ST. MARY'S COUNTY PUBLIC SCHOOLS

2011-2012 HIGH SCHOOL
PROGRAM OF STUDIES

Michael J. Martirano, Ed.D.
Superintendent of Schools

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Note: For more information, please visit our website at http://www.smcps.org

Please direct inquiries about this document to:
Department of Teaching, Learning, and Professional Development
23160 Moakley Street
Leonardtown, MD 20650
301-475-5511, Ext. 133

The St. Mary's County Public School System does not discriminate on the basis of race, color, sex, age, marital status or sexual orientation, national origin, religion or disability in matters affecting employment or in providing access to programs. Questions pertaining to this policy may be addressed to the Director of Human Resources at:

St. Mary's County Public Schools • 23160 Moakley Street • P.O. Box 641 • Leonardtown, MD 20650 • 301-475-5511, Ext. 169.

ST. MARY'S COUNTY PUBLIC SCHOOLS

2011-2012 HIGH SCHOOL
PROGRAM OF STUDIES

CHARTING A COURSE TO EXCELLENCE

St. Mary's County Public Schools

"Work Hard and Be Nice"

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St. Mary's County Public Schools

DR. MICHAEL J. MARTIRANO
Superintendent of Schools

Central Administration
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Leonardtown, Maryland 20650
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Dear Students and Parent(s)/Guardian(s):

St. Mary's County Public Schools seeks to educate all students with rigor, relevance, respect, and positive relationships. To achieve this mission, schools have adopted a rigorous curriculum that promotes authentic and lifelong learning. Graduates of St. Mary's County Public Schools are expected to be:

- Resourceful, lifelong learners who appreciate and seek knowledge, apply learning to new situations, and pursue personal goals;
- Fluent communicators who can read, write, and integrate information effectively and apply technology appropriately;
- Responsible, productive citizens who contribute to the community as collaborative workers, and as active citizens who value and respect diversity, and;
- Goal-oriented and contributing citizens who are prepared to make career decisions to enter the workforce and/or pursue higher education.

The High School Program of Studies is designed to assist our graduates to meet these expectations. Courses are designed to challenge all students, fulfill the high school graduation requirements, prepare students for the High School Assessments, and ensure students are prepared for post-secondary programs.

Students and their parent(s)/guardian(s) are encouraged to review this Program of Studies and the school registration material carefully with teachers, school counselors, and administrators. It is very important that students select the most challenging and rigorous program to meet their post-secondary and career goals.

Sincerely,

Michael J. Martirano, Ed.D.
Superintendent of Schools

ST. MARY'S COUNTY HIGH SCHOOL
GRADUATION REQUIREMENTS

Effective beginning with students entering grade 9 in the 2011-2012 school year. Students entering grades 10-12 must meet the graduation requirements established for their respective class.

To receive a High School Diploma in St. Mary's County Public Schools, students must select and complete a program pathway. Students must select a University System of Maryland Entrance Requirements Sequence or a Career and Technology Education Completer Sequence. All students are highly encouraged to take advantage of all SMCPS offers and to be a Dual Completer, meeting the requirements of both.

University System of Maryland Entrance Sequence

- Complete a minimum of 21 credits, including:

English	4
Mathematics	4
Social Studies	3
Science	3
World Language	2
Physical Education/Health	1
Technology Education	1
Fine Arts	1
Electives	2
Credit Total	**21**

- Take a Mathematics course each year of high school
- Complete the High School Assessments, as applicable
- Complete the student service-learning component
- Compile a career portfolio

Dual Completer Sequence

All students are highly encouraged to take advantage of all SMCPS offers and to be a Dual Completer.

- Meet all University System of Maryland Entrance Requirements
- Complete 4 credits of an approved Career and Technology Education completer sequence

Career and Technology Education Sequence

- Complete a minimum of 21 credits, including:

English	4
Mathematics	3
Social Studies	3
Science	3
CTE Sequence	4
Physical Education/Health	1
Technology Education	1
Fine Arts	1
Elective	1
Credit Total	**21**

- Take a Mathematics course each year of high school
- Complete the High School Assessments, as applicable
- Complete the student service-learning component
- Compile a career portfolio

GRADUATION REQUIREMENTS

Students are encouraged to present more than the minimum units of credit for graduation. Most students will graduate with more than 26 units of credit. For students enrolled in the seven-period day schedule, units of credit are earned in 0.5 unit increments for all courses except certain technical courses, intervention courses, and advanced placement courses. Units of credit for certain technical courses are earned in 3/4 unit increments. A unit of credit denotes both semesters of the course. For example, if a student receives an F in United States History for the first semester and a C for the second semester, the student will earn 0.5 unit of credit. The F and C are not averaged. The semester failed for a required course must be repeated.

The school system reserves the right to cancel or combine any class due to insufficient enrollment. Courses are open to all students without regard to race, sex, age, or disability. Enrollment at the Dr. James A. Forrest Career and Technology Center is limited to space available.

PROGRAM COMPLETER REQUIREMENTS FOR A HIGH SCHOOL DIPLOMA

In addition to the completion of the core credit requirements for a High School Diploma, a student must complete one or more of the following program sequences:

1. **University System of Maryland Entrance Sequence.** A completer of the University System of Maryland entrance sequence must complete a core program of four credits of English; three credits of social studies; three credits of laboratory science, including Biology; four credits of mathematics, including Algebra 1, Geometry, and Algebra 2. Students who complete Algebra 2 prior to their final year must complete the fourth year math requirement with non-trivial Algebra. Student must also complete two credits in a Language other than English or complete 2 credits in Advanced Technology. For further details regarding the University System of Maryland entrance requirements and other college/university opportunities, contact your school counseling office.

EXAMPLE OF UNIVERSITY SYSTEM OF MARYLAND 4 YEAR EDUCATIONAL PLAN

	Grade 9	*Grade 10*	*Grade 11*	*Grade 12*
English	English 9 (CM)	English 10 (CM)	English 11 (CM)	English 12 (CM)
Math	Algebra 1 (CM)	Geometry (CM)	Algebra 2 (CM)	Finite Math (CSM) or high-level Math course
Science	Concept Based Physics (CM)	Biology (CM)	Chemistry (CM)	Elective
Social Studies	United States History (CM)	Government (CM)	World History (CM)	Elective
World Language	World Language	World Language	World Language (recommended but not required)	Elective
Other	Foundations of Technology	Elective	Elective	Elective
Other	PE/Health	Fine Arts	Elective	Elective

2. Career and Technology Education Program Completer Sequence. A completer of the Career and Technology Education program sequence must complete at least four additional credits in a career specialization beyond the required core credits. Within the five career clusters (**business management and finance; communication, media, and arts; consumer and human services; engineering, sciences, and technology;** and **life science and environmental studies**), the student will select one program in which to complete four or more credits. Students completing a two-year program at the Dr. James A. Forrest Career and Technology Center earn a total of five credits in their career specialization. Students who complete the Career and Technology Education program sequence may also meet University System of Maryland entrance requirements and/or qualify to enter a community college, technical college, or other approved post-secondary training program. For further details regarding Career and Technology Education program opportunities, contact your school's counseling office.

EXAMPLE OF CAREER AND TECHNOLOGY EDUCATION 4 YEAR EDUCATIONAL PLAN

	Grade 9	*Grade 10*	*Grade 11*	*Grade 12*
English	English 9	English 10	English 11	English 12
Math	Algebra 1	Geometry	College Prep Algebra	Algebra 2
Science	Exploration in Science	Biology	Environmental Science	Elective
Social Studies	United States History	Government	World History	Elective
CTE	Foundations of Technology	CTE sequenced course	CTE sequenced course	CTE sequenced course
Other	Crafts/Visual Arts	CTE sequenced course	Elective	Elective
Other	PE/Health	Elective	Elective	Elective

3. **Dual Completer Sequence.** A dual completer will meet all the requirements of the University System of Maryland Entrance Requirements as well as four sequenced credits in an approved Career and Technology Education Completer Sequence.

EXAMPLE OF DUAL COMPLETER FOUR YEAR EDUCATIONAL PLAN

	Grade 9	*Grade 10*	*Grade 11*	*Grade 12*
English	English 9 (CM)	English 10 (CM)	English 11 (CM)	English 12 (CM)
Math	Algebra 1 (CM)	Geometry (CM)	Algebra 2 (CM)	Finite Math (CSM) or high-level Math course
Science	Concept Based Physics (CM)	Biology (CM)	Chemistry (CM)	Elective
Social Studies	United States History (CM)	Government (CM)	World History (CM)	Elective
World Language	World Language	World Language	World Language (recommended but not required)	Elective
Other	Foundations of Technology	CTE sequenced course	CTE sequenced course	CTE sequenced course
Other	PE/Health	CTE sequenced course	Fine Arts	Elective

PORTFOLIO REQUIREMENT FOR A HIGH SCHOOL DIPLOMA

Students must complete an electronic career portfolio which consists of a series of career exploration activities joined with educational course work for the purpose of post-secondary planning. The career portfolio is begun in grade 9 and culminates in an end product that demonstrates a student's knowledge, competencies, and interests. Satisfactory completion of the career portfolio includes evidence of an application letter, academic course work, resume, and student-generated products.

STUDENT SERVICE-LEARNING REQUIREMENTS FOR A HIGH SCHOOL DIPLOMA

Students must complete a program in student service-learning developed by the St. Mary's County Public Schools, including service preparation, action, and reflection components. Students enrolled in St. Mary's County Public Schools meet this requirement through service-learning activities conducted in middle school and through the satisfactory completion of specific courses in high school. Students not completing these courses in the St. Mary's County Public Schools must have met this requirement through programs in other school systems or through the completion of Independent Study Student Service-Learning or School Student Service-Learning.

HIGH SCHOOL ASSESSMENTS

Students entering grade 9 beginning in the fall of 2011 are required to pass the Maryland High School Assessment for English (Grade 10), Algebra/Data Analysis, and Biology. Scores will be recorded on students' high school

transcripts as part of the high school graduation requirement. Students may also meet this requirement by earning a minimum combined score or through the successful completion of the Bridge Plan for Academic Validation.

GRADE 12 ENROLLMENT

First time students in grade 12 must enroll in four credit-bearing courses (or its equivalent) to include a Mathematics and English credit. Waivers for full time grade 12 attendance will only be granted when the student can present proof of concurrent enrollment in college or a work-based experience.

CERTIFICATE OF MERIT
REQUIREMENTS

1. **Credit Requirements:**
   Students **beginning** grade 9 in the 2011-2012 school year must complete the specified credits as part of the 21 credit requirement to receive a Certificate of Merit:

Subjects	*Units of Credits/Courses*
English	4
Social Studies	3 (United States History, Government, World History)
Mathematics	4 (Beginning with Algebra 1 or beyond)
Science	3 (Biology)
Fine Arts (Visual Arts, Music, Theatre)	1
PE/ Health	1
Technology Education	1
World Languages (other than English, completing through Level 3 or above) or Advanced Techology Education	2

2. **Cumulative Grade Point Average Requirement:**
   Students must obtain at least a 3.0 cumulative grade point average on a 4.0 scale.

3. **Advanced Course Requirements:**
   Students must complete at least 12 credits of their high school program in advanced courses at the Certificate of Merit, advanced placement, or honors level.

Special Note Regarding the World Language Requirement for the High School Certificate of Merit:

Students must successfully complete through Level 3 of a world language in order to meet the Certificate of Merit world languages requirement. Level 1 credit may be earned in grade 8 with a passing grade in a world language. However, the grade from middle school does not factor into the grade point average (GPA), quality points, or the class rank.

