a player, mascot, or coach, you can still catch all the action up close and personal as manager of the team. Sports management lets you participate in—and cash in on—the exciting world of sports from a business standpoint. In this course, you'll learn about sports themselves (perhaps focusing on one or two in particular) plus the psychological principles at work behind them and how sports fit into our society. But you'll also gain a strong foundation of knowledge in the field of business, examining how the worlds of business and sports interact and how you can make those interactions more profitable and beneficial for every person and interest involved.

### Multimedia/Web Page Design (.5 credit)

Are you interested in creating your own app, game, or web site? This course is for YOU! This course takes a wide lens on computer science by covering topics such as programming, physical computing, HTML/CSS, and data. Students engage with computer science as a medium for creativity, communication, problem solving, and fun. The course inspires students as they build their own websites, apps, games, and physical computing devices.

### Principles of Marketing MK116 (.5 SAHS credit/3 potential Thomas College credits) (Grades 11 & 12)

Are you looking for a creative, dynamic, and exciting course/career, then marketing is for you! Marketing is more than advertising and sales. It is all the activities that influence the flow of goods, services, and ideas between producers and consumers or organizations. This course provides students with an introduction to the role of marketing, advertising and the process involved in developing a marketing mix for a new product. Topics covered include marketing functions, product development, channels of distribution, market segmentation, pricing policies, product life cycle, and promotional activities. Students will complete a project developing a product that incorporates the marketing mix. Emphasis will be on the elements of promotion (selling, public relations, publicity, advertising, and sales promotion) and how it contributes to the success of a business. This course may be taught in person, online, or in a hybrid format.

### Start Your Own Business (.5 credit)

Do you want to be your own boss? Own your own business, and be a successful entrepreneur in your community? Whether you plan to operate a business of your own or become an employee who expects to rise to a top-level position, you must be well informed about the production, marketing, and financial activities of a business. This course is devoted to the management and development of a small business by creating your own personal business plan. From the development of your personal business plan, you will benefit by learning how successful businesses operate.

### Street Law (.5 credit)

Have you ever wondered how the law affects you? This course is for YOU! The purpose of Street Law is to help students learn about their rights and responsibilities and to encourage them to think critically about the law. The course explores how law affects students' lives and ways that law can be used to improve society. We will touch on broad and specific legal topics to give students a better understanding of law and how it affects you in **real life**. We will use case studies, individual research, group discussion, and guest speakers.

## ENGLISH DEPARTMENT

### Advanced Placement English IV (1 credit)

- Prerequisites: Honors I, II, and III, or teacher recommendation.

This fast-paced rigorous course is taught at the level of a freshman course in college. It involves analysis of world literature, formal expository writing, and research projects. All students who enroll must take the AP test which is administered in May. Assigned summer readings are required and minimum performance standards are set by school board policy. Any student who has not met the prerequisites must apply for enrollment and be approved by the English department.

### Advanced Speech (.5 credit) counts as a Fine Arts credit

- Prerequisite: Successful completion of Speech

Students will learn to use the voice as an instrument for creation emphasis will be on vocal range, the breath, intonation, modulation, and performance. Students will use the voice to create characterization and narration and will create products such as advertisements, voice overs, and announcements. Technology will be incorporated.

### Advanced Theatre (.5 credit) counts as a Fine Arts credit

- Prerequisite: Successful completion of Theater.

Students will study elements of theatre in-depth with a focus on performance, creation, and critique and application. Topics will include scene study, character developing, acting, movement, and vice techniques, and design.

### College Composition ENG101 (.5 SAHS credit/3 potential KVCC credits) (Grades 11 & 12)

College Composition is an introductory level college writing course that emphasizes critical reading and thinking as part of the process of clear and effective writing. Students will practice and apply a range of writing skills through varied and numerous writing assignments. Students will conduct research and write two different kinds of essays based on that research. College Composition values the process of writing and students will actively engage in the revision process, which will include self-reflection, peer review, and conferences with the instructor. A student must earn a C or better to earn KVCC credit.

### College English III (1 credit)

In this college preparatory, third year course, students will read a survey of 20<sup>th</sup> century American literature. Students will write essays related to literature, they will continue to prepare for the SAT by writing timed essays, and they will practice writing college application essays. Students will learn formal research skills that include proper documentation of sources. Grammar instruction will focus on more complex constructions.

### Consultant English I (1 credit)

In this course students will build on basic grammar, spelling, capitalization, and punctuation skills. Grammar study will continue with instruction around recognizing and fixing fragment and run-on sentences. Students will also be introduced to a variety of sentence structures. Students will develop these grammar skills along with other writing skills through extensive practice, beginning with the paragraph through the complete essay. Students will develop their reading comprehension and analytical skills as they engage with short stories, plays, fiction, and nonfiction. Students will be accommodated based on IEP recommendations. This course is taught in coordination with the Special Education department.

### Consultant English II (1 credit)

This course is a continuation of Consultant English I. Admission into the class is based upon departmental recommendation and/or IEP placement.

### Consultant English III (1 credit)

In Consultant English III, students study the following themes: aspirations, racism and discrimination, taking a stand, and dealing with disabilities. Students will read a variety of works—novels, short stories, plays, poems and essays—that relate to these broad themes, including *Journey*, *A Raisin in the Sun*, *Animal Farm*, and *The Miracle Worker*. In addition, students will study vocabulary and grammar throughout the academic year, as well as practice and expand writing skills. Students are supported in class by two educators. Therefore, admission is based on departmental recommendation and/or IEP placement.

### Consultant English IV (1 credit)

This course is a continuation of Consultant English III. Admission into the class is based upon departmental recommendation and/or IEP placement.

### English I (1 credit)

In this course students will build on basic grammar, spelling, capitalization, and punctuation skills. Grammar study will continue with instruction around recognizing and fixing fragment and run-on sentences. Students will also be introduced to a variety of sentence structures. Students will develop these grammar skills along with other writing skills through extensive practice, beginning with the paragraph through the complete essay. Students will develop their reading comprehension and analytical skills as they engage with short stories, plays, fiction, and nonfiction. This course will offer college preparatory assignments.

### English II (1 credit)

This course is designed to assist students in developing reading and writing skills. Through a variety of novels, short stories and poetry, students will study literary analysis and practice active reading strategies. *Of Mice and Men*, *To Kill a Mockingbird*, *Julius Caesar* or *Macbeth*, and *Lord of the Flies* are some of the works studied extensively. Students will develop essay writing skills and practice on demand writing prompts in preparation for the SAT. The basics of grammar, with particular focus on comma rules, are reviewed in the development of effective sentences and paragraphs.

### Exploring the Wilderness (.5 credit) Semester 2 Grade 12

Students will investigate some of the ways that people have been intrigued by, terrified of, and found comfort in their experiences in the wilderness. Although Jon Krakauer's book *Into the Wild* will be the primary text of the course, students may also read other myths, short stories, poems, excerpts from historical essays, and contemporary articles. Students may also view recent documentaries about modern experiences in "the wild". Students will contemplate the role of "the wild" in our work today as well as in their own lives. They will have opportunities to write narrative as well as creative pieces in addition to formal expository and analytical essays. In addition, students will learn research skills that they will apply in projects and writing assignments.