CERTIFICATE OF MERIT
COURSES

CAREER AND TECHNOLOGY EDUCATION
- Academy of Health Professions 2 (CM)
- Advanced Microsoft Office Specialist Training (CM)
- Automotive Refinishing and Repair Technology 3 (CM)
- Automotive Technology 3 (CM)
- Aviation Technology 3 (CM)
- Business Administration 1 (CM)
- Business Administration 2 (CM)
- Carpentry 2 (CM)
- Child Development 2 (CM)
- Computer Aided Drafting and Design 2 (CADD) (CM)
- Computer Networking 2 (CM)
- Computer Programming 1 (CM)
- Computer Programming 2 (CM)
- AP Computer Science A (CM)
- Computer Website Development 1 (CM)
- Computer Website Development 2 (CM)
- Criminal Justice 2 (CM)
- Culinary Arts 2 (CM)
- Dental Assisting 2 (CM)
- Diesel Technology 3 (CM)
- Engineering 2 (CM)
- Food and Nutrition 2 (CM)
- Graphic Communications 2 (CM)
- Horticulture 2 (CM)
- Hospitality and Tourism 2 (CM)
- Interactive Web Media (CM)
- Natural Resource Management 2 (CM)
- Office Systems and Project Management Training (CM)
- Personal LIving (CM)
- Pre-Engineering 1 (CM)
- Pre-Engineering 2 (CM)
- Principles of Accounting 2 (CM)
- Production Engineering 2 (CM)
- Sheet Metal 2 (CM)
- TV/Video Production 2 (CM)
- Web Essentials (CM)
- Welding 2 (CM)

ENGLISH
- English 9 (CM)
- English 9 (CM) (H)
- English 10 (CM)
- English 10 (CM) (H)
- English 11 (CM)
- AP English 11 Language and Composition (CM)
- English 12 (CM)
- AP English 12 Literature and Composition (CM)

FINE ARTS
- AP Art History (CM)
- Band 2 (Advanced) (CM)
- Chamber Orchestra (CM)
- Chamber Singers (Advanced) (CM)
- Chorus 2 (CM)
- Jazz Band (CM)
- AP Music Theory (CM)
- AP Studio Art - Drawing Portfolio (CM)
- AP Studio Art - Three-Dimensional Design Portfolio (CM)
- AP Studio Art - Two-Dimensional Design Portfolio (CM)
- Theatre Arts 3 (CM)
- Theatre Arts 4 (CM)
- Visual Arts 3 (CM)
- Visual Arts 4 (CM)

MATHEMATICS
- Algebra 1 (CM)
- Algebra 2 (CM)
- Algebra 2 (CM) (H)
- Algebra 3 (CM)
- Calculus (CM)
- AP Calculus AB (CM)
- AP Calculus BC (CM)
- College Preparatory Algebra (CM)
- Data Analysis Plus (CM)
- Engineering Design and Analysis (CM)
- Finite Mathematics (CM)
- Geometry (CM)
- Geometry (CM) (H)
- Intermediate Algebra (CM)
- Precalculus (CM)
- Precalculus (CM) (H)
- AP Statistics (CM)

SCIENCE
- Astronomy (CM)
- Biology 1 (CM)
- Biology 1 (CM) (H)
- Biology 2 (CM)
- AP Biology (CM)
- Chemistry 1 (CM)
- Chemistry 1 (CM) (H)
- Chemistry 2 (CM)
- AP Chemistry (CM)
- Concept-Based Physics (CM)
- Environmental Science (CM)
- AP Environmental Science (CM)
- Geology (CM)
- Introduction to Human Anatomy and Physiology (CM)
- Natural Resources Management 2 (CM)
- Physics 1 (CM)
- AP Physics B (CM)
- AP Physics C (CM)

SOCIAL STUDIES
- Contemporary Issues (CM)
- AP Economics (CM)
- Global Diplomacy 10 (CM)
- Global Diplomacy 11 (CM)
- Global Diplomacy 12 (CM)
- Global Diplomacy (CM) (H)
- Government (CM)
- AP Psychology (CM)
- AP United States Government and Politics (CM)
- United States History (CM)
- AP United States History (CM)
- World History (CM)
- AP World History (CM)

WORLD LANGUAGES
- American Sign Language 3 (CM)
- Chinese 3 and 4 (CM)
- French 3 and 4 (CM)
- AP French Language (CM)
- German 3 and 4 (CM)
- Latin 3 and 4 (CM)
- AP Latin Literature (CM)
- Spanish 3 and 4 (CM)
- AP Spanish Language (CM)

ACADEMY OF FINANCE
- Academy of Finance Internship (CM)
- Business in Global Economy/Business Ethics (CM)
- Financial Mathematics (CM)
- Financial Planning/Financial Services (CM)
- Principles of Accounting 1/Managerial Accounting (CM)
- Principles of Finance/Applied Finance (CM)

GLOBAL AND INTERNATIONAL STUDIES
- English 9 GIS (CM) (H)
- English 10 GIS (CM) (H)
- Global and International Studies 1 (CM) (H)
- Global and International Studies 2 (CM) (H)
- Global and International Studies 3 (CM) (H)
- Global and International Studies 4 (CM) (H)
- AP United States/Comparative Government and Politics (CM)

SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS ACADEMY
- STEM Algebra 2 (CM) (H)
- STEM Biology (CM) (H)
- STEM Chemistry (CM) (H)
- STEM Engineering (CM) (H)
- STEM Internship (CM) (H)
- STEM Physics (CM) (H)
- STEM Research (CM) (H)

ADVANCED PLACEMENT COURSES

All students should have the opportunity to pursue more challenging academic opportunities. The advanced placement courses are designed to provide the highly able student with more complex and rigorous academic content, comparable to the demands of college-level course work. The following advanced placement courses are offered to students.

- AP Computer Science A
- AP English 11 - Language and Composition
- AP English 12 - Literature and Composition
- AP Art History
- AP Music Theory
- AP Studio Art - Drawing Portfolio
- AP Studio Art - Two-Dimensional Design Portfolio
- AP Studio Art - Three-Dimensional Design Portfolio
- AP Calculus AB
- AP Calculus BC
- AP Statistics
- AP Biology
- AP Chemistry
- AP Environmental Science
- AP Physics B
- AP Physics C
- AP Economics
- AP Psychology
- AP United States Government and Politics
- AP United States History
- AP World History
- AP French Language
- AP Spanish Language
- AP Latin Literature
- AP United States Government/Comparative Government and Politics

The program also provides the opportunity to earn college credit or its equivalent through the advanced placement testing program. **Although not all colleges and universities grant credit for qualifying grades on advanced placement examinations,** over 400 institutions do grant credit.

Since there are much greater demands placed on those students who enroll in advanced placement courses, it is appropriate to establish a grading system that is commensurate with the nature of effort required. Therefore, advanced placement grades will be weighted according to A = 5, B = 4, C = 3, D = 1, and F = 0.

MARYLAND HIGH SCHOOL CERTIFICATE

The Maryland High School Certificate is awarded only to a student with disabilities who cannot meet the requirements for a diploma but who can meet one of the following standards:

1. The student is enrolled in an education program for at least four years beyond grade 8 or its age equivalent; and is determined by the Individualized Education Program Team, with the agreement of the parent(s)/guardian(s) of the student with disabilities, to have developed appropriate skills for the individual to enter the world of work, act responsibly as a citizen, and enjoy a fulfilling life. World of work shall include but not be limited to gainful employment, work activity centers, sheltered workshops, and supported employment.
2. The student has been enrolled in an education program for four years beyond grade 8, or its age equivalent, and has reached age 21.
3. The student has taken the Alt-MSA in the equivalent of grade 10.

THE ACADEMIES

Science Technology Engineering Mathematics Academy

St. Mary's County Public Schools

Fulfilling the Promise in Every Child

LEONARDTOWN HIGH SCHOOL ACADEMY OF Global and International Studies

Academy of FINANCE

Fairlead Academy

Guiding students to success

ACADEMY OF FINANCE

The Academy of Finance (AOF) is offered at Chopticon High School. The Academy offers unique courses in financial services to give students extraordinary knowledge and skills, as well as career exploration in numerous financial pathways. The curriculum includes dedicated classes founded upon the application of content, integrated technologies, and extra curricular programs. Admission to the program is through an application process based on students' past academic performance and desire to pursue financial services related careers.

EXAMPLE OF ACADEMY OF FINANCE FOUR YEAR EDUCATIONAL PLAN

	Grade 9	*Grade 10*	*Grade 11*	*Grade 12*
English	English 9 (CM) (Honors)	English 10 (CM) (Honors)	English 11 (CM) or AP English Language	English 12 (CM) or AP English Literature
Math	Geometry (Honors)	Algebra 2 (Honors)	Pre-Calculus (CM)	Financial Mathematics
Science	Concept Based Physics (CM)	Biology (CM)	Chemisty (CM)	AP or (CM) Science
Social Studies	U.S. History (CM)	Government (CM)	World History (CM)	AP Social Studies or Global Diplomacy (CM)
World Language	World Language	World Language	World Language	Financial Planning/FInancial Services (CM)
AOF	Foundations of Technology	Computer Applications in Financial and Data Management (CM)	Principles of Accounting 1/ Managerial Accounting (CM)	AOF FInance Internship
AOF	PE/Health	Principles of Finance/Applied Finance (CM)	Fine Arts	Business in Global Economy/ Business Ethics (CM)

FOUNDATIONS OF TECHNOLOGY ACADEMY OF FINANCE – 171240

This course seeks to develop technological literacy through problem solving activities that challenge students to apply mathematics, and science concepts to real-world engineering problems. Students will work independently and collaboratively as part of an engineering team. The focus on all activities will be a better understanding of the nine core technologies, (i.e., mechanical, electrical, electronic, structural, fluid, optical, thermal, biotechnical, material). A wide variety of technical craft, and engineering careers will be explored. This course satisfies the technology education credit required for graduation.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-10
PREREQUISITE: Admission to Academy of Finance or approval of the instructor required.

PRINCIPLES OF FINANCE/APPLIED FINANCE (CM) – 170440

This year-long course introduces students to the financial world. Students develop financial literacy as they learn about the function of finance in society. Students study income and wealth, examine financial institutions, and study key investment-related terms and concepts. Students also research how innovations have changed the financial services field. Finally, students explore careers that exist in finance today. During the second semester, students study applied finance. The applied finance content delves into the financial concepts introduced in the first semester. Students learn to identify the legal forms of business organization and continue to develop an understanding of profit. Students learn about various financial analysis strategies and the methods by which businesses raise capital. Students also have the chance to explore, in depth, topics of high interest in the field of finance, as well as the type of careers that exist in finance today.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 10
PREREQUISITE: Admission to Academy of Finance or approval of the instructor required.

PRINCIPLES OF ACCOUNTING 1/MANAGERIAL ACCOUNTING (CM) – 170470

This year-long course provides students with an understanding of the accounting process and how it facilitates decision making by providing data and information to internal and external stakeholders. Students learn that accounting is an integral part of all business activities. Students learn how to apply technology to accounting by creating formulas and

inputting data into spreadsheets. Students also examine career opportunities and the professional certificates and designations earned by individuals in the accounting profession. During the second semester students study managerial accounting. Students are introduced to the fundamentals of management accounting, including manufacturing and cost accounting, budgeting, accounting for managerial decision making, and financial statement analysis. Students learn how to use accounting information for internal decision making, planning and control. Regardless of the career path they choose, this course gives students the financial acumen necessary to make informed personal and business decisions.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11
PREREQUISITE: Admission to Academy of Finance or approval of the instructor required.

ACADEMY OF FINANCE INTERNSHIP (CM) – 170480

Students bridge the gap between the classroom and the workforce through a first-hand internship experience in the financial world. Students will prepare resumes and be interviewed for positions in banks, brokerage houses, accounting firms, and other business opportunities. The internship occurs between the summer of grades 11 and 12.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 12

BUSINESS IN GLOBAL ECONOMY/BUSINESS ETHICS (CM) – 170450

This year-long course introduces students to the key concepts of economics as they pertain to business. The course discusses the American economy and the factors that influence the success of businesses and products. It describes forms of business ownership, discusses the relationship of labor and business, and provides a broad overview of the global economy. Students also examine careers in business, both as employees and as business owners. During the second semester students study ethics in business. The ethics in business content focuses on the significance of ethics to stakeholders, examines who bears responsibility of monitoring ethics, and explores ethical situations common in organizations. Students examine how ethics affect various business disciplines and consider the impact of organizational culture. Students also explore ethics as social responsibility, the evolution of ethics in international business, and how the free market and ethics can coexist.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: Admission to Academy of Finance or approval of the instructor required.

FINANCIAL MATHEMATICS (CM) – 032560

This year-long course will present students with application-based practice problems that connect them to real-world experiences. For example, students will learn the time value of money, how to evaluate the best cell phone contract, how to build a business plan by knowing costs, profits, breakeven points, and more. Students will understand finance in mathematical terms and gain confidence in their ability to manage money.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: Algebra 2 and Admission to Academy of Finance or approval of the instructor required.

FINANCIAL PLANNING/FINANCIAL SERVICES (CM) – 170460

This year-long course provides students with an overview of the job of a financial planner. Students learn to consider how all aspects of financial planning might affect a potential client and about the importance of financial planning to help people reach their life goals. The course includes lessons on saving, borrowing, credit insurance, and investments. Students also examine careers in financial planning. During the second semester students study financial services. Students receive an overview of banks and other financial service companies. Students are introduced to the origins of money and banking and examine the early history of banking in the United States. Students study the financial services industry and the types of companies within the industry. Students learn about the services offered by such companies and analyze the ways in which these companies earn profits. Finally, students examine careers in financial services.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: Admission to Academy of Finance or approval of the instructor required.

ACADEMY OF GLOBAL AND INTERNATIONAL STUDIES

Global and International Studies is offered at Leonardtown High School. The program is designed to provide a rigorous, engaging educational pathway focused on an advanced study of world cultures, contemporary issues, history, and world languages. Additional credits for high school graduation, advanced placement courses, an internship, and senior capstone project are part of the program requirements. Admission to the program is through an application process based on students past academic performance, dedication to advanced learning, and desire to pursue international related careers.

EXAMPLE OF GLOBAL AND INTERNATIONAL STUDIES FOUR YEAR EDUCATIONAL PLAN

	Grade 9	*Grade 10*	*Grade 11*	*Grade 12*
English	English 9 GIS (Honors)	English 10 GIS (Honors)	AP English Language	AP English Literature
Math	Geometry (Honors) or Algebra 2 (Honors)	Algebra 2 (CM) or Pre-Calculus	Pre-Calculus (CM) or Calculus (AP or CM)	Calculus or high-level Math course
Science	Biology (Honors)	Chemistry (Honors or CM)	Science (AP or CM)	Science Elective (AP or CM)
Social Studies	AP World History (2 class periods)	AP United States History	AP United States/Comparative Government and Politics	Elective
World Language	World Language	World Language	World Language	World Language (AP or second language)
GIS		Global International Studies 1	Global International Studies 2	Global International Studies 3 and 4
Other	PE/Health	Foundations of Technology	Fine Arts	Elective

ENGLISH 9 GIS (HONORS) – 011170

This course focuses on Pre-AP strategies and curriculum. A challenging course designed for 9th grade students who show interest and ability in above grade level English, the GIS English course examines World Literature from BCE oral traditions to more contemporary works of literature. Focus will be on grammar, writing, and analysis of literature, along with skill development in the areas of research, composition, and vocabulary.

CREDIT: 0.5 per semester TYPE: Honors GRADE: 9
PREREQUISITE: Admission to Global and International Studies required.

ADVANCED PLACEMENT WORLD HISTORY/COURSE SUPPORT – 022250

This AP World History course is designed to develop a greater understanding of the evolution of different types of human societies. The study will focus upon the time period from approximately 6000 B.C.E. to the present. Students will examine a truly global history by identifying global patterns and processes that have affected human history throughout time through a combination of factual knowledge and appropriate analytical skills. The course will stress six themes: the impact of interaction, change and continuity, the impact of technology and demography, social structure and gender, cultural and intellectual developments, and politics. Study skills, time management, note taking, essay writing, independent research, and test taking are emphasized to support students taking an advanced placement course in the ninth grade. The summer assignment must be completed prior to the first class. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

CREDIT: 1 per semester TYPE: Advanced Placement GRADE: 9
PREREQUISITE: Admission to Global and International Studies required.

ENGLISH 10 GIS (HONORS) – 012260

This course focuses on Pre-AP strategies and curriculum. A challenging course designed for 10th grade students who show interest and ability in above grade level English. Literary study focuses on American Literature. This course provides advanced instruction in English grammar, writing, and literature with in-depth study of research,

composition, vocabulary development. This course will prepare students for the High School Assessment in English.

CREDIT: 0.5 per semester TYPE: Honors GRADE: 10
PREREQUISITE: Admission to Global and International Studies required.

GLOBAL AND INTERNATIONAL STUDIES 1 (HONORS) – 026110

Students are introduced to the field of social science and exposed to a variety of different career pathways within the field. Students gain a better understanding of the different world regions by focusing on different themes, such as cultural diversity and awareness, population growth and settlement, land use management, and political/economic systems. Having a deeper understanding of the international system will help students complete the Global and International Studies (GIS) course that examines international relation theories, conflict and peace building, political economics, international trading systems and businesses, and economic development.

CREDIT: 0.5 per semester TYPE: Honors GRADE: 10
PREREQUISITE: Admission to Global and International Studies required.

GLOBAL AND INTERNATIONAL STUDIES 2 (HONORS) – 026120

This research course will prepare students for an internship during the summer between their junior and senior year. Students will learn about the various types of research – theoretical, observational, computational, engineering, and electronic – with historic examples. Students will learn about ethics, integrity, and accountability in research. Expectations for student research will be explained with practical application of skills involved. These will include topics such as time management, organization, interpersonal and communication skills, safety, record keeping, problem finding, problem solving, critical thinking, integrative thinking, analytical thinking, informational research, experimental design, visualizing and analyzing data, statistical analysis, technical writing, oral presentations, and presentation technology. Students will be required to write a proposal explaining their investigative project. Students will be paired with a mentor and will collaborate in the planning of the subsequent research project.

CREDIT: 0.5 per semester TYPE: Honors GRADE: 11
PREREQUISITE: Admission to Global and International Studies required.

ADVANCED PLACEMENT UNITED STATES/COMPARATIVE GOVERNMENT AND POLITICS – 023440

The course is designed to give students a critical perspective on government and politics in the United States. This course involves both the study of general concepts used to interpret American politics and the analysis of specific case studies. It also requires familiarity with the various institutions, groups, beliefs, and ideas that make up the American political scene. The following topics are included in this course of study; constitutional underpinnings of American government, political beliefs and behaviors, political parties and interest groups, institutions and policy processes of national government, and civil rights and civil liberties.

Comparative Government and Politics introduces students to fundamental concepts used by political scientists to study the processes and outcomes of politics in a variety of country settings. The course aims to illustrate the rich diversity of political life, to show available institutional alternatives, to explain differences in processes and policy outcomes, and to communicate to students the importance of global political and economic changes. Comparison assists both in identifying problems and in analyzing policymaking.

Summer assignments must be completed prior to the first class.

Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

This course may be substituted for Government (Certificate of Merit course) and will prepare students for the High School assessment in Government. This course also includes student service-learning.

CREDIT: 0.5 per semester TYPE: Advanced Placement GRADE: 11
PREREQUISITE: Admission to Global and International Studies required.

GLOBAL AND INTERNATIONAL STUDIES 3 (HONORS) – 026130

The Global and International Studies (GIS) internship is designed for GIS students who will be implementing a research project outside of the traditional school day. Students must complete a minimum of 100 hours of supervised activities. Supervisors will include the GIS research teacher, the GIS coordinator, and a mentor. All internships must involve an advanced study of either world cultures, international events, history, or world languages and make sure of appropriate investigative techniques.

CREDIT: 0.5 per semester TYPE: Honors GRADE: 12
PREREQUISITE: Admission to Global and International Studies required.

GLOBAL AND INTERNATIONAL STUDIES 4 (HONORS) – 026140

The senior capstone project is designed for Global and International Studies (GIS) students. Supervisors will include the GIS research teacher, the GIS coordinator, and a mentor. All projects must involve either an advanced study of world cultures, international events, history, or world languages and make use of appropriate investigative techniques. Exemplary research skills will be expected, with complete records and data collected. Students will apply the skills learned in the research course, incorporating research skills such as experimental design, modeling, testing, observation, investigation, problem solving, critical thinking analysis of literature, interpretation of data, statistical analysis, and technology in their research. A research paper will be required. The research results will be presented in a symposium format using multimedia technology during the senior year.

CREDIT: 0.5 per semester TYPE: Honors GRADE: 12
PREREQUISITE: Admission to Global and International Studies required.

FAIRLEAD ACADEMY

Fairlead Academy is located in Great Mills, Maryland and provides an instructional program designed to transition tenth or eleventh grade students to high school. The instructional program is organized into 90-minute blocks of time and runs on an A/B schedule. Instruction is differentiated to meet students' particular areas of need and interest. Admission to the program is through an application process based on students' past academic performance and desire to pursue an alternative program for the first and second year of high school. A transition coordinator works individually with students and their parents(s)/guardian(s) as they transition back to their home high school for grades 10 or 11.

ENGLISH 9 – 011120

This course focuses on the study of grammar and composition with emphasis on a review of language arts skills. The students are introduced to various literary types, such as drama, short stories, essays, articles, biographies, poetry, and novels. Vocabulary development is emphasized throughout the year.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9

EXPLORATIONS IN SCIENCE – 041110

This course provides an overview of the four core high school sciences: Physics, Chemistry, Biology, and Earth/Space Science. Concepts within each content with application to biology will be explored. Topics of study include physics concepts as they apply to Biology, chemical elements and compounds important to life, and Earth systems as they relate to life. The highly engaging course uses a product-based approach. The skills and process of science, including data analysis, reading strategies, and content specific writing, will be emphasized.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9

UNITED STATES HISTORY – 023320

This study reviews the evolution of governmental, social, and economic institutions in the United States from the Civil War through the Reconstruction period. The study continues with a chronological survey of United States history focusing on important domestic and foreign issues which have helped determine conditions in contemporary America. Industrialization, the Progressive Era, world involvement, the Great Depression, the New Deal, and recent domestic and international developments are included. This course also includes service-learning.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9

FOUNDATIONS OF TECHNOLOGY – 171140

This course seeks to develop technological literacy through problem solving activities that challenge students to apply mathematics and science concepts to real-world engineering problems. The course focuses on the nine core technologies, (i.e., mechanical, electrical, electronic, structural, fluid, optical, thermal, biotechnical, material). Students work independently and collaboratively as part of an engineering team. A wide variety of technical, craft, and engineering careers will be explored. This course satisfies the technology education credit required for graduation.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-10

ALGEBRA 1 (CM) – 031130

At the conclusion of the course, the students will demonstrate the ability to interpret, use, and apply polynomial expressions and equations, graph linear equations and linear systems, factor algebraic expressions, calculate with rational, radical, and exponential expressions, and apply appropriate technologies and statistical methods for interpreting data and communicating results. The use of a graphing calculator will be an integral part of the course. The Texas Instruments TI-84 Silver Edition or a calculator with equivalent capability is recommended. This course will prepare students for the High School Assessment in Algebra/Data Analysis.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 9-12
PREREQUISITE: Recommendation of previous mathematics instructor required.

INTERMEDIATE ALGEBRA (CM) – 031630

This course is intended for students who wish to take Algebra 2, but need additional preparation. At the conclusion of the course, the students will demonstrate the competencies listed for Algebra 1. They will have additional exposure to methods of graphing, statistical methods, and appropriate technologies for interpreting data and communicating results. The use of a graphing calculator will be an integral part of the course. The Texas Instruments TI-84 Silver Edition or a calculator with equivalent capability is recommended.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 9-12
PREREQUISITE: Recommendation of Algebra 1 instructor required.

THEATRE ARTS 1 – 017520

This course consists of a basic introduction to the performance, technical, and academic aspects of drama. This includes a survey of major plays and theatre history. It develops students' appreciation of the theatre through a variety of projects, performances, and activities.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12

ENGLISH 10 – 012220

Emphasis is placed on clear and effective writing to be taught in conjunction with the necessary grammar and oral language skills. World literature is the focus of literary study with language arts, research skills, and vocabulary development emphasized throughout the course. This course will prepare students for the High School Assessment in English.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10
PREREQUISITE: English 9

GOVERNMENT – 021120

This study presents the ideas, values, and institutions underlying the American democratic system. The forms, functions, and processes of local, state, and national governments are studied to illustrate citizens` relationships to democratic government. The rights guaranteed to each citizen in a democratic society, the responsibilities for citizens to serve the community and to participate in government, and the protections extended to each citizen through a system of law are studied. This course will prepare students for the High School Assessment in Government. This course also includes student service-learning.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10

ALGEBRA 1 – 031120

At the conclusion of this course, students will demonstrate an ability to interpret and use variable expressions. They will perform multi-step calculations following the correct order of operations. They will have a proficiency with graphing that includes plotting in the coordinate system, and the ability to write the linear equation from the slope of a line and a point on the line. They will be able to interpret data displayed in graphs and calculate mean, median, quartiles, and ranges. The Texas Instruments TI-84 Silver Edition or a calculator with equivalent capability is recommended. This course will prepare students for the High School Assessment in Algebra/Data Analysis.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-11
PREREQUISITE: Recommendation of previous mathematics instructor required.

BIOLOGY 1 – 042220

This course focuses on the study of biology with an emphasis on development of science skills and processes. Students learn how living organisms interact with living and nonliving components of the environment. They learn about the mechanism of evolutionary change and how traits are inherited and passed on to succeeding generations. The structure and function of cells and multicellular organisms is addressed, including biologically important molecules and their relationship to cell processes. This laboratory course emphasizes the development of skills in

observation, investigation, interpretation of data, reading of scientific texts, and related writing skills. Students who object to dissection will be given alternative activities. This course will prepare students for the High School Assessment in Biology. Passing the Biology High School Assessment is a requirement for graduation.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: One credit of science required.

GEOMETRY – 032220

At the conclusion of this course, students will demonstrate an ability to interpret and use parallel lines and planes. They will demonstrate the ability to apply the properties of similar and congruent figures. They will be able to calculate perimeter, circumference, area, volume, and surface area of two- and three-dimensional figures. They will use the Pythagorean Theorem, apply the properties of classic triangles, and understand the trigonometric ratios for right triangles. The Texas Instruments TI-84 Silver Edition or a calculator with equivalent capability is recommended.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Algebra 1

SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM)

The Science, Technology, Engineering, and Mathematics (STEM) Academy is offered at Great Mills High School. The STEM Academy offers unique courses in science, technology, engineering, and mathematics to give students extraordinary knowledge and skills, as well as career exploration in numerous science and engineering pathways. The curriculum includes dedicated research classes founded upon the application of content, integrated technologies, and extensive problem-solving experiences. Advanced Placement courses are incorporated. Admission to the program is through an application process based on students past academic performance, dedication to advanced learning, and desire to pursue STEM related careers.