### Honors English I (1 credit)

Students who are recommended by their eighth grade Language Arts teacher as capable of work at an accelerated level may enroll in this first course in the honors program. Major works of literature in this class may include *The Odyssey*, *Romeo and Juliet*, *The Book Thief*, *Night*, and *A Tale of Two Cities*. The development of strong writing skills is important, and students will review formal grammar in relationship to their writing. Intensive vocabulary study is integrated throughout the year. Students will also learn basic research skills that they will apply in written reports, as well as presentations. Students enrolled in this class must complete assigned summer readings and must maintain minimum grade standards established by school board policy.

### Honors English II (1 credit)

This is the second course in the Honors English program. Themes explored in literature will be man in isolation, man's conflicts with himself, and the sins of society. *To Kill a Mockingbird*, *My Antonia*, *Julius Caesar*, and *Lord of the Flies* are some works studied extensively. Poetry and short story selections will be read. The basics of grammar, with particular focus on comma rules, are reviewed in the development of effective sentences and paragraphs. Composition related to reading includes an introduction to the written analysis of literature in formal essays. Class requirements include assigned summer readings. Students must maintain grades based on school board policy. Students new to the Honors program must apply to the department for approval before registering for this course.

### Honors English III (1 credit)

- Prerequisites: Honors I and II or application to the department for special approval before registering for this course.

This course is taken in the third year of the honors sequence. A survey of American literature is studied, including the works of Hawthorne, Twain, and Fitzgerald. Shakespeare is studied as well. Writing related to literature is emphasized and formal research skills are taught. Short stories, poems and nonfiction are also analyzed. Grammar and sentence structure are reviewed when necessary and vocabulary development continues. Assigned summer readings are required and grade standards are set by school board policy.

### Introduction to Literature (.5 SAHS credit / 3 potential KVCC credits) Grades 11 & 12

- Prerequisite: A grade of C or better in College Composition

Introduction to Literature is an introductory level humanities course in which students will read and discuss a selection of short stories, plays, poems, and novels. Students will write about their personal reactions as well as engage in literary analysis in a variety of writing assignments that may range from journal writing, in class prompts, essays, and creative pieces. This class provides students with the opportunity for personal growth and insight into social problems as revealed through literature.

### Investigating the Truth (1 credit) Grade 11

The emphasis of this course is on discovering the truth. Students will read texts about journalists and by journalists as they learn how to get to the truth. In the first semester, students will learn the vocabulary of journalism by tracking the essential practices of journalists in action. In the second semester, students will apply these practices by writing their own investigative article about a current school issue. Throughout this course students will read analytically, interview thoughtfully, and write accurately.

### Reading the Film (.5 credit) Semester 2 Grade 12

Students will apply reading techniques for film reviewing. Students will encounter a variety of film genres and topics and is analysis and critique to draw a conclusion about the goals of each filmmaker as well as effectiveness of the story. Students will read a variety of pieces related to themes and connecting to the world we live in. Students will have the opportunity to read short stories, poems, historical essays, and current articles that connect to each film they examine. Students will write personal reactions, informative and analytical responses (formal and informal), and learn research skills that they will apply in projects and writing assignments. Students may have opportunities to write narrative as well as creative pieces.

### Speech CO245 (.5 SAHS credit / 3 potential Thomas College credits) counts as a fine arts credit

In this course, students learn to research, prepare, and present speeches in the first quarter. Oral interpretation, including the study of children's literature, poetry, monologues, and readers' theatre, will be emphasized in the second quarter. Learning is assessed through student in-class performance and reflection. Speech is open to all students, but only grades 11 and 12, per Thomas College, may earn college credit. If Speech is taken during grades 9 or 10, it may be taken again during grades 11 or 12 so students may access college credit opportunity. A student must earn a C or better to earn Thomas College credit.

### Stagecraft (.5 credit) counts as a fine arts credit

Students will be introduced to elements of costume, scenic, lighting, and properties design. Reading and analyzing scripts is required. Assessments consist of written responses, presentations, self-evaluations, group evaluations, hands-on projects and a final portfolio.

### Stories of Resilience (.5 credit) Semester 1 Grade 12

How is it that some people overcome obstacles while others seem to flounder? The answer is resilience. Resilience, however, is not something you are born with, but rather something that can be developed. In this course students will discover what it means to be resilient by engaging with a variety of stories from different genres and places around the world. Students will use research techniques to learn about resilience and apply what they learn to the stories they read. Students will have the opportunity to examine resiliency in short stories, poems, film, and novel forms, which will include both fiction and nonfiction. This course will also offer some student choice related to reading material within the theme of resiliency. Students will write personal reactions, informative and analytical responses, and learn research skills that they will apply in projects and writing assignments. Students may have opportunities to write narrative as well as creative pieces.

### Storytelling (.5 credit) counts as a Fine Arts credit

- Prerequisite: successful completion of Speech class

For as long as human beings have existed, they have been telling stories. Storytelling is a fun way to discover one's own personal power and magnetism and to gain self-confidence. Through storytelling, we learn about our connection to the world, past and present. Using techniques from the earliest days of this ancient art form along with modern approaches, students will discover and develop the power of their personal voice.

### The Making of a Leader (.5 credit) Semester 1 Grade 12

Students will review, investigate, define, and analyze leadership qualities in characters in literature, history, and in our world today. Students will read a variety of fiction and nonfiction texts (including film) that may include excerpts from *Beowulf* and Shakespeare's *Henry V*, speeches of historical and contemporary leaders, and articles about the many styles of leadership. Students will have opportunities to reflect on their own lives and to consider their own leadership qualities. Students will write personal reactions, informative and analytical responses (formal and informal), and learn research skills that they will apply in projects and writing assignments.

### Theatre (.5 credit) counts as a Fine Arts credit

All aspects of the theatre are explored: acting, makeup, costumes, set construction, theatre history and for advanced students – directing. Students will be involved in practical, hands-on projects directly related to play production.

## **MATHEMATICS DEPARTMENT**

### AP Calculus (1.5 credits)

- Prerequisites: Honors Trigonometry and Pre-Calculus or by approval of the department

This course is a rigorous extension of calculus. Students will be required to take the AP exam.

### Applied Math/Science (1 credit)

Students will learn how math and science are connected by learning them as a cooperative, experimental, hands-on experience. This course is geared towards students who struggle with math and science courses. This course will provide great conversations for how math and science are cooperative content areas, while providing relevance of learning both subjects in real time. This course will focus on the most important Algebra I and Physics standards.

### Algebra I (1 credit)

Algebra I is an introduction to algebra rules and topics including linear functions, quadratic functions, solving equations, inequalities, and systems. Semester one will focus on basic concepts of numbers, variables, and patterns, order of operations, the structure of the number system, and solving real world problems are emphasized. Semester two is an introduction to rules and topics include linear functions, quadratic functions, solving equations, inequalities, and systems.