EXAMPLE OF STEM FOUR YEAR EDUCATIONAL PLAN

	Grade 9	*Grade 10*	*Grade 11*	*Grade 12*
English	English 9 (Honors)	English 10 (Honors)	AP English Language	AP English Literature
Math	STEM Algebra 2 (Honors)	STEM Pre-Calculus	AP Calculus	AP Statistics
Science	STEM Chemistry	STEM Physics	AP Science	AP Science
Social Studies	U.S. History (CM)	Government (CM) or AP Government and Politics	World History (CM)	AP Social Studies or Global Diplomacy (CM)
World Language	World Language	World Language	World Language	AP World Language
STEM		STEM Biology	STEM Research	STEM Internship
STEM	PE/Health	STEM Engineering	STEM Internship	Fine Arts

STEM ALGEBRA 2 (HONORS) – 032160

This course is for ninth grade students who are enrolled in the STEM academy and have completed Algebra 1. This is a rigorous course, which incorporates topics in a hands-on, real-world discovery approach. The STEM Algebra 2 course exposes students to the ideas and applications of mathematical modeling, completes acquisition of basic skills in algebraic manipulation, and introduces a shift in perspective which is characteristic of the study of higher mathematics. To this end, equations, functions, and their graphs are studied. Students work with equations and inequalities, radical and absolute expressions, linear relations and functions, systems of equations and inequalities, coordinate geometry, matrix algebra, sequences and series, quadratic functions, polynomial functions, exponential and logarithmic functions, rational expressions, and conic sections.

Students in the STEM course undertake advanced study in functions. Applications are more complex, and the material is explored in greater depth. Thorough mastery and understanding of techniques and concepts, as well as greater facility in using symbolic language, is expected. The use of a TI-84 Plus graphing calculator will be an integral part of the course.

CREDIT: 1 per semester TYPE: Honors GRADE: 9
PREREQUISITE: Admission to the STEM Academy, a minimum of 2.0 average in Algebra 1 (CM) and/or equivalent competency required.

STEM CHEMISTRY (HONORS) – 043430

This project-based course is designed to challenge highly able students who have been accepted into the STEM Academy. Science, technology, engineering, and mathematics concepts will be fully integrated in this course. Students learn about the atomic structure and the relationship between this structure, the properties of elements, and the bonds they form. The properties of compounds related to the arrangement and types of atoms they contain are addressed. Students learn how to represent substances symbolically with chemical formulas. Also, students learn how matter is transformed in chemical reactions and how those chemical equations are represented symbolically. Applications to topics such as engineering, biomedicine, physiological chemistry, and pharmacology will be addressed. Advanced instruction will prepare students for other advanced placement science courses. This laboratory-oriented course includes very high-level expectations in scientific observation, investigation, experimental design, interpreta-

tion of data, problem-solving, critical thinking, analysis of scientific literature, and use of technology. An extended project involving experimental design is required.

CREDIT: 0.5 per semester TYPE: Honors GRADE: 9
PREREQUISITE: Admission to the STEM Academy required.

STEM BIOLOGY (HONORS) – 043440

This project-based course is designed to challenge highly able students who have been accepted into the STEM Academy. Science, technology, engineering, and mathematics concepts will be fully integrated in this course. Students learn how living organisms interact with living and nonliving components of the environment. The mechanics of evolutionary change and how traits are inherited and passed on to succeeding generations will be studied. The structure and function of cells and multicellular organisms is addressed, including biologically important molecules and their relationship to cell processes. Biomedical, physiological, and environmental applications incorporating statistical analysis are a major focus. Advanced instruction will be given to prepare students for other advanced placement courses. This laboratory-oriented course includes very high-level expectations in scientific observation, investigation, experimental design, interpretation of data, problem solving, critical thinking, analysis of scientific literature, and use of technology. An extended project involving experimental design is required. Students who object to dissection will be given alternative activities. This course will prepare students for the High School Assessment in Biology.

CREDIT: 0.5 per semester TYPE: Honors GRADE: 10
PREREQUISITE: Admission to the STEM Academy required.

STEM ENGINEERING (HONORS) – 177410

This project-based course is designed to challenge highly able students who have been accepted into the STEM Academy. The course provides students the opportunity to engage in authentic engineering challenges that allow application of knowledge and skill in mathematics and science. Students will be involved with four major areas of study with respect to Engineering: Principles of Design, Engineering Resources, Engineering Design Process, and Project Management. The nine core technologies (i.e., mechanical, electrical, electronic, structural, fluid, optical, thermal, biotechnical, and material) will be studied. The areas of study will be addressed through highly engaging, authentic engineering problems using the most current project management techniques. The course will include a capstone engineering project. This course satisfies the technology education credit required for graduation.

CREDIT: 0.5 per semester TYPE: Honors GRADE: 10
PREREQUISITE: Admission to the STEM Academy required.

STEM PHYSICS (HONORS) – 043450

This project-based course is designed to challenge highly able students who have been accepted into the STEM Academy. Science, technology, engineering, and mathematics concepts will be fully integrated into this course. Students learn about and apply the concepts of vectors, motion, and forces to explain the physical world. The concepts of electricity and magnetism are studied and related to their role in nature and technology. Practical applications of the laws of thermodynamics are explored. Wave motion and its relationship to the understanding of various physical phenomena are studied. Also, students explore various topics in modern physics, including the wave/particle duality of matter and nuclear energy. Engineering and other science applications will be a major focus. Advanced instruction will be given to prepare students for other advanced courses such as AP Physics B and/or AP Physics C. This laboratory-oriented course includes very high-level expectations in scientific observation, investigation, experimental design, interpretation of data, problem solving, critical thinking, analysis of scientific literature, and use of technology. An extended project involving experimental design is required. This course will be taught concurrently with Precalculus.

CREDIT: 0.5 per semester TYPE: Honors GRADE: 10
PREREQUISITE: Admission to the STEM Academy required.

STEM PRECALCULUS (HONORS) – 032180

This course is for tenth grade students who are enrolled in the STEM academy and have completed Algebra 2 and Geometry. Students will develop skills to identify and sketch graphs of trigonometric functions and transformations of these graphs. Students will demonstrate the ability to interpret, use, and apply mathematical concepts for a wide variety of functional relationships including trigonometric, circular, composite, inverse, exponential, and logarithmic. Algebra skills remain a key tool for analysis throughout the course, especially in the unit involving trigonometric identities. Students will also undertake the study of advanced topics in algebra and a comparative look at functions and their graphs. Materials covered will include trigonometry, law of sines and law of cosines, functions and their graphs, quadratic functions, exponential and logarithmic functions, and topics in analytical geometry. Students will explore enriched topics with more formal sophisticated applications, a formal study of limits, and an introduction to differential calculus.

STEM Precalculus explores beyond the material covered and focuses on a more in-depth discovery in trigonometry and advanced algebra topics. Students are expected to make deeper connections; applications are more complex and model real life experiences.

Graphing techniques are emphasized and mastered through hands-on experiences, then applied and extended using a TI-84 Plus graphing calculator, Geometer's Sketchpad, and Fathom software programs.

CREDIT: 0.5 per semester TYPE: Honors GRADE: 10
PREREQUISITE: Admission to the STEM Academy, and a minimum of 3.0 average in Algebra 2 and Geometry required.

STEM RESEARCH (HONORS) – 046520

This research course will prepare students for an internship during the summer between their junior and senior year. Students will learn about the various types of research – theoretical, observational, computational, engineering, and electronic – with historic examples. Students will learn about ethics, integrity, and accountability in research. Expectations for student research will be explained with practical application of skills involved. These will include topics such as time management, organization, interpersonal and communication skills, safety, record keeping, problem finding, problem solving, critical thinking, integrative thinking, analytical thinking, informational research, experimental design, visualizing and analyzing data, statistical analysis, technical writing, oral presentations, and presentation technology. Students will be required to write a proposal explaining their investigative project. Students will be paired with a mentor and will collaborate in the planning of the subsequent research project.

CREDIT: 0.5 per semester TYPE: Honors GRADE: 11
PREREQUISITE: Admission to the STEM Academy required.

STEM INTERNSHIP (HONORS) – 046510

The STEM Internship is designed for STEM students who will be implementing a research project outside of the traditional school day. Students must complete a minimum of 100 hours of supervised activities. Supervisors will include the STEM Research Teacher, the STEM Coordinator, and a mentor. All projects must involve a science, technology, engineering, or mathematics application and make use of appropriate investigative techniques. Exemplary research skills will be expected with complete records and data collected. Students will apply the skills learned in the research course incorporating research skills such as experimental design, modeling, testing, observation, investigation, problem solving, critical thinking, analysis of scientific literature, interpretation of data, mathematical computation, statistical analysis, and technology in their research. A research paper will be required. The research results will be presented in a symposium format using multimedia technology during the senior year. It is expected that this research will be presented at a major competition such as the Intel International Science and Engineering Fair; the Siemens Westinghouse Competition in Math, Science, and Technology; or other noted public venue.

CREDIT: 0.5 per semester TYPE: Honors GRADE: 12
PREREQUISITE: Admission to the STEM Academy required.

CTE COMPLETER PATHWAYS - COMPREHENSIVE HIGH SCHOOL

Career and Technology Education offers sequenced courses available at each of the St. Mary's County Public high schools. These completer pathways blend academic, technical, and employability skills together resulting in concentrated instruction that demonstrates the strong relationship between classroom lessons and workplace demands. Each completer pathway consists of four credits that must be completed to earn a Maryland high school diploma. The learning is rich, relevant, and hands on.

*A completer of the Career and Technology Education program sequence must complete at least four additional credits in a career specialization beyond the required core credits. Within the career clusters (***business management and finance; communication, media, and arts;** *and* **consumer and human services***), the student will select one program in which to complete four or more credits. Students who complete the Career and Technology Education program sequence may also meet University System of Maryland entrance requirements and/or qualify to enter a community college, technical college, or other approved post-secondary training program.*

BUSINESS, MANAGEMENT, AND FINANCE

- Accounting (AOF Chopticon)
- Business Administration
- Administrative Services Credentialing
- Career Research and Development
- Computer Programming

COMMUNICATIONS, MEDIA, AND ART

- Computer Website Design and Development

CONSUMER AND HUMAN SERVICES

- Child Development
- Social and Natural Sciences

BUSINESS, MANAGEMENT, AND FINANCE - ACCOUNTING (AOF CHOPTICON)

Completer Program: **Accounting (CHS only)**
Credits Needed for Completion: 4

CIP Number: **5203024**
Completer Code: **2A**

REQUIRED COURSE: PRINCIPLES OF BUSINESS, ADMINISTRATION, AND MANAGEMENT – 171110

The Principles of Business, Administration, and Management course provides students with knowledge of the types of businesses, as well as various applications, laws, and theories of business. Along with a brief historical perspective, business terminology and principles will be emphasized. Students will learn to analyze the functions of business through planning, organizing, and evaluating. Students will be expected to think analytically; improve written and oral communication skills; enhance listening and questioning skills; learn and practice the art of conversation; improve public speaking skills; broaden awareness of career options; practice using team work to make decisions and solve problems; and learn why people skills, human resource skills, communications skills, and networking skills can help them succeed in their careers. Upon successful completion of this course, the students will understand the business world and be more prepared to meet their career goals and objectives.

CREDIT: 1 (0.5 per semester) TYPE: Standard GRADE: 10

REQUIRED COURSE: COMPUTER APPLICATIONS IN FINANCIAL AND DATA MANAGEMENT – 172130

This introductory computer course will refine and develop data entry skills, teach students to manage resources and information. Students will use MS Office software to develop application skills in spreadsheets, databases, presentations, and electronic communications and to prepare financial documents. Students will also develop the knowledge and practice they need to make informed financial decisions. Students will be taught to analyze the various financial resources of a business and the risk management process (insurance). The financial management standards taught in this course are consistent with the Maryland Council on Economic Education components.

CREDIT: 1 (0.5 per semester) TYPE: Standard GRADE: 10

REQUIRED COURSE: PRINCIPLES OF ACCOUNTING 1/MANAGERIAL ACCOUNTING (CM) – 170470

This year-long course provides students with an understanding of the accounting process and how it facilitates decision making by providing data and information to internal and external stakeholders. Students learn that accounting is an integral part of all business activities. Students learn how to apply technology to accounting by creating formulas and inputting data into spreadsheets. Students also examine career opportunities and the professional certificates and designations earned by individuals in the accounting profession. During the second semester students study managerial accounting. Students are introduced to the fundamentals of management accounting, including manufacturing and cost accounting, budgeting, accounting for managerial decision making, and financial statement analysis. Students learn how to use accounting information for internal decision making, planning and control. Regardless of the career path they choose, this course gives students the financial acumen necessary to make informed personal and business decisions.

CREDIT: 1 (0.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 11
PREREQUISITE: Admission to Academy of Finance or approval of the instructor required.

REQUIRED COURSE: PRINCIPLES OF ACCOUNTING 2 (CM) – 171930

This course provides students with the accounting knowledge that will prepare them for post high school levels of education and entry-level positions in the work force. Focus will be on accounting procedures necessary to address long and short-term asset investments and liabilities. Career pathways for accounting will be examined and the use of accounting knowledge in a variety of career clusters is also expected. Awareness of ethical issues and application of ethical decision-making models will be reinforced throughout the course. This course will employ industry standard accounting software. Students will be encouraged to participate in work study, mentorship, internship, and job shadow opportunities. Upon successful completion of the program, students will be encouraged to take the CLEP-Financial Accounting exam offered by Educational Testing Service (ETS).

CREDIT: 1 (0.5 per semester) TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: A minimum of a 2.0 average in Principles of Accounting 1/Managerial Accounting.