### Algebra II (1 credit)

- Prerequisite: Successful completion of Algebra I and Geometry

This course is a continuation of Algebra I. Students will explore different functions and the application of these functions in real-world settings.

### Calculus MAT152 (1 SAHS credit / 3 potential USM credits)

- Prerequisite: Trigonometry and Pre-Calculus

This course covers the fundamentals of differential and integral calculus. It is intended to develop manipulative skills by providing a sound intuition about the concepts. Applications rather than theoretical structure will be stressed. A project will be required. A student must earn a C or better to earn USM credit.

### Consultant Algebra 1 (1 math credit/.5selective credit)

Consultant Algebra is an introduction to Algebra rules and topics including linear functions and solving equations. Consultant Algebra will review some pre-algebra topics and then cover the units: Solving Equations, Solving Inequalities, Functions & Scatter Plots, and Equations of Lines. This class meets every day.

### Consultant Algebra 2 (1 credit)

- Prerequisite: Consultant Algebra 1 or with teacher recommendation

Consultant Algebra 2 is an introduction to rules and topics including linear functions, quadratic functions, solving equations, solving inequalities, and solving systems of equations and inequalities with a focus on real life applications of algebra.

### Consultant Geometry (1 credit)

- Prerequisite: Consultant Algebra 1 or Algebra I with teacher recommendation

Geometry is the study of the size, shape, position and dimensions of figures and solids. In this class, students will learn about shapes, area, surface area, volume, congruence, constructions, and transformations. This class will explore these topics with limited emphasis on Algebra 1 skills and focus on real-life applications of geometry.

### Daily Math (.5 elective credit) Pass/Fail

Daily Math is for any student who is enrolled in Geometry or Algebra II who may need extra time/instruction to be successful. The class is run by a math teacher with the hope of better meeting the needs of students who find learning geometry and algebra concepts challenging. This is an elective class and does not fulfill a diploma requirement for math.

### Geometry (1 credit)

- Prerequisite: Algebra I

Geometry is all about shapes and their properties. In this course you will cover topics including lines, triangles, quadrilaterals, polygons, circles, and the basics of coordinate geometry. Students will also calculate the perimeter, area, surface area, and volume of shapes and figures. Geometry relies heavily on the skills taught in Algebra I to explore these concepts. Several projects including tessellations, polyhedrons, product packaging, and writing assignments are required.

### Honors Algebra I (1 credit)

This course is the same as Algebra I but is more demanding.

### Honors Algebra II (1 credit)

- Prerequisite: Successful completion of Algebra I and Honors Geometry or approval of the department

This course is the same as Algebra II, but with more depth.

### Honors Geometry (1 credit)

- Prerequisite: Honors Algebra I or approval of the department

This course is the same as Geometry but is more demanding.

### Honors Trigonometry and Pre-Calculus (1 credit)

- Prerequisite: Successful completion of Honors Algebra II or approval of the department

This course is the same as Trigonometry and Pre-Calculus but with more depth. Projects are required.

### Quantitative Reasoning MAT 111 (.5 SAHS credit / 3 potential KVCC credits) Semester 2

This course will be a concurrent course with KVCC. Quantitative Reasoning provides a foundation in critical thinking, problem solving, and mathematical skills aligned with citizenship, workforce, and real-world applications. The goals of the course are to engage students in meaningful mathematical experiences that will increase their quantitative and logical reasoning abilities and strengthen the mathematical abilities needed in other disciplines. Learners will engage in a variety of activities designed to aid in the mastery of the material. Topics will include, but not limited to numeracy, proportions, linear and exponential models, geometry, statistical analysis, and budgeting.

### Pre-Algebra (1 credit)

Pre-Algebra is a remedial math class for students who have not mastered the skills necessary to be successful in Algebra I. The students will work with integers, decimals, and fractions to acquire skills needed for Algebra I. The class is instruction-based with remedial work done on the computer.

### Probability and Statistics (.5 credit)

Semester course to help prepare you to understand how statistics and probability are utilized in everyday life. Understand how to collect data, represent the data in a variety of ways and how the creator can manipulate the data to show what they want you to see. Understand basic probability concepts to help you understand the odds of winning games, unlocking a combination lock without the combination, and more.

### Problem Solving (.5 credit)

- Prerequisite: Algebra I and Geometry

Course Description: Students will learn problem solving skills to answer questions that are framed as standardized test questions, data analysis application, and real-world contexts. The purpose of this course is to build critical thinking skills and help students efficiently answer questions within time constraints.

### Senior College Algebra MAT117 (1 SAHS credit / 3 potential KVCC credits)

- Prerequisite: Successful completion of Algebra I, Geometry and Algebra II

The course is designed for students who have completed high school math requirements but are not ready to take Trigonometry. The emphasis of this course is on problem solving. This course unifies the traditional analytical methods of Algebra with the modern graphing technologies to solve problems modeled by a variety of functions such as a linear, quadratic, absolute value, polynomial, exponential and logarithmic. The central theme is authentic applications from traditional disciplines such as the physical sciences and engineering, as well as applications from business, economic, social sciences, life science, health science, sports, and other areas of student interests. This course is appropriate for students whose future studies of mathematics include applications-based courses such as Statistics or Math for Business and Economics. A student must earn a C or better to earn KVCC credit.

### Senior Technical Math MAT 114 (.5 SAHS credit / 3 potential KVCC credits) Semester 1

This course focuses on mathematics topics relevant to a variety of trades and technical disciplines. Topics will include, but not limited to proportions, percentages, measurement, algebra, geometry, and trigonometry. An emphasis is placed on practical, contextual applications. Students will work with selected math topics to enhance their understanding and ability to manipulate mathematical problems. The students will be presented with a wide range of illustrated math examples dealing with real life applications. This course will be a concurrent course with KVCC.

### Statistics MAT120 (1 SAHS credit / 3 potential KVCC credits)

- Prerequisite: Algebra II

This course covers a full introduction to a college level statistics course. Topics include data collection, statistical vocabulary, bias, normal and abnormal distributions, Empirical Formula, advanced probabilities, z-scores, area under the curves, Chi Square and p-hat formulas and many other aspects of statistics. The course is offered to any student who has had an Algebra II course or is concurrently enrolled in Honors Algebra II.

### Trigonometry (1 credit)

- Prerequisite: Algebra II

This course reviews Algebra II stressing the graphic approach to the solution of problems. In addition, the course covers the following topics: exponential and logarithmic functions and trigonometric applications.



**MUSIC DEPARTMENT**  
**Each Music Course earns both a Fine Art and an Elective Credit**

Advanced Music Performance (1 credit)

- . Prerequisites: **By music teacher recommendation only.** Students must be enrolled in band, string orchestra or chorus.