BUSINESS, MANAGEMENT, AND FINANCE - ADMINISTRATIVE SERVICES CREDENTIALING

Completer Program: **Administrative Services Credentialing**
Credits Needed for Completion: **4**

CIP Number:
Completer Code: **2K**

REQUIRED COURSE: PRINCIPLES OF BUSINESS, ADMINISTRATION, AND MANAGEMENT – 171110

The Principles of Business, Administration, and Management course provides students with knowledge of the types of businesses, as well as various applications, laws, and theories of business. Along with a brief historical perspective, business terminology and principles will be emphasized. Students will learn to analyze the functions of business through planning, organizing, and evaluating. Students will be expected to think analytically; improve written and oral communication skills; enhance listening and questioning skills; learn and practice the art of conversation; improve public speaking skills; broaden awareness of career options; practice using team work to make decisions and solve problems; and learn why people skills, human resource skills, communications skills, and networking skills can help them succeed in their careers. Upon successful completion of this course, the students will understand the business world and be more prepared to meet their career goals and objectives.

CREDIT: 1 (0.5 per semester) TYPE: Standard GRADE: 10

REQUIRED COURSE: COMPUTER APPLICATIONS IN FINANCIAL AND DATA MANAGEMENT – 172130

This introductory computer course will refine and develop data entry skills, teach students to manage resources and information. Students will use MS Office software to develop application skills in spreadsheets, databases, presentations, and electronic communications and to prepare financial documents. Students will also develop the knowledge and practice they need to make informed financial decisions. Students will be taught to analyze the various financial resources of a business and the risk management process (insurance). The financial management standards taught in this course are consistent with the Maryland Council on Economic Education components.

CREDIT: 1 (0.5 per semester) TYPE: Standard GRADE: 10

REQUIRED COURSE: ADVANCED MICROSOFT OFFICE SPECIALIST TRAINING (CM) – 172230

The students will develop advance skills using Microsoft Office 2007 (Word, PowerPoint, Access, Excel, and Outlook) and Adobe InDesign software applications. Students will be expected to think analytically, manipulate information, and use the computer as a productivity tool through integrated application programs. Upon successful completion, the students may be eligible to sit for one or more industry certifications.

CREDIT: 1 (0.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 11
PREREQUISITE: Minimum of 2.0 GPA in Computer Applications in Financial and Data Management

REQUIRED COURSE: OFFICE SYSTEMS AND PROJECT MANAGEMENT TRAINING (CM) – 172330

During this year-long course, the students will develop managerial and technical skills for business support operations through applied learning. Problem-solving skill development is incorporated throughout the course to meet the recommendations made through Maryland Skills for Success. Additionally, students will use the features of MS Project to develop the basic competencies (complete/develop plans, assign resources to tasks, track progress, manage budgets, and analyze workloads) needed to successfully pursue a program of study in Project Management at a post-secondary school. Upon successful completion of the course, the students may be eligible to sit for the Project Management Professional (PMP) certification exam.

CREDIT: 1 (0.5 per semester) TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: Advanced Microsoft Office Specialist Training

BUSINESS, MANAGEMENT, AND FINANCE - BUSINESS ADMINISTRATION

Completer Program: **Business Administration**
Credits Needed for Completion: **4**
CIP Number: **5202014**
Completer Code: **2G**

REQUIRED COURSE: PRINCIPLES OF BUSINESS, ADMINISTRATION, AND MANAGEMENT – 171110

The Principles of Business, Administration, and Management course provides students with knowledge of the types of businesses, as well as various applications, laws, and theories of business. Along with a brief historical perspective, business terminology and principles will be emphasized. Students will learn to analyze the functions of business through planning, organizing, and evaluating. Students will be expected to think analytically; improve written and oral communication skills; enhance listening and questioning skills; learn and practice the art of conversation; improve public speaking skills; broaden awareness of career options; practice using team work to make decisions and solve problems; and learn why people skills, human resource skills, communications skills, and networking skills can help them succeed in their careers. Upon successful completion of this course, the students will understand the business world and be more prepared to meet their career goals and objectives.

CREDIT: 1 (0.5 per semester) TYPE: Standard GRADE: 10

REQUIRED COURSE: COMPUTER APPLICATIONS IN FINANCIAL AND DATA MANAGEMENT – 172130

This introductory computer course will refine and develop data entry skills, teach students to manage resources and information. Students will use MS Office software to develop application skills in spreadsheets, databases, presentations, and electronic communications and to prepare financial documents. Students will also develop the knowledge and practice they need to make informed financial decisions. Students will be taught to analyze the various financial resources of a business and the risk management process (insurance). The financial management standards taught in this course are consistent with the Maryland Council on Economic Education components.

CREDIT: 1 (0.5 per semester) TYPE: Standard GRADE: 10

REQUIRED COURSE: BUSINESS ADMINISTRATION 1 (CM) – 172500

This project-based course introduces the students to the intermediate skills needed to be successful in the business world or a post-secondary education experience. Students will develop an understanding of the roles a manager must perform and the skills needed to be a manager, the skills needed to be an entrepreneur, the role of ethics and social responsibility in the workplace, and the laws that affect businesses. Participation in FBLA is an integral component of the coursework. By participating in local, state, and national events, students gain authentic real-world experience competing as potential employees in the business world.

CREDIT: 1 (0.5 per semester)(This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 10
PREREQUISITE: Principles of Business, Administration, and Management

REQUIRED COURSE: BUSINESS ADMINISTRATION 2 (CM) – 172090

This course continues to develop the skills needed to perform in the business world. This course requires students to take charge and become self-regulated as they work on meaningful, real-world applications. The skills acquired in the level one course will be applied to a variety of challenging activities. The activities will focus on entrepreneurship, management and administration, careers in management, and the implementation of a school-wide activity. The curriculum activities will require students to apply communication, decision-making, organizational, leadership, creative thinking, problem solving, and technology skills. Students will be required to read and report on weekly business issues. Students will also write business reports, letters, and memos as they work through the various business activities. Throughout the course, the students will be required to participate in the following experiences: mentoring, an independent study, and career to work.

CREDIT: 1 (0.5 per semester) TYPE: Certificate of Merit GRADE: 11
PREREQUISITE: Business Administration 1 or approval of the instructor required.

BUSINESS, MANAGEMENT, AND FINANCE - CAREER RESEARCH AND DEVELOPMENT

Completer Program: **Career Research and Development**
Credits Needed for Completion: **4**

CIP Number: **8600000**
Completer Code: **2J**

REQUIRED COURSE: CAREER RESEARCH AND DEVELOPMENT 1 – 171120

The overall goals of this course are to teach students the process of self-awareness, career exploration, and setting academic and career-related goals. Students will demonstrate an understanding of how accurate, current, and unbiased career information is necessary for successful career planning and management using Maryland's career clusters and pathways. In addition, students will be introduced to basic concepts of financial literacy to help them manage their personal finances. Course content will integrate the development of the student's competency in business writing as well as the Skills for Success (i.e., communication, learning, interpersonal, technology, and critical thinking). Students will also be required to prepare for and participate in an interview process.

CREDIT: 1 (0.5 per semester) TYPE: Standard GRADE: 11

REQUIRED COURSE: CAREER RESEARCH AND DEVELOPMENT 2 – 171130

Students will continue building and strengthening their career portfolio to demonstrate proficiencies in workplace readiness, personal financial management, personal growth and development, and employment experiences. Students will use the portfolio as part of the interviewing process. The portfolio will serve as part of the student's end-of-program assessment/culminating project. Students will benefit from joining one of the career technology student organizations to assist in refining and developing their leadership and workplace readiness skills.

CREDIT: 1 (0.5 per semester) TYPE: Standard GRADE: 12
PREREQUISITE: Career Research and Development 1

REQUIRED COURSE: CAREER RESEARCH AND DEVELOPMENT WORK-BASED LEARNING – 171280

The work-based learning experience takes place at the worksite, includes a minimum of 270 hours, and may be paid or unpaid. This experience is directed by the Work-Based Learning (WBL) agreement and plan developed by the student, WBL coordinator, and employer. The WBL plan identifies the appropriate competencies, duties and tasks in academic, technical, and work readiness areas that apply directly to students' goals for a specific work-related placement. The goal of the WBL experience is to expose students to authentic employment opportunities that link to students' career interests. WBL placements have the potential to prepare students for employment that leads to a family-supporting wage. The worksite placement is secured, based on students' interests, and employer demand. The WBL coordinator is responsible for monitoring students' placements, documenting students' progress, and accounting for students' completion of their plan and portfolio.

CREDIT: 2 (1 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Standard GRADE: 12
PREREQUISITE: Concurrent enrollment in Career Research and Development 2

BUSINESS, MANAGEMENT, AND FINANCE - COMPUTER PROGRAMMING

Completer Program: **Computer Programming**
Credits Needed for Completion: **4**

CIP Number: **5212014**
Completer Code: **2B**

REQUIRED COURSE: COMPUTER APPLICATIONS IN FINANCIAL AND DATA MANAGEMENT – 172130

This introductory computer course will refine and develop data entry skills, teach students to manage resources and information. Students will use MS Office software to develop application skills in spreadsheets, databases, presentations, and electronic communications and to prepare financial documents. Students will also develop the knowledge and practice they need to make informed financial decisions. Students will be taught to analyze the various financial resources of a business and the risk management process (insurance). The financial management standards taught in this course are consistent with the Maryland Council on Economic Education components.

CREDIT: 1 (0.5 per semester) TYPE: Standard GRADE: 10

REQUIRED COURSE: COMPUTER PROGRAMMING 1 (CM) – 172020

This course is designed as an introduction to computer technology. Students will study the historical development, operations, and functions of the computer. An emphasis will be placed on program development. Students will be introduced to computer programming through object-oriented languages such as, but not limited to, Visual Basic and C++. Internet use will also be part of this course. Students will complete a variety of programming projects.

CREDIT: 1 (0.5 per semester) TYPE: Certificate of Merit GRADE: 11
PREREQUISITE: A minimum of a 2.0 average in Computer Applications in Financial and Data Management or approval of instructor

COMPUTER PROGRAMMING 2 (CM) – 172030

This course is designed to help students become proficient in writing, testing, and maintaining coded instructions that direct computer functions or processes. Students will continue to develop proficiency in using C++ (an advanced object-oriented programming language). In addition, students will study the practices and procedures of a second language (Java). Topics covered will include input and output, flow of control features, data structures, searching, and sorting algorithms, and program design and analysis.

CREDIT: 2 (1 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 12

PREREQUISITE: Computer Programming 1

OR

ADVANCED PLACEMENT COMPUTER SCIENCE A – 178950

Advanced Placement Computer Science A is both a course for potential computer science majors and a foundation course for students planning to study in other technical fields such as engineering, physics, chemistry, and geology. It involves the study of the object-oriented paradigm using the Java programming language. Concepts such as classes, objects, inheritance, polymorphism, and reusability will be covered, as well as input and output, flow of control features, data structures, searching and sorting algorithms, and program design and analysis. The course is designed to challenge students to be active learners and critical thinkers. Students are provided time for hands-on learning. During this time, their programs can be individually evaluated, and their progress can be informally tracked. Assistance can be provided and students can talk about their programs and ask specific questions about any problems they may have. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement (AP) examinations, although 400 institutions do grant credit.

CREDIT: 2 (1 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Advanced Placement GRADE: 12

PREREQUISITE: Algebra 2 with a 3.0 average or concurrent enrollment in Algebra 2

COMMUNICATION, MEDIA, AND ARTS - COMPUTER WEBSITE DESIGN AND DEVELOPMENT

Completer Program: **Computer Website Design and Development** CIP Number: **1001054**
Credits Needed for Completion: **4** Completer Code: **2H**

REQUIRED COURSE: COMPUTER WEBSITE DEVELOPMENT 1 (CM) – 178330

This course is designed to provide the necessary skills and training needed to create a website from start to finish. The course will focus on Object Orienting Programming, Unified Modeling Language (UML), Internet basics, planning, basic design, layout and construction, and set up and maintenance of a website. Students may use any of the following Web Development programming languages: VisualBasic.NET, C#.NET, Java, PHP, AJAX, or Cold Fusion. Students will be introduced to flowcharts and pseudo-codes. Students are encouraged to concurrently enroll in Web Essentials.

CREDIT: 1 (0.5 per semester) TYPE: Certificate of Merit GRADE: 10
PREREQUISITE: Computer Applications in Financial and Data Management

REQUIRED COURSE: INTERACTIVE WEB MEDIA (CM) – 178350

Interactive Media will focus on concepts of color theory, the history of design, and basic graphics/animation. Students will learn skills and techniques required to use specialized software to create and manipulate art with computers and to edit digital images. Using a popular desktop publishing software, students will learn color, composition, layout design, digital photography, animation, typography of computer images, publication, advertising, statistical charts, and graphs. Students will be introduced to basic principles for the design, use, and application of computer graphic systems. This course may require students to complete a work-based learning experience. Upon successful completion of the course, students will be equipped with the necessary entry-level skill sets needed to pursue employment in the information technology profession, enroll in an information technology program at a post secondary school, and sit for the Adobe certification examination.

CREDIT: 1 (0.5 per semester) TYPE: Certificate of Merit GRADE: 11
PREREQUISITE: Computer Website Development 1

REQUIRED COURSE: COMPUTER WEBSITE DEVELOPMENT 2 (CM) – 178340

This advanced course continues to build on previously taught web design and development skills. It is recommended for students interested in specializing in designing websites and/or furthering their education in design at a post-secondary institution. Using a project-based curriculum, students are introduced to the advanced components of web design software to augment and enhance their web design skills. Students create web applications and web forms and use interactive animation development tools and Internet applications.

CREDIT: 1 (0.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: Computer Website Development 1

REQUIRED COURSE: WEB ESSENTIALS (CM) – 178320

This course is recommended for students desiring to develop and enhance the computer skills needed to prepare for a work experience and/or secondary education in Web Developing or Interactive Media. Students will construct web documents. Emphasis will be placed on FTP, HTML, CSS, XHTML, W3 Standards, Basic Scripting, web standards, and Internet concepts. Students will maintain a digital portfolio and are encouraged to concurrently enroll in Computer Website Development 1.

CREDIT: 1 (0.5 per semester) TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: Computer Website Development 2

CONSUMER AND HUMAN SERVICES - CHILD DEVELOPMENT

Completer Program: **Child Development**
Credits Needed for Completion: **4**

CIP Number: **2002014**
Completer Code: **5E**

REQUIRED COURSE: CHILD DEVELOPMENT 1 – 179000

This course provides students with basic theories and principles concerning pregnancy, prenatal development, prenatal care, childbirth, and an in-depth study of the physical, emotional, social, and intellectual needs and development of the child beginning at birth and progressing to age eight. Observations will be required in addition to regular classroom instruction and may include field trips to local libraries, day care centers, and elementary schools. Students prepare themselves for careers working with young children as well as parenting responsibilities. Successful completion of this course and Child Development 2 meets the Maryland requirement for preschool teacher in a licensed child care facility. These courses articulate with the College of Southern Maryland classes EDU 1012 and 1013.

CREDIT: 1 (0.5 per semester) TYPE: Standard GRADE: 11
PREREQUISITE: Personal Living and/or approval of instructor required.

REQUIRED COURSE: CHILD DEVELOPMENT 2 (INCLUDES AN INTERNSHIP) (CM) – 179030

This course provides students with theories and principles for understanding the developmental stages of children from birth through age 12. Instruction includes development of observation skills, classroom management, program planning and curriculum; and participation in a preschool or day care facility, along with other child care training activities. Students obtain marketable skills for child development careers and prepare for parenting responsibilities. Students are required to have a current medical report. Successful completion of this course combined with Child Development 1 meets the Maryland requirement for preschool teacher in a licensed child care facility and articulates to College of Southern Maryland classes EDU 1012 and 1013.

CREDIT: 3 (1.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: Child Development 1

CONSUMER AND HUMAN SERVICES - SOCIAL AND NATURAL SCIENCES

Completer Program: **Social and Natural Sciences**
Credits Needed for Completion: **4**

CIP Number:
Completer Code: **5L**

REQUIRED COURSE: PERSONAL LIVING (CM) – 121100

This course is designed to help students understand the many challenges facing them as young adults during and after high school. Students will explore all facets of daily living, including, but not limited to: personal style, personality, careers, food and nutrition, personal health, parenting, child development, personal finances, consumerism, decision-making, family roles and relationships, multiculturalism, and self awareness. This course seeks to improve decision-making skills in all aspects of personal living. This curriculum will include an integration of Family Economics and Financial Education. Students will complete a variety of simulations on spending, saving, and investing.

CREDIT: 1 (0.5 per semester) TYPE: Certificate of Merit GRADE: 10

REQUIRED COURSE: FOOD AND NUTRITION SCIENCE 1 – 124430

This course examines the nutritional needs of the individual. Emphasis is placed on the relationship of diet to health, kitchen and meal management, food preparation and sustainability for a global society, and time and resource management. Skills in science, reading, and mathematics literacy are reinforced in this course. Work-based learning strategies appropriate for this course include field trips, job shadowing, and service learning.

CREDIT: 1 (0.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Standard GRADE: 11
PREREQUISITE: Personal Living or approval of the instructor required.

REQUIRED COURSE: FOOD AND NUTRITION SCIENCE 2 (CM) – 124530

This course focuses on advanced food preparation techniques while applying nutrition, food science, and test kitchen concepts using new technology. Food safety and sanitation receive special emphasis, with students taking the exam for the ServSafe credential from the National Restaurant Association. Work-based learning strategies appropriate for this course include school-based enterprises, field trips, job shadowing, and service learning.

CREDIT: 1 (0.5 per semester) TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: Food and Nutrition Science 1

FAMILY LIFE AND HUMAN DEVELOPMENT – 027300

This course is designed to assist students in understanding the basis of human sexual behavior and family relationships, responsibilities of marriage and parenthood, and the values of these underlying concepts in American society. The work in this course includes the use of approved audiovisual materials.

CREDIT: 1 (0.5 per semester) TYPE: Standard GRADE: 11-12
PREREQUISITE: Parental approval required.

OR

FINANCIAL LITERACY – 171150

The role of the student as a citizen, consumer, and active participant in the business world will be the focus. Students explore many areas of financial planning that will enhance their financial security. Students learn how to prepare a financial plan that includes investing, saving, borrowing, and budgeting. Using credit, obtaining insurance, and purchasing securities will be included. In addition, students learn about risk management and laws that will protect them as consumers.

CREDIT: 1 (0.5 per semester) TYPE: Standard GRADE: 11-12

THE DR. JAMES A. FORREST
CAREER AND TECHNOLOGY CENTER

The Dr. James A. Forrest Career and Technology Center (JFCTC) offers a wide variety of career specific programs that enable students to gain technical and academic skills. The JFCTC will offer elective courses as well as two and three year programs. These programs offer students a "head-start" for employment or continuing education in a variety of career fields. Students attending the JFCTC will spend part of the day at the home high school and part of the day at the JFCTC. Student participation in Skills USA is strongly encouraged because of the focus on leadership skill development.

*A completer of the Career and Technology Education program sequence must complete at least four additional credits in a career specialization beyond the required core credits. Within the career clusters (***communication, media, and arts; consumer and human services; engineering, sciences, and technology;** *and* **life science and environmental studies***), the student will select one program in which to complete four or more credits. Students completing a two-year program at the Dr. James A. Forrest Career and Technology Center earn a total of five credits in their career specialization. Students who complete the Career and Technology Education program sequence may also meet University System of Maryland entrance requirements and/or qualify to enter a community college, technical college, or other approved post-secondary training program.*

COMMUNICATIONS, MEDIA, AND ART

- Graphic Communications
- TV/Video Production

CONSUMER AND HUMAN SERVICES

- Criminal Justice
- Culinary Arts
- Fire and Rescue/Emergency Medical Services
- Hospitality and Tourism

ENGINEERING, SCIENCES, AND TECHNOLOGY

- Automotive Refinishing and Repair
- Automotive Technology
- Aviation Technology
- Carpentry
- Computer Aided Drafting and Design (CADD)
- Computer Networking
- Diesel Technology
- Engineering
- Masonry
- Production Engineering
- Residential/Industrial Wiring
- Sheet Metal
- Welding

LIFE SCIENCE AND ENVIRONMENTAL STUDIES

- Academy of Health Professions
- Dental Assisting
- Natural Resources Management
- Horticulture

Some of the JFCTC programs have specific entrance requirements. These should be carefully reviewed when planning a course of studies. Please note the specific prerequisite courses that are required for entry into a career-specific program.

Admission process is as follows:

1. Students complete an application to the JFCTC selecting a first, second, and sometimes a third choice.
2. Students from the high schools are expected to visit the JFCTC for a tour to ensure their interest and understanding of the program's requirements.
3. Applications are scored and ranked based on attendance, GPA, credits, appropriate grade level, courses taken, discipline, and completion of prerequisites.
4. The Dr. James A. Forrest Career and Technology Center Administration Admission Committee reviews applications. Based on registration scores, students are accepted into their first, or if necessary, alternate choice, until classes have reached capacity.

Students enrolled in a program at the JFCTC must obtain special permission from the home school principal and JFCTC principal in order to drop a program.

*Students who have disabilities, special needs, or other situations which may hinder success in school, may request a Vocational Evaluation from the JFCTC. This may provide students with a career direction, help select specific courses, and better define a possible career pathway.

COMMUNICATION, MEDIA, AND ARTS - GRAPHIC COMMUNICATIONS

Completer Program: **Graphic Communications**
Credits Needed for Completion: **4**

CIP Number: **1003500**
Completer Code: **1F**

REQUIRED COURSE: GRAPHIC COMMUNICATIONS 1 – 177900

In the first year, students will be introduced to the graphic communications industry, exploring career options, and industry trends. They will study graphic design and digital layout, typography, digital photography, and production techniques standard in the graphic communications industry. Students will work with a variety of equipment and techniques, including offset printing, bindery operations, and sign manufacturing.

Students are introduced to a variety of industry-standard programs from the Adobe Creative Suite, such as InDesign, Illustrator, PhotoShop, and Dreamweaver. Principles of design and color theory are emphasized. Reading, writing, and mathematics related to graphic communications are an integral part of this class. Students are instructed through a combination of demonstrations, guest speakers, self-study, group projects, and individual hands-on experiences. Basic computer skills are required.

CREDIT: 2 (1 per semester) TYPE: Standard GRADE: 10-11

REQUIRED COURSE: GRAPHIC COMMUNICATIONS 2 (CM) – 177930

The second year prepares students for work-related skills and advancement into graphic design, digital imaging, sign making, and print production for gainful employment and/or entry into post secondary education in the graphic communications industry. To facilitate this, students will complete a comprehensive project based on career aspirations in conjunction with business partners in the community. Advanced knowledge and skill in the graphic design and printing industry will be enhanced in a laboratory setting that duplicates the typical workplace and offers school/work based learning opportunities. Job shadowing opportunities are available during the second year of study. Students will acquire necessary technical skills by completing real-world projects for the school system and the community.

CREDIT: 2 (1 per semester)(This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 11-12

PREREQUISITE: Graphic Communications 1

COMMUNICATION, MEDIA, AND ARTS - TV/VIDEO PRODUCTION

Completer Program: **TV/Video Production**
Credits Needed for Completion: **5**

CIP Number: **1002020**
Completer Code: **1H**

REQUIRED COURSE: TV/VIDEO PRODUCTION 1 – 177910

During this course, students will explore the history of television and mass communication. Using the content from the Cybercollege program on television and video production, students will study the technology to broadcast audio and video images throughout the world. This will include: cable, satellite, specialized antennas, and fiber optic/copper cable systems. All career areas from pre-production, production, and post-production will be explored. Scheduling, technical management, script development as well as a variety of production formats - news, documentaries, interviews, education, comedy, games, etc. will be studied. Field trips, guest speakers, and multimedia experiences will be part of the course.

CREDIT: 2 (1 per semester) TYPE: Standard GRADE: 10-11

REQUIRED COURSE: TV/VIDEO PRODUCTION 2 (CM) – 177920

During this course, students will apply their knowledge and skills in the three phases of programming: pre-production, production, post-production. A detailed review and application of the 15 steps for television production will be accomplished. Students will be required to plan and create a wide variety of authentic video productions from identification of the purpose, analyzing the audience, determining production value, schedules, personnel, locations, wardrobe and set requirements. Instruction will include obtaining permits, legal issues, video inserts, photos, and graphic design needs. As part of the local cable company contract with St. Mary's County Public Schools, a Public, Educational & Governmental (PEG) access station is operated from the Dr. James A. Forrest Career and Technology Center. This will allow students to work with actual school system productions as well as assisting with productions for community groups as part of the free public access requirements. Students will focus on related career pathways. Students will be engaged with "state of the art" technology for this industry.

CREDIT: 3 (1.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 11-12

PREREQUISITE: TV/Video Production 1

CONSUMER AND HUMAN SERVICES - CRIMINAL JUSTICE

Completer Program: **Criminal Justice**
Credits Needed for Completion: **5**

CIP Number: **4301994**
Completer Code: **5B**

REQUIRED COURSE: CRIMINAL JUSTICE 1 – 172630

The Criminal Justice Program is a two-year course that provides students an insight into the criminal justice system, criminal law, legal procedures, and the career possibilities available. Students will be exposed to a variety of careers and gain insight into the skills and talents required for employment in the various legal areas. The curriculum consists of a preparatory education with an in-depth study of law, law enforcement, crime scene investigation courts, and the correctional system in the United States. Students are introduced to criminal justice in an interdisciplinary approach that involves integration of the arts education, business, English, world language, mathematics, physical education, and science.

CREDIT: 2 (1 per semester) TYPE: Standard GRADE: 10-11

REQUIRED COURSE: CRIMINAL JUSTICE 2 (CM) – 172640

The second year will continue study in the numerous career pathways available in law enforcement. A strong focus on career exploration and site visits in criminal justice environments will be offered.

CREDIT: 3 (1.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 11-12

PREREQUISITE: Criminal Justice 1

CONSUMER AND HUMAN SERVICES - CULINARY ARTS

Completer Program: **Culinary Arts**
Credits Needed for Completion: **5**

CIP Number: **2004014**
Completer Code: **5C**

REQUIRED COURSE: CULINARY ARTS 1 – 176400

This course provides students with the theory and practice training in all aspects of entry level food preparation and service. Emphasis is placed on safety, sanitation, tools, utensils, equipment operation, recipe use, and basic methodology in a variety of culinary kitchen operations. Chef coats and black and white checkered pants are required and will be ordered during the first week of school.