This course is designed to enhance performance skills. Students are required to audition for District Festivals, All-State, and other various performing festivals throughout the year as well as performing in class daily. Students will be expected to critique and discuss one another's performances as well as their own. Topics include preparation for college-level auditions, college research, extensive scholarship exploration, broad-based study of musical styles and performance techniques, i.e.: Classical, Pop, Broadway, Jazz, and other various genres and participating in both group and solo performances. Skills needed: Extensive prior performing experience in vocal or instrumental music.

Band (1 credit)

Band is a performing ensemble that provides opportunities for students with previous band instrument experience to expand their skills on their instrument and play music of many varied genres. Performances include seasonal concerts, sporting events, school assemblies, tours, and parades. Periodic proficiency evaluations are given to assess individual progress. Members earn academic credit for successful completion of the requirements. Students are encouraged to pursue further experiences with Solo & Ensemble Festivals, Jazz Festivals, Mid-Maine Youth Orchestra and Kennebec Valley and All-State Music Festivals.

Chamber Choir (1 credit)

- Prerequisite Chorus

Admission by permission/audition. Perform advanced music from choral literature. Focus on music literacy, sight singing and performance.

Chorus (1 credit)

Chorus is a performing ensemble providing opportunities for students who desire a choral ensemble experience to improve and expand their vocal skills by performing music of many varied genres. Performances include seasonal concerts, exchange concerts, sporting events, school assemblies, tours, and parades. Periodic proficiency evaluations are given to assess individual progress. Members earn 1 academic credit for successful completion of the requirements. Students are encouraged to pursue further experiences with Jazz Festivals, Kennebec Valley, and All-State Music Festivals. Previous experience or permission of the director required.

Guitar/Music Theory (.5 credit)

The course will cover the reading of music through guitar. This course will focus on the basics of learning to play acoustic and/or electric guitar. Students will learn how to play basic classical songs and simple accompaniment/chords on the guitar. Some music theory, note reading and tab reading will be learned. **Please note: This class is for beginning guitar students.** Performances will be left to the discretion of the teacher and students.

Music Appreciation Technology (.5 credit)

This course will focus on the roots of Rock 'n' Roll and trace its beginnings from the 1950's to present day. We will study major icons of rock such as Elvis, the Beatles, Lynyrd Skynyrd, the Eagles, Bruce Springsteen, Madonna, as well as others. We will also explore the different genres of rock music such as Punk, Alternative, R & B, Heavy Metal, Disco, Eighties Rock and more. Students will be expected to keep a notebook throughout the semester, to write research reports as well as regularly attend class and complete homework assignments. Each unit of study will include a project involving the use of our available computer technology. Among the technological resources utilized are Key Note, GarageBand, Musescore, iTunes and iMovie.

### Songwriting for Diverse Music (.5 credit) counts as a Fine Arts credit

This course will delve into the art of songwriting. Students will compose their own lyrics and music. Students will create/compose their own songs in a variety of styles and genres. Projects may include writing commercials, children's songs, setting poetry to music, musical theater, country, rock, pop, etc. Technology will be used throughout the course. GarageBand, MuseScore, BandLab for Education are some of the programs that we may use in this course.

### String Ensemble (1 credit)

Strings/Orchestra is a performing ensemble that provides opportunity for students with previous orchestra instrument experience to expand their skills on their instrument and play music of many varied genres. Performances include seasonal concerts, assemblies, and tours. Periodic proficiency evaluations are given to assess student progress. Members can earn 1 academic credit for successful completion of requirements. Students are encouraged to pursue further experiences by participating in string opportunities outside of the school day.

## **PHYSICAL EDUCATION AND HEALTH DEPARTMENT**

### Health (.5 credit)

One semester of health education is required to meet graduation requirements. It is strongly recommended that the course be taken during the ninth grade year. Health knowledge and skills enhance students' ability to achieve life goals and to develop them emotionally, mentally, physically and socially. There are 10 content areas for comprehensive school health education that may be addressed in class. The ten areas include: Community Health, Consumer Health, Environmental Health, Family Life Education, Growth and Development, Nutritional Health, Substance Use and Abuse, Safety and Accident Prevention, Prevention and Control of Disease and Disorders, and Personal Health—including Mental and Emotional Health.

### Physical Education (.5 credit)

Two semesters of physical education are required to meet graduation requirements. Physical Education I (fall semester) and Physical Education II (spring semester). Appropriate clothing and sneakers are required to be worn by all students. If a student is not prepared for class, he/she will not receive credit for that day. Each activity includes working on skills, knowledge of the activity and general play. Individual, dual and team sports in conjunction with lifetime activities are offered.

#### *Semester 1*

Ultimate Frisbee/Disc Golf  
Golf  
Mountain Biking  
Geocaching  
Basketball/Aerobics Dance/Fitness Activities  
Volleyball  
Bowling  
Brisket ball/Team Hand Ball/Strength Training Fitness  
will be rainy day activities

#### *Semester 2*

Badminton/Ping Pong/Weight Room Activities  
Snowshoeing  
Archery  
Golf  
Lacrosse  
Softball/Track  
Bowling  
Speedball/Team Hand Ball/Strength Training Fitness  
will be rainy day activities

### Adaptive Physical Education (1 credit) Pass/Fail

This is a modified physical education program that includes activities that work on physical skills, knowledge of activities, and general play in both individual and team activities. Students must be recommended through the IEP process or by the instructor.

## SCIENCE DEPARTMENT

### Anatomy and Physiology (1 SAHS credit / 3 potential Thomas College credits) Grades 11 & 12

- Prerequisite: Successful completion of Biology I and Chemistry I.

This course is an in-depth study of the structure and function of the human body. In addition to body systems in overview, the parts of the body are considered on the molecular, cellular, tissue, and organ level. Laboratory experience is an integral part of this course. It is designed for the serious science student who plans to pursue a career in medicine, nursing, medical or lab technology, biology, zoology, pharmacy, physical education, or physical therapy. A student must earn a C or better to earn Thomas College credit.

### Astronomy (.5 credit)

Astronomy will focus on the formation of the universe and Earth's place in space. Students will explore comets, asteroids, galaxies, stars, laws of motion, and their origins. Students will learn about space exploration, the solar system, the universe, and scientific inquiry.

### Biology Level I (1 credit)

Bio I is an introductory course designed to explore life on earth at the molecular, cellular and organism level. The course uses discussion, group work, laboratory investigations and projects to provide students with a means of developing critical thinking skills and knowledge of fundamental biological concepts. Topics will include Ecological Relationships, Cell Form and Function, DNA and Genetic Variation and Biodiversity through Evolution.

### Biology Level II-Human Biology (1 credit)

- Prerequisite: Biology Level I

This course is designed to learn about some of the body systems and how they interact to maintain homeostasis in a human being. This is a general course and not meant to replace clinical or technical courses in the health careers field. Students will investigate the function and structure of the nervous, endocrine, immune and reproductive systems and how they are related to one another. In addition, health-related issues or conditions will be explored. The course uses discussion, group work, laboratory investigations and projects to provide students a means of developing critical thinking skills and knowledge of fundamental biological concepts in human biology and related careers.

### Chemistry Level I (1 credit)

Chem I is an introductory course designed to meet specific standards based on the National Science Standards as well as the Maine Learning Results. The course outcomes will be based on the important chemistry concepts all American citizens should understand, focusing specifically on topics related to matter and energy.

### Consultant Biology Level I (1 credit)

Bio I is an introductory course designed to explore life on earth at the molecular, cellular and organism level with coursework adapted to meet the needs of individual students. The course uses a variety of instructional strategies to provide students with the skills needed to understand basic biological concepts. Topics will include Ecological Relationships, Cell Form and Function, DNA and Genetic Variation and Biodiversity through Evolution.

### Consultant Chemistry Level I (1 credit)

Chem I is an introductory lab course designed to meet specific standards in chemistry, with coursework adapted to meet the needs of individual students. The course uses a variety of instructional strategies to provide students the skills needed to understand concepts in chemistry focusing specifically on topics related to matter and energy.

### Consultant Physics Level I (1 credit)

This is a course designed for those students planning to attend a two year or certificate program at a community college or trade school. Course topics are basics of motion, Newton's Laws, momentum, work, energy, power, simple machines, sound, light, and electricity. Enrollment into this course is through the IEP process of by teacher recommendation.

### Environmental Science SC219 (1 SAHS credit / 3 potential Thomas College credits) Grades 11 & 12

- Prerequisite: Biology Level I

An elective science course designed for students interested in pursuing a career in environmental studies including forestry, ecology, warden service, environmental science, outdoor recreation, and/or wildlife biology. The course will introduce students to basic concepts in environmental and earth science such as ecology, ecosystems, energy, climate change, water and air quality, pollution, waste management and sustainability. Emphasis will be on developing data literacy and critical thinking skills through project-based learning with a focus on issues relevant to Maine. Students must be prepared to spend some time outside in all seasons. Students must earn a C or better to earn Thomas College credits.

### Forensic Science (1 credit)

A course designed to study the application of basic biological, chemical, and physical science principles and technological practices as they apply to civil and criminal law. Students will study concepts through a combination of case studies and the use of laboratory techniques. Emphasis will be placed on the scientific practices outlined in the Next Generation Science Standards, with special attention to critical thinking, problem solving and supporting conclusions with sound evidence and scientific reasoning.

### Genetics BIO110N (1 SAHS credit / 3 potential UMF credits) Grades 10-12

- Prerequisite: Biology Level 1

This course is a topic study of the structure and function of DNA, inheritance of traits and the ethics involving the discoveries and uses of genetics and genetic technologies.

### Honors Biology Level I (1 credit)

Honors Bio I is an introductory course designed for highly motivated students to prepare them for advanced level work in science. Students will use critical thinking and writing skills, discussion, group work, laboratory investigations and projects while exploring organisms and their environment, molecular biology, cell form and function, genetic variation, and biodiversity through evolution. Students are expected to demonstrate in-depth understanding and a strong work ethic. Enrollment in this class is dependent upon teacher recommendation and maintenance of an 85-grade average.

### Honors Chemistry Level I (1 credit)

Honors Chem I is an introductory course designed to prepare highly motivated students for advanced level work in science. Students will use critical thinking and writing skills, discussion, group work, laboratory investigations and projects while working to meet specific chemistry standards. Students are expected to demonstrate in-depth understanding, independent thinking, and a strong work ethic. Enrollment in this class is dependent upon teacher recommendation and maintenance of an 85-grade average.

### Honors Physics Level I (1 credit)

This is an introductory course designed for highly motivated students to prepare them for advanced level work in science. The course outcomes will be based on the important physics concepts all American citizens should understand, focusing specifically on the following topics such as motion, energy, heat, sound, electricity and magnetism, light. Emphasis is placed on learning important concepts through laboratory activities. (Prerequisite: Honors level mathematics is highly recommended, and a teacher recommendation is required.)

### Physical Geology (.5 credit)

Physical Geology is the study of Earth systems, minerals, rocks, structural geology, plate tectonics, geologic time, geological processes, and landforms. This course is designed to give a basic understanding of geology and geological techniques.

### Physics Level I (1 credit)

This is an introductory course designed to meet specific standards based on the National Science Standards as well as the Maine Learning Results. The course outcomes will be based on the important physics concepts all American citizens should understand, focusing specifically on topics such as motion, energy, heat, sound, electricity, magnetism, and light. Emphasis is placed on learning important concepts through laboratory activities, Ability to work with decimals, fractions, and algebra is required.

### Physics Level II (1 credit)

- Prerequisite: Physics Level I

This course is a continuation of Physics Level I. Topics covered will include but are not limited to heat energy's effect on gases, liquids and solids, properties of waves along with sound and light energy. In addition, electrical energy and magnetism will be explored as well as a brief introduction to astronomy.

### Meteorology (1 credit)

- Prerequisite: Biology

This course provides students with the opportunity to learn meteorological concepts in a visual, practical, and nonmathematical manner. The intent is to stimulate curiosity about weather and climate that arise in our daily lives. This course emphasizes the understanding and application of meteorological principles beginning with an introduction to origin, composition, and structure of the atmosphere. Topics such as solar energy and air temperature provide students with an understanding of the primary source that influences our weather. A look at cloud formation and precipitation allows the students to visualize how weather evolves around us on a daily basis. Global winds and circulation patterns provide students with a large scale look at how weather "moves" around the world. A detailed description of air masses, fronts, and middle-latitude cyclones incorporate previous learning to explain the primary forces that drive our weather in the United States. Weather forecasting is examined as a method for predicting how weather evolves and changes as time progresses. Severe weather topics such as thunderstorms, tornadoes, and hurricanes are researched in detail as a method for explaining how the atmosphere can turn chaotic. Special topics on air pollution, global climate, and atmospheric optics are introduced to include real-time weather and climate issues.

## SOCIAL STUDIES DEPARTMENT

### American Government Dual Enrollment (1 SAHS credit/6 potential Thomas College credits)

- **Prerequisite:** B average, previous honors, or AP level or recommendation of instructor. Due to the scope of curriculum and the rigor, daily attendance is essential to being successful in this course.
- Thomas College Credit: PS213 American National Government=3/PS214 Rights and roles of Citizens=3

The organization and functions of American government- Topics covered include: the principles of the U.S. Constitution and the Bill of Rights, civil rights and liberties, and the powers and limitations of the executive, legislative, and judicial branches of the federal government. The course also examines the various rights and political behavior of American citizens. Topics include contemporary issues on political philosophy, political parties, the media, interest group politics, and elections and voting.

### AP American Government (1 credit) Grade 12

Students will be accepted into this course based on the recommendation of the U.S. History teachers and the requirements approved by the Social Studies Department and the School Board. To remain in this course, the student must demonstrate consistent study habits, be highly self-motivated, demonstrate good writing skills and have the ability to analyze and interpret information. The curriculum is designed to give a more in-depth study of American Government. Supplemental materials and research are used frequently in addition to the text. Summer reading, a journal, and year-long portfolio are required. Students enrolled in this course will be expected to take the AP exam to determine college credit. The curriculum for the Advanced Placement test will be followed.