CREDIT: 2 (1 per semester) TYPE: Standard GRADE: 11
PREREQUISITE: Algebra 1 or an equivalent Mathematics course and Biology or concurrent enrollment

REQUIRED COURSE: CULINARY ARTS 2 (CM) – 176500

During this course, an in-depth study of culinary operations management, food production, garnishing, record-keeping, purchasing, and continental cuisine will prepare the student for immediate employment or continued education in the culinary field. Chef coats and black and white pants are required.

CREDIT: 3 (1.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: Culinary Arts 1

CONSUMER AND HUMAN SERVICES - FIRE AND RESCUE/EMERGENCY MEDICAL SERVICES

Completer Program: **Fire and Rescue/EMS**
Credits Needed for Completion: **4**

CIP Number: **4302500**
Completer Code: **5I**

REQUIRED COURSE: FIRE AND RESCUE/EMERGENCY MEDICAL SERVICES – 177820

Students will have an opportunity to participate in a career and technology program related to fire prevention and control and emergency medical technology. The program includes classroom instruction as well as formal training at selected local fire companies. Students are required to complete a minimum of 138 hours of work-based learning and take the seven certification exams. The program is designed to allow students to complete all requirements and earn college credit. This intense training program is offered as a one year experience. Students will complete an extended day program in order to satisfy the hourly requirements for certification.

The classroom training will be provided by instructors from the Maryland Fire and Rescue Institute (MFRI) of the University of Maryland.

The components of the Firefighter/EMT program are delivered through MFRI courses and certification exams. The following represent the core set of highly focused courses that will be addressed during this one year experience at the Dr. James A. Forrest Career and Technology Center. Emergency Medical Technician, Firefighter 1, Incident Management System, Emergency Response to Terrorism, Hazardous Materials Operations, Firefighter 2, and Rescue Technician.

CREDIT: 4 (2 per semester) TYPE: Standard GRADE: 11-12
PREREQUISITE: Approval of instructor, Fire and Rescue students must be age 16 at the beginning of the school year and Emergency Medical Services (EMS) students must be age 16 by September 15, a member of a local fire department or rescue squad, available on weekends, and have parental permission.

CONSUMER AND HUMAN SERVICES - HOSPITALITY AND TOURISM

Completer Program: **Hospitality and Tourism**
Credits Needed for Completion: **5**

CIP Number: **5009540**
Completer Code: **5J**

REQUIRED COURSE: HOSPITALITY AND TOURISM 1 – 176510

This course will introduce students to this broad industry which includes hotel and motel management, resort management, food and beverage industry, and special event planning. Students will explore this wide spectrum of specialized customer service skills that include: marketing concepts, hotel and motel tasks and management, quality service delivery, competition based pricing, and travel agencies.

CREDIT: 2 (1 per semester) TYPE: Standard GRADE: 11

REQUIRED COURSE: HOSPITALITY AND TOURISM 2 (CM) – 176520

The course will provide opportunities for students to apply the numerous and diverse skills obtained in the Level 1 course. Students will focus on major event management reflective of the broad scope of this industry. Students will facilitate key events for the school system in collaboration with the culinary arts program. Students will actually perform industry accepted practices associated with customer satisfaction, domestic and international travel, product promotion, marketing, sales, suppliers, sales organizations, distribution systems, safety and security, hospitality services. There will be field trips and guest speakers from the diverse sectors of this industry.

CREDIT: 3 (1.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 12

PREREQUISITE: Hospitality and Tourism 1

ENGINEERING, SCIENCES, AND TECHNOLOGY - AUTOMOTIVE REFINISHING AND REPAIR

Completer Program: **Automotive Refinishing and Repair**
Credits Needed for Completion: **6**

CIP Number: **4706034**
Completer Code: **3A**

REQUIRED COURSE: AUTOMOTIVE REFINISHING AND REPAIR TECHNOLOGY 1 – 175510

This basic course will introduce students to a rapidly changing industry due to vehicle design changes resulting from changing market demands. Students will explore a wide range of tools, machines, materials, and processes used to repair damaged vehicles. Instruction will focus on personal and environmental safety while working in an automotive laboratory. There will also be a strong emphasis on developing linear measurement knowledge and skills to ensure accuracy with repairs and begin the process for Automotive Service Excellence (ASE) certification.

CREDIT: 1 (0.5 per semester) TYPE: Standard GRADE: 10

REQUIRED COURSE: AUTOMOTIVE REFINISHING AND REPAIR TECHNOLOGY 2 – 175500

This course will begin with a focus on repair estimates, metal fabrication, welding processes, metal preparation, finishing techniques, cleaning methods, paint evaluation, and paint mixing. Students will be challenged to apply personal and environmental safety as part of their Automotive Service Excellence (ASE) instruction and certification. Specialized tools, machines, and materials will be used to repair actual vehicles to meet industry specifications.

CREDIT: 2 (1 per semester) TYPE: Standard GRADE: 11
PREREQUISITE: Automotive Refinishing and Repair Technology 1

REQUIRED COURSE: AUTOMOTIVE REFINISHING AND REPAIR TECHNOLOGY 3 (CM) – 175600

Students will begin to investigate specific industry pathways and during the second semester prepare for internships within the local industry. Complete job evaluation, planning, task organization, and estimation will be accomplished. Students will work closely with industry representatives from local repair facilities as well as insurance businesses. There will be field trips, guest speakers, and job shadowing as part of this advanced level course.

CREDIT: 3 (1.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 12

PREREQUISITE: Automotive Refinishing and Repair Technology 2

ENGINEERING, SCIENCES, AND TECHNOLOGY - AUTOMOTIVE TECHNOLOGY

Completer Program: **Automotive Technology**
Credits Needed for Completion: **6**

CIP Number: **4706044**
Completer Code: **3B**

REQUIRED COURSE: AUTOMOTIVE TECHNOLOGY 1 – 175310

The first year of this ASE/NATEF certified program will provide the students with the knowledge and skills needed to obtain an entry level position in the field of automotive servicing. Students will learn about the different automotive careers available and the importance of ASE certification. All students will complete the S/P2 Safety and Pollution Prevention training at the beginning of the year. The students will finish out the year by learning the theory of electricity and electrical/electronic circuit testing.

CREDIT: 1 (0.5 per semester) TYPE: Standard GRADE: 10

REQUIRED COURSE: AUTOMOTIVE TECHNOLOGY 2 – 175300

This ASE/NATEF certified course will build on electrical/electronic circuit testing through the theory and diagnosis of electronic ignition, electronic fuel injection, and emission control systems. The competencies covered will also include the operations of the internal combustion engine, basic engine diagnosis and repair. Students will be encouraged to join and compete in the Skill's USA competitions.

CREDIT: 2 (1 per semester) TYPE: Standard GRADE: 11
PREREQUISITE: Automotive Technology 1

REQUIRED COURSE: AUTOMOTIVE TECHNOLOGY 3 (CM) – 175430

This ASE/NATEF certified course will continue to build on electrical/electronic diagnosis. Students will learn the theory of and how to diagnose anti-lock braking systems, traction control systems, and various electrical/electronic body control systems. Competencies covered this year will also include steering, suspension, alignment, and brake hydraulic systems. Before exiting the course, the students are required to take the National Automotive Student Skills Standards Assessments for Engine Performance, Electrical/Electronic Systems, Braking Systems, and Steering and Suspension Systems.

CREDIT: 3 (1.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: Automotive Technology 2

Completer Program: **Aviation Technology**
Credits Needed for Completion: **6**

CIP Number: **4706080**
Completer Code: **3S**

REQUIRED COURSE: AVIATION TECHNOLOGY 1 – 179010

This course will serve as the foundation experience for students who are interested in a career in the aviation maintenance industry. Students will explore the basic theory of flight and the related science concepts of lift, drag, thrust, and gravity. Students will focus on specific industry tools, machines, materials, and processes found in the typical aviation repair facility. Personal and environmental safety will be another key focus for this introductory course. Aviation modeling will also be used to help students understand the basic forces affecting flight. Students will begin an exploration of airframe components and techniques used to build and maintain aircraft superstructures.

CREDIT: 1 (0.5 per semester) TYPE: Standard GRADE: 10
PREREQUISITE: Algebra 1 with grade of C or better

REQUIRED COURSE: AVIATION TECHNOLOGY 2 – 177550

This course will introduce students to the general aviation requirements to begin the instruction necessary to pursue an aviation airframe technician certificate and rating. This course will begin the focused work in applied physics and mathematics as it relates to flight theory and airframe applications on small aircraft. Students will study the following technical areas during this introductory course: basic electricity, aircraft drawing/design, weight and balance, fluid lines/fittings, aircraft materials, ground operations, servicing schedules, cleaning/corrosion control, maintenance forms and records, maintenance publications, mechanic privileges and limitations as specified by the Federal Aviation Administration (FAA), and basic physics and mathematics related to flight and aircraft design.

CREDIT: 2 (1 per semester) TYPE: Standard GRADE: 11
PREREQUISITE: Aviation Technology 1

REQUIRED COURSE: AVIATION TECHNOLOGY 3 (CM) – 177560

This course will continue instruction as required by the Federal Aviation Administration (FAA) for airframe content requirements. This course will enable students to complete the airframe curriculum. Elements of the general curriculum will be applied as new knowledge and skills are introduced in the airframe studies. Students will investigate through classroom instruction, field trips, and laboratory applications the following areas: airframe structures, airframe systems and components, airframe finishes and corrosion prevention, aviation avionics systems, aviation fire prevention techniques, airframe inspection requirements, landing gear systems, and communication and navigation systems. Students will begin final preparation for completion of all required elements of this program to achieve airframe certification as required by the FAA.

CREDIT: 3 (1.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: Aviation Technology 2

ENGINEERING, SCIENCES, AND TECHNOLOGY - CARPENTRY

Completer Program: **Carpentry**
Credits Needed for Completion: **5**

CIP Number: **4602014**
Completer Code: **3C**

REQUIRED COURSE: CARPENTRY 1 – 176000

The first year of Carpentry addresses the National Center for Construction Education and Research (NCCER) CORE curriculum. Basic safety, construction mathematics, hand tools, power tools, blueprints, basic rigging, communication skills, and employability skills will be studied. In addition, students study fabrication, materials specifications, estimating, site preparation, fasteners, foundations, flooring, and framing.

CREDIT: 2 (1 per semester) TYPE: Standard GRADE: 10

REQUIRED COURSE: CARPENTRY 2 (CM) – 176130

The second year of Carpentry involves more comprehensive and advanced projects. The course includes intensive experience with construction skills with signification in refining design and construction techniques. Roofing, siding, windows, and exterior doors will be studied. Students will also learn finishing techniques and applications. Students may have the opportunity to work with local employers as an intern. Students will also have the opportunity to achieve National Center for Construction Education and Research (NCCER) certification.

CREDIT: 3 (1.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 11

PREREQUISITE: Carpentry 1

ENGINEERING, SCIENCES, AND TECHNOLOGY - COMPUTER AIDED DRAFTING AND DESIGN (CADD)

Completer Program: **Computer Aided Drafting and Design (CADD)** CIP Number: **4801014**
Credits Needed for Completion: **5** Completer Code: **3D**

REQUIRED COURSE: COMPUTER AIDED DRAFTING AND DESIGN 1 (CADD) – 178000

This course is essential for students considering mechanical, structural, industrial, civil, or electrical engineering. Competencies in architecture include floor plans, wall sections, and elevations. Students will develop skills in technical drafting, solid modeling, assemblies, animation and architecture. The software applications used in the course include Autocad, SolidWorks, Rhino, and Chief Architect. This class is articulated with the College of Southern Maryland where students could pursue an associate's degree in CADD or Engineering Technology.

CREDIT: 2 (1 per semester) TYPE: Standard GRADE: 10-11
PREREQUISITE: Algebra 1 or an equivalent mathematics course

REQUIRED COURSE: COMPUTER AIDED DRAFTING AND DESIGN 2 (CADD) (CM) – 178130

Students will continue to expand their knowledge and practical application of skills learned during the first year. Additional exposure to computer aided drafting and design (CADD) will develop the state-of-the-art skills necessary to enter engineering-related occupations in industry or to pursue advanced training in college or other post secondary schools.

CREDIT: 3 (1.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: Computer Aided Drafting and Design 1 (CADD)

Completer Program: **Computer Networking**
Credits Needed for Completion: **5**

CIP Number: **5212044**
Completer Code: **3E**

REQUIRED COURSE: COMPUTER NETWORKING 1 – 177950

The first year is designed to provide students with classroom and laboratory experience in current and emerging networking technology that will empower them to enter employment and/or further education and training in the computer networking field. A task analysis of current industry standards and occupational analysis was used to develop the content standards. Instruction includes, but is not limited to, safety, networking, network terminology and protocols, network standards, LANs, WANs, OSI models, cabling, cabling tools, router programming, star topology, IP addressing, and network standards. In addition, instruction and training are provided in the proper care, maintenance, and use of networking software, tools, and equipment and all local, state, and federal safety, building, and environmental codes and regulations.

CREDIT: 2 (1 per semester) TYPE: Standard GRADE: 10-11
PREREQUISITE: Algebra 1

REQUIRED COURSE: COMPUTER NETWORKING 2 (CM) – 177960

The second year continues with classroom and laboratory experience in current and emerging networking technology that will empower them to enter employment and/or further education and training in the computer networking field. A task analysis of current industry standards and occupational analysis was used to develop the content standards. Instruction includes, but is not limited to: safety, networking, network terminology and protocols, network standards, LANs, WANs, OSI models, Ethernet, Token Ring, Fiber Distributed Data Interface, TCP/IP Addressing Protocol, dynamic routing, routing, and the network administrator's role and function. In addition, instruction and training are provided in the proper care, maintenance, and use of networking software, tools, and equipment and all local, state, and federal safety, building, and environmental codes and regulations.

CREDIT: 3 (1.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: Computer Networking 1

ENGINEERING, SCIENCES, AND TECHNOLOGY - DIESEL TECHNOLOGY

Completer Program: **Diesel Technology**
Credits Needed for Completion: **6**

CIP Number:
Completer Code: **3R**

REQUIRED COURSE: DIESEL TECHNOLOGY 1 – 175420

This course introduces the students to heavy duty diesel powered vehicles and equipment. The students will study personal tool and equipment safety, environmental issues, Heavy-Duty Brake Systems Part I, Heavy-Duty Electrical/Electronic Systems Part I, and Preventative Maintenance Inspection Part I. The students will also enhance mathematical and scientific concepts related to heavy duty vehicles and equipment. The students use a wide variety of vehicles and equipment to develop skills and perform diagnostics. This course utilizes the National Automotive Technicians Education Foundation (NATEF) and the National Institute for Automotive Service Excellence (ASE) standards. The course prepares the student for the ASE Heavy-Duty Truck Brakes Part I (T-4), Heavy-Duty Electrical/Electronic Systems Part I (T-6) and Preventative Maintenance Inspection Part I (T-8) exams.

CREDIT: 1 (0.5 per semester) TYPE: Standard GRADE: 10
PREREQUISITE: Algebra 1 or an equivalent Mathematics course

REQUIRED COURSE: DIESEL TECHNOLOGY 2 – 175440

This course continues the study of heavy duty diesel powered vehicles and equipment. The students will study personal tool and equipment safety, environmental issues, Heavy-Duty Brake Systems Part II, Heavy-Duty Electrical/Electronic Systems Part II, Heavy-Duty Drive Trains and Preventative Maintenance Inspection Part II. The students will also enhance mathematical and scientific concepts related to heavy duty vehicles and equipment. The students use a variety of vehicles and equipment to develop skills and perform diagnostics. This course utilizes the National Automotive Technicians Education Foundation (NATEF) and the National Institute for Automotive Service Excellence (ASE) standards and prepares the student for the ASE Heavy-Duty Truck Brakes Part II (T-4), Heavy-Duty Electrical/Electronic Systems Part II (T-6), Heavy-Duty Drive Trains (T-3) and Preventative Maintenance Inspection Part II (T-8) exams.

CREDIT: 2 (1 per semester) TYPE: Standard GRADE: 11
PREREQUISITE: Diesel Technology 1

REQUIRED COURSE: DIESEL TECHNOLOGY 3 (CM) – 175450

This course continues the study of heavy duty diesel powered vehicles and equipment. The students will study personal tool and equipment safety, environmental issues, Heavy-Duty Diesel Engines, Heavy-Duty Electrical/Electronic Systems Part III, Heavy-Duty Suspension and Steering Systems, and Preventative Maintenance Inspection Part III. The students will also enhance their knowledge of mathematical and scientific concepts related to heavy duty vehicles and equipment. Students will use a variety of vehicles and equipment to develop skills and perform diagnostics. This course utilizes the National Automotive Technicians Education Foundation (NATEF) and the National Institute for Automotive Service Excellence (ASE) standards The course also prepare students for the ASE Diesel Engines (T-2), Heavy-Duty Electrical/Electronic Systems Part III (T-6), Heavy–Duty Suspension and Steering Systems (T-5), and Preventative Maintenance Inspection Part III (T-8) exams.

CREDIT: 3 (1.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: Diesel Technology 2

ENGINEERING, SCIENCES, AND TECHNOLOGY - ENGINEERING

Completer Program: **Engineering**
Credits Needed for Completion: **5**

CIP Number: **1511011**
Completer Code: **3I**

REQUIRED COURSE: ENGINEERING 1 – 177400

This course is designed for students who are interested in advanced studies in engineering, mathematics, and science. The course will introduce students to the work of engineering technicians and engineers. Students will apply engineering knowledge and skills to solve technological problems. Experiences with a wide variety of tools, machines, materials, and unique processes will enable students to gain a broad base of knowledge and skills. A strong emphasis on career exploration will also be part of this course.

CREDIT: 2 (1 per semester) TYPE: Standard GRADE: 10-11
PREREQUISITE: Algebra 1 or an equivalent Mathematics course

REQUIRED COURSE: ENGINEERING 2 (CM) – 177530

During the second year of this program, students will again be challenged with more rigorous applications of the foundation skills identified in course 1. Students will organize full production companies and engage in comprehensive product research, marketing, design, production planning, production implementation, quality control, and full automation using a Computer Integrated Manufacturing (CIM) cell.

This approach will reflect actual industry methods. Students will assume both management and labor roles to ensure a comprehensive investigation of all career pathways in production, product engineering, and quality control. Several small scale production activities will lead to a capstone event showcasing the full range of knowledge and skills developed by all students in this two year program. In addition, during the second semester, students will seek internships with a local manufacturing business.

CREDIT: 3 (1.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: Engineering Technology 1

ENGINEERING, SCIENCES, AND TECHNOLOGY - MASONRY

Completer Program: **Masonry**
Credits Needed for Completion: **5**

CIP Number: **4601014**
Completer Code: **3J**

REQUIRED COURSE: MASONRY – 175810

Masonry is a combination of the program completer in Masonry with Construction Management embedded into the curriculum. The program addresses the National Center for Construction Education and Research (NCCER) CORE curriculum which includes: basic safety, construction mathematics, hand tools, power tools, blueprints, basic rigging, communication skills, and employability skills. Students learn masonry terms, various masonry products, site preparation, mixing mortar, and building brick and block corners and walls. Students learn modern techniques and industry practices by constructing a variety of projects such as foundations, chimneys, fireplaces, and arches. Employment opportunities in the Masonry field will be explored.

During the Construction Management segment of the program, students will learn the business side of the industry. Estimating, pricing, subcontractors, scheduling, material profit, marketing, and inspections will be studied. Mathematical concepts include volume, perimeter, proportion, measurement, and the Pythagorean Theorem.

CREDIT: 5 (2.5 per semester) TYPE: Standard GRADE: 11-12

Completer Program: **Production Engineering**
Credits Needed for Completion: **5**

CIP Number: **1506130**
Completer Code: **3V**

REQUIRED COURSE: PRODUCTION ENGINEERING 1 – 170300

This course offers students the opportunity to explore the major content areas defined by key manufacturing organizations and industries. Students will investigate numerous competencies or tasks related to the following critical areas in manufacturing machining techniques and processes, design, quality control, automation/robotics, materials handling, manufacturing processes, electricity/electronics, mechanical systems, and fluid systems. During this course, students will be involved in classroom instruction, laboratory applications, field trip events, guest speakers, and dynamic software applications as part of their instruction.

CREDIT: 2 (1 per semester) TYPE: Standard GRADE: 10-11
PREREQUISITE: Algebra 1 or an equivalent Mathematics course

REQUIRED COURSE: PRODUCTION ENGINEERING 2 (CM) – 170310

During the second year of this program, students will again be challenged with more rigorous applications of the foundation skills identified in Course 1. Students will organize full production companies and engage in comprehensive product research, marketing, design, production planning, production implementation, quality control, and full automation using a Computer Integrated Manufacturing (CIM) cell.

This approach will reflect actual industry methods. Students will assume both management and labor roles to ensure a comprehensive investigation of all career pathways in production, product engineering, and quality control. Several small scale production activities will lead to a capstone event showcasing the full range of knowledge and skills developed by all students in this two year program. In addition, during the second semester, students may seek internships with a local manufacturing business.

CREDIT: 3 (1.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: Production Engineering 1

ENGINEERING, SCIENCES, AND TECHNOLOGY - RESIDENTIAL/INDUSTRIAL WIRING

Completer Program: **Residential/Industrial Wiring**
Credits Needed for Completion: **5**

CIP Number: **4603024**
Completer Code: **3N**

REQUIRED COURSE: RESIDENTIAL/INDUSTRIAL WIRING – 176210

Residential/Industrial Wiring is a combination of the completer program in Residential/Industrial Wiring with Construction Management embedded into the curriculum. The program addresses the National Center for Construction Education and Research (NCCER) CORE curriculum which includes: basic safety, construction mathematics, hand tools, power tools, blueprints, basic rigging, communication skills, and employability skills. Students will learn material identification and usage, electrical construction, OHM's law and electrical theory, basic A/C circuit theory, national electrical code, and series and parallel circuit theory. Extensive advanced study will cover conduit bending and installation, electrical system trouble shooting, commercial electric theory, motor control wiring, and fiber optics introduction.

In the Construction Management segment of the program, students will learn about the business side of the industry. Estimating, pricing, subcontractors, scheduling, material delivery and storage, labor and material coordination, supervision, finance, cost control, profit, marketing, and inspections will be studied. Mathematical concepts include perimeter, geometric formulas, graphs, resistance equations, power equations, electrical power conversions, and trigonometry functions.

CREDIT: 5 (2.5 per semester) TYPE: Standard GRADE: 11-12

ENGINEERING, SCIENCES, AND TECHNOLOGY - SHEET METAL

Completer Program: **Sheet Metal**
Credits Needed for Completion: **5**

CIP Number**: 4805064**
Completer Code: **3P**

REQUIRED COURSE: SHEET METAL 1 – 176600

This course is the first course of a two-year course sequence that provides instruction in the planning, design, layout, and fabrication techniques employed in the sheet metal industry. Trade mathematics, geometric construction, and basic drafting techniques will be applied to basic sheet metal layout and parallel line pattern development. The focus of the course will include both sheet metal products utilized in the heating, ventilating, and air conditioning (HVAC) industry and of the sheet metal fabrication and manufacturing industry. Students will be instructed in safe, proper use of the basic and specialized hand tools and machinery used in sheet metal fabrication.

CREDIT: 2 (1 per semester) TYPE: Standard GRADE: 11

REQUIRED COURSE: SHEET METAL 2 (CM) – 176730

This course is the second course of a two-year course sequence that provides instruction in advanced sheet metal design, layout and fabrication techniques. Radial line and triangulation pattern development is introduced and applied. Instruction in computer applications utilized in the metal-working industry including the computer-numerically-controlled (CNC) plasma cutting table and computer aided drafting (CADD) will be provided. Also, instruction in welding techniques utilized in the sheet metal industry will be covered.

CREDIT: 3 (1.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 12

PREREQUISITE: Sheet Metal 1

ENGINEERING, SCIENCES, AND TECHNOLOGY - WELDING

Completer Program: **Welding**
Credits Needed for Completion: **5**

CIP Number: **4805084**
Completer Code: **3Q**

REQUIRED COURSE: WELDING 1 – 177200

Based on the AWS (American Welding Society) standards, students will receive instruction in blueprint reading, math, metallurgy, and applicable science required in the field of welding. Students will safely receive instruction in oxy-acetylene cutting, welding, and torch brazing (OAC, OAW, and TB), ARC Welding (SMAW), MIG Welding (SMAW), and Plasma Cutting (PAC). They will receive instruction in the safe use of hand and power tools associated with the welding industry. Using Auto Sketch, the students will be taught drafting and design standards of the welding industry. Students will learn the drafting and design standards of welding via competencies. Students will fabricate and practice good welding standards and verify their progress through destructive and non-destructive testing.

CREDIT: 2 (1 per semester) TYPE: Standard GRADE: 10-11

REQUIRED COURSE: WELDING 2 (CM) – 177300

Students will fabricate weld samples, complete resumes and applications for apprenticeships, employment, and post-secondary education. Students will receive instruction in TIG Welding (GTAW), Pipe Welding, and semi-automatic robotic oxy-acetylene cutting. Students will learn to weld using all welding processes and metals--both ferrous and non-ferrous. This is a regimented concentrated AWS course of study that prepares students for success on the AWS Certification Test (D1.1). Students will have the opportunity to take the AWS certification test--which licenses them to weld nationally. This testing will be completed at the Dr. James A. Forrest Career and Technology Center under the supervision of the classroom instructor and Steamfitters Union 602 partners.

CREDIT: 3 (1.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 11-12

PREREQUISITE: Welding 1

LIFE SCIENCE AND ENVIRONMENTAL STUDIES - ACADEMY OF HEALTH PROFESSIONS

Completer Program: **Academy of Health Professions**
Credits Needed for Completion: **6**

CIP Number**: 510050**
Completer Code: **4A**

REQUIRED COURSE: ACADEMY OF HEALTH PROFESSIONS 1 – 