### AP United States History (1 credit) Grade 11

This fast-paced rigorous course will cover exploration through the 2000s. Students will be expected to complete research papers, book reports, and supplemental reading and to actively participate in classroom discussions. This course is designed to prepare students for the senior AP Government course. Students will be expected to take the AP exam. The results of the exam will determine college credit. This course has a limited enrollment and selection will be based on the recommendations from sophomore teachers.

### AP World History (1 credit) Grade 10

This is a rigorous course designed for students who enjoy a challenge. The class will study the cultural, economic, political, and social developments that have shaped the world from c. 1200 CE to the present. Students will analyze texts, visual sources, and other pieces of historical evidence as they relate to themes of world history. The curriculum for the Advanced Placement provided by the College Board will be followed and students will take the AP test in May. If students earn a passing grade of 3 on the exam, they will receive college credit.

### College American Government (1 credit) Grade 12

This course is designed to give college bound students an overall view of the structure, functions, duties, and responsibilities of the American system of government. In addition, world governmental systems, economies, and foreign policy issues are explored. A discussion of contemporary issues will be carried on throughout the year. Selected readings and periodicals are used to supplement the course. A year-long portfolio is required. Students will be required to have a three-to-four-inch binder. Topics will include unites on political philosophy, political parties, voting and citizenship, the political process (media, campaigns, election, and public opinion), the basis of democracy, federalism, forms of government, and economic systems. The course includes units on historical foundations of the Constitutional government in the United States, an in-depth study of the Constitution, civil rights and liberties, the legislative branch, the executive branch, the judicial branch, and American foreign policy.

### College Options American Government (1 credit) Grade 12

This course is designed to give students an overall view of the structure, functions, duties, and responsibilities of the American system of government. A discussion of contemporary issues will be carried on throughout the year. Extra emphasis will be given to hands-on and project-based learning. Outside reading will be done from newspapers and magazine articles. A yearlong portfolio will be required. Students will be required to have a three- or four-inch binder. Topics include units on political philosophy, political parties, voting and citizenship, the political process (media, campaigns, elections, and public opinion), the basis of democracy, federalism, forms of government, and economic systems. The course includes units on historical foundations of the Constitutional government in the United States, an in-depth study of the Constitution, civil rights and liberties, the legislative branch, the executive branch, the judicial branch, and American foreign policy.

### College Options United States History I (1 credit) Grade 11

This course covers the same material as the college program. Greater emphasis is placed, however, on skills such as map reading, graphs, pictures and social issues.

### Consultant American Government (1 credit) Grade 12

This course covers the basic American political system and foreign affairs. By using a team-teaching approach, attention is given to the individual needs and learning styles of students. Contemporary issues and the use of periodicals are used to enhance citizenship responsibilities and view world issues. Extra emphasis will be given to hands-on and project-based learning. A year-long portfolio will be required. Students will be required to have a three-inch binder.

### Consultant Geography (1 credit) Grade 9

This course covers the same curriculum as Geography except it is taught at a slower pace than the traditional program. There is emphasis placed on repetition, life skills such as map reading, and hands-on activities. This course is taught using a team-teaching approach which includes a social studies teacher and a special education teacher. The format allows for more individualized instruction and a smaller class size.

### Consultant United States History I (1 credit) Grade 11

This course will cover the same curriculum as the college program; however, greater emphasis is placed on hands-on activities, reading skills and small group projects.

### Culture and Society (.5 credit) Grade 10

Topics Covered: Lasting Contributions, Global Connections, Sports, Literature, Fashion, Music  
Unique cultures have existed from the beginning of time. What makes a culture? Why are they so different? In this course, students will study a variety of cultures to examine their makeup (sports, fashion, literature, music, etc.) and lasting contributions to society. Students will also learn about increasingly significant global connections between cultures and how this shapes the society that we live in.

### East/West Civilization (.5 credit) Grade 10

Eastern and Western civilizations is a one semester introduction to World History. This class will study the historical development of several significant civilizations that shaped the world. Students will read and analyze texts, use visual resources, and other historical evidence related to the themes of World History.

### Geography (1 credit) Grade 9

Topics will include an introduction to geography in the form of map work to familiarize the student with the major land and water features of the world. In addition, the five themes of geography will be taught and continually emphasized throughout the year. The physical and cultural geography of the Middle East, Europe, Indian Subcontinent, East Asia, sub-Saharan Africa, and Australia will be covered including emphasis on current events in each region.

### Honors Geography (1 credit) Grade 9

Students will be accepted into this course based on the requirements approved by the Social Studies department and the School Board. This course follows the geography curriculum, but more supplemental materials will be utilized in the class instruction and more research skills and projects will be stressed. The level of instruction and expectations for performance are demanding. Topics will include an introduction to geography in the form of map work to familiarize the student with the major land and water features of the world. The five themes of geography will be taught and continually emphasized throughout the year. The physical and cultural geography of the Middle East, Europe, Indian Subcontinent, East Asia, sub-Saharan Africa, and Australia will be covered including emphasis on current events in each region.

### Introduction to Education: EDU177 (.5 SAHS credit / 3 potential UMF credits) Grade 10-12

What is learning? What is teaching? What is school? These 3 critical questions will be considered as students learn how American Schooling has been shaped by historical and political trends, diversity in society and in the classroom and theories of learning. Issues in education will be explored such as race, gender, immigration, sexuality, and special education. Learners will focus on understanding community, school setting, and personal awareness as they reflect on their observations, values, and experiences. Students will gain both a philosophical awareness of education and practical tools relevant to developing a model for effective American schooling. This course is one of a series that will lead to an early college pathway in education at UMF.

### Introduction to Political Science (.5 SAHS credit / 3 potential Thomas College credits) Grades 11 & 12

An overview of the basic principles, terminology and methods used to study politics in the United States and around the world. This course also will introduce students to international politics, political thought, and the decision-making process.

### Psychology (.5 credit) Grades 11 & 12

This course reviews the history of development of psychology, careers, psychological approaches, research methods and statistics, basic types of therapies, contributors, theories of personality and learning, and brain research. Students will explore research and theory and examine its personal and professional applications.

### Revolutions (.5 credit) Grade 10

Topics Covered: Social, Economic, Political, Music

Throughout the course of civilizations, there have been incidents that have forever altered human history when ordinary people united to bring about change. In this course, students will seek to understand the causes of revolutions (social, political, economic, and even musical!), inspirations for revolutionaries, and strategies used. In the end, students will be able to compare/contrast revolutions and explain how they changed the world.



### Sports History SM228 (.5 SAHS credit / 3 potential Thomas College credits)

This course is designed to deepen the students' knowledge of the history of sports and to help them realize the physical culture of mankind, which has had a significance in history. This course will give students the background necessary to make decisions in the sports arena and to be successful in the field of sports management.

### Technology Through History (.5 credit) Grade 10

Topics Covered: Military, Architecture, Transportation, Medicine, Digital Age, Ancient Technology  
We're surrounded by inventions. Consider the clocks, appliances, and transportation that coordinate our days. Or TVs, cell phones, and social media that connect us to each other. Or how the buildings, medical advances, or how we power our world shape our lives. Where do these inventions come from? How do they work? How do they reflect - or possibly define - the values of our culture? You will be introduced to the history of technology and how societies and cultures have been shaped by various forms of technologies. Discover how technology has completely shaped and changed the course of human history and trace its innovation and impact on the course of history and today.

### United States History I (1 credit) Grade 11

U.S. History will focus on events starting with World War I. Students will continue their study of the United States through the 1920's and the Great Depression. The course is designed to prepare the prospective college student by focusing on present day problems and discussing possible solutions in light of past experiences in American History. Students will continue the study of history from World War II and move through the Korean War, the Cold War, the Civil Rights Movement, the Vietnam War and the 70's, 80's and 90's.

### Unsolved Mysteries in History (.5 credit) Grades 11, 12

This course will have students exploring unsolved mysteries throughout history. Theories and evidence of historical events such as the disappearance of Amelia Earhart, the assassination of JFK, who built Easter Island, who Jack the Ripper was, and what caused the explosion on the USS Maine that led to the Spanish-American War will all be considered. This project-based course will ask students to develop their own evidence-based theories as to how and why these events unfolded.

### War and Conflict (.5 credit) Grade 10

Topics covered: War, Genocide, Political Conflict, Crime, Social Conflict  
For thousands of years, conflicts between opposing nations and societies have had important effects on all aspects of human civilization. While the most direct and recognizable impacts of conflict is warfare, conflict often creates as well as destroys. Conflict has demanded the adoption of complex economic systems, shaped the ideology and culture of nations, promoted developments in art, literature, technology, and spread faith across the globe. This class will examine the rationale of conflict within our society and history and will explore the cultural and societal roots of wars, genocides, and other political conflicts.

## **WORLD LANGUAGE DEPARTMENT**

At all levels, students are expected to limit the use of English.

### French I (1 credit)

French I emphasizes the acquisition and comprehension of French vocabulary and eventually speaking, reading, writing, and grammar. Active participation is part of the course. This involves learning through movements, acting out skits and storytelling.

### French II (1 credit)

French II will be a continuation of the techniques used in French I, incorporating grammar and expanding vocabulary. Students will do more speaking, reading, and writing in French. The majority of the class is taught in French. Students will continue to learn through stories.

### French III (1 credit)

French III stresses the development of the students' ability to use vocabulary, idioms and grammatical structures to communicate a sequence of ideas. Written and oral skills are further developed using stories, readings, compositions, and pictures to provoke communication. Short stories and reading are introduced. Varied conversational topics are introduced to promote active discussions in French. Students will continue to learn through stories. Students are expected to try to use French as much as possible.

### French IV (1 credit)

French IV will continue the techniques used in French III. Students will discuss and write about readings, stories, pictures, and other authentic French materials. Emphasis will be placed on speaking, creative writing and working with French materials. Students will continue to learn through stories. Students are expected to use French in class.

### Spanish I (1 credit)

Spanish I will be taught mainly in Spanish, emphasizing comprehension through movement. Participation in class is expected. Emphasis will be on communication first listening skills and then speaking. Storytelling techniques will be employed as well. Grammar will be taught through the stories.

### Spanish II (1 credit)

Spanish II will be a continuation of the techniques used in Spanish I, incorporating essential grammar. Students will be expected to do more reading, writing, and speaking in the Spanish language. Students will continue to learn through storytelling.

### Spanish III (1 credit)

Spanish III is for students who have completed two years of high school Spanish in good standing. Equal emphasis is placed on reading, writing, and speaking. An introduction to Spanish literature will be included.

### Spanish IV (1 credit)

Spanish IV is for students who have completed three years of high school Spanish in good standing. It consists of a fast-paced review of Spanish grammar, pronunciation, and vocabulary, with an emphasis on oral communication. Following this initial review, the classes will study advanced grammar and Spanish culture through the reading of Spanish literature. Textbook: *Galería de Arte y Vida*

## SOMERSET CAREER AND TECHNICAL CENTER

Courses at the Center are available to juniors, seniors, and some eligible sophomores from all Somerset County school districts. Students must complete an application for a program and attend an interview with the program instructor.

### App Development Using Android Studio (1 credit)

- Prerequisite: Computer Science

This course offers an introduction to using JAVA and XML to develop mobile apps. The structure of this course is project-based, hands-on learning. Students will create apps using Android Studio.

### Automotive Technology I & II (3 credits each year)

This Automotive Service Excellence (ASE) certified program is designed to teach students how to repair and service gasoline and diesel-powered cars and light duty trucks using the latest technology. Students will gain experience in the areas of engine and oiling & cooling, breaks, and front-end alignment. Second year students will focus on the electrical aspects of the automobile such as the starting and charging system, computerized engine control, anti-lock brakes and air bag systems. Other systems include fuel delivery, ignition, suspension, and drive train. Seniors can become ASE certified and obtain a Maine State Inspection License.

### Calculus Based Physics (1 credit)

- Prerequisite: Students should be enrolled in or have already taken calculus.

Build on your existing physics knowledge and problem-solving skills in the following core areas of physics: classical mechanics (motion); vibrations and waves; and thermodynamics(heat). This course is recommended for students considering engineering or any other advanced science.

### Career Explorations A (.5 credit) / Career Explorations B (.5 credit)

Career explorations is an opportunity for students to learn about different SCTC programs and career pathways. Students can take A, B, or both. The A class informs students about automotive technology and welding. The B class informs students about electrical construction and pre-engineering.

### CDL-Commercial Truck Driving (3 credits)

Our new commercial truck driving program qualifies students to test for the state of Maine SCD Class B commercial driver's permit and license. Instruction is based on state laws, industry regulations, and equipment inspection required for licensing. According to Federal Motor Carrier Laws, students in the commercial truck driving program must hold a current Class C automobile driver's license. Students must be 16 years of age to enter the program and must have a clean driving record.

### Cooperative Education I & II (3 credits each year)

The Cooperative Education program provides an opportunity for students to participate in an occupational training program for which facilities and courses are not otherwise available at SCTC. This program is designed for the student to spend part of the day at their sending school and part of the day "on the job". Students attend class with their instructor where job seeking, workplace skills, and professional finance are taught. An arrangement between the school, employer, student, and parents will be created. The goal is to find training stations that will meet varying needs and interests and provide appropriate employment for the student.

### Computer Science (1 credit)

This course offers an introduction to a select number of computer science topics including: developing an understanding of computer hardware, exploring cybersecurity, learning to code in Python, investigating machine learning and artificial intelligence, creating 3D digital graphics, exploring 3D modeling, and designing video games using the Unreal Engine.

### Culinary I & II (3 credits each year)

The culinary arts program prepares students for a future in the food service industry. Students begin by learning entry-level culinary skills and techniques for cooking and baking. Students in this program focus on sanitization, personal hygiene, commercial kitchen tools, equipment, and safety. Menu planning, standardizing, and converting recipes, table service, nutrition, cost, portion control, purchasing and receiving food orders, and researching industry careers are also covered.

### Digital Graphic Arts I & II (3 credits each year)

Students in Digital Graphics program learn design concepts related to graphic design, digital photography, and marketing. Students use professional software and equipment to design and produce a variety of projects including promoting displays, brochures, logos, signage, note pads, decals, and custom clothing. In the second year, students operate an in-house print shop, "DG Print Shop & Design Center". By aligning "live jobs" for a variety of clients, students are not only able to apply and develop the skills they have acquired in the previous year of class but gain skills in professionalism through real world experiences.

### Early Childhood Education I & II (3 credits each year)

The Early Childhood Education program is a two-year course for students who are interested in a career working with children. Students learn about child development, psychology, curriculum design and classroom management. The course included 10 college credits, CPR/First Aid, State of Maine Early Childhood Assistant certification, and enrollment in the Maine Roads to Qualify professional registry. Students assist in various settings including infant/toddler classrooms, childcare facilities, Pre-K8 elementary, middle, and secondary teaching, counseling, pediatric nursing, speech and occupational therapy and special education positions.

### Electrical Construction I & II (3 credits each year)

Electrical Construction I & II (3 credits each year) This course provides students with the knowledge and background that prepares them for a career in the electrical field. Students learn electrical safety, tools of the trade, wiring, conduit, parts, and assembly. In the first year of this two-year program, students learn the basics of the National Electrical field and the theory of electricity. Students work in the shop applying the six common wiring methods using industry required tools. During the second year, students continue to advance their studies of the National Electrical Code as well as learning to read blueprints. The students work outside of the shop on practical "live work" projects including service entry equipment, motor starters, electric heat, solar energy, and programmable logic controllers (PLC's). Seniors can receive a certification through the National Association of Home Builders

### EMT (3 credits)

The Emergency Medical Technician Program (EMT) is an introduction to patient assessment skills. Upon successful completion of the course, students will earn 5 credits from KVCC for EMS 111 and be prepared to sit for the EMS basic certification exam. Content includes management of airway, bleeding control and treatment for shock, soft tissue injuries and fracture care, principles of spinal immobilization, fundamentals of triage and transportation of the sick and injured, treatment modalities for range of medical, obstetrical, pediatric, environmental, and behavioral emergencies.

### Firefighting (3 credits)

Firefighting I is a certification program that prepares students for a career in fire service. Students who successfully complete the class will be eligible to sit for the Maine Firefighting I exam. There may also be an option to continue to complete Firefighting II.

### Game Design Using Unreal Engine (1 credit)

- **Prerequisite:** Computer Science

This course offers an introduction to using programming concepts and the Unreal Engine to develop video games. The structure of this course is project-based, hands-on learning. Students will learn the basics of game design.

### Health Care Careers (3 credits)

Students in this program gain knowledge in multiple health care careers through job shadows, community service projects, and clinical experiences. Students learn CPR, first aid, basic anatomy & physiology, and study the concepts of health promotion and disease prevention. SCTS' CNA program uses the State of Maine Nursing Assistant Curriculum which is approved by the Maine State Board of Nursing. Students also can earn up to three college credits from KVCC with completion of the program. Students must be 16 years old.

### Outdoor Leadership & Skills I & II (3 credits each year)

This two-year course is designed to prepare students to work in the natural resources and outdoor recreation industries. Skills learned in this program can be transferred to virtually any career you choose. You will acquire practical skills including leadership, communication, problem solving, decision making, rescue, canoeing, first aid/CPR/AED, hunter, archery, crossbow safety, ATV, snowmobile, and boating safety, basic and rescue. Industry recognized certificates can be earned in CPR/First Aid, and Registered Maine Guide. College credit in the 2nd year from the University of Maine can be earned in Outdoor Adventure Activities and Wilderness First Aid.

### Pre-Engineering – AP Computer Science (1 credit) 80 minutes

Learn what it means to "program" and focus on solving problems using code. Computer Science Principles introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. Students will have the option to take the AP Computer Science Principles exam at the end of the class for potential college credit.

### Pre-Engineering – Robotics (1 credit) 80 minutes

In this course students will use robotics to explore the fundamentals of engineering and electronics. Topics of discussion will include engineering, physics, electronics, mechanics, and computer programming. Laboratory experiments will require students to build robots and demonstrate these principles. Experiments include: - design and build a simple hydraulic robot, build and program a robot that uses sensors to navigate its environment, build a VEX robot to compete in multiple classroom challenges, build an underwater remote-controlled vehicle. Open to sophomores, juniors, and seniors.

### Pre-Engineering – Structures (1 credit) 80 minutes

This course is an introduction to structural design concepts, structural performance, materials, loads, factors of safety and aesthetics. Discussions will include how certain structures function and lessons learned from structural failures. Students will use design software to create and test their designs prior to production. Projects in this course include the design and build of cardboard boats for either one or two people, various trusses, balsa wood bridges, and a concrete canoe. Prerequisites: Successful completion of Algebra 1 and Geometry.

### Pre-Engineering - 3D Engineering Design (1 credit) 80 minutes

See designs come to life using the 3D modeling software *Solidworks* and Ultimaker 3D printers. Computer-aided design systems are used by designers and manufacturers in virtually every industry to create engineering design solutions. Examples of class projects include rubber band race cars, model rockets, redesigning parts for a drone and building prosthetic hands.

### Residential Construction I & II (3 credits each year)

The Residential Construction Program is a two-year program that concentrates on the residential carpentry trade. Students learn to work cooperatively in groups to complete projects. They also learn organizational and leadership skills that help them to be successful in the workplace. Throughout both years of the program, there is a strong focus on employability skills. Students receive instruction in the following: hand & power tools, building materials and fasteners, floor & wall framing, roof framing, construction drawings, energy efficiency, basic stair construction, wall systems, career opportunities, and practical application of skills.

### Technical Writing ENG 108 (.5 SAHS credit/3 potential KVCC credits)

This course challenges students to solve problems using words and images. The course stresses both the writing process and the writing situation consisting of purpose, audience, and context. By learning to assess user needs, students develop critical thinking skills and use these skills to guide the writing process in a variety of communication forms. Students learn to gather and select information and to choose organizing and formatting strategies that result in clear written documents. Class activities include writing in a computerized writing lab; therefore, keyboarding skills are required.

### Welding Systems I & II (3 credits)

Welding (3 credits each year) The SCTC Welding Program is held at 2 locations: The Cianbro Training Facility in Pittsfield as well as at Madison Area Memorial High School in Madison. Students learn the importance of workplace safety to become certified as a welder. The National Center of Construction Education and Research (NCCER) provides the curriculum students will follow as they learn different types of welding techniques and positions. Students progress at their own pace which allows everyone a chance to become proficient before progressing. The Welding Program can be either a 1- or 2-year program depending on a student's interest and ambition. Students can earn the OSHA 10 Safety Certification, Cianbro Welding Certifications and NCCER credentials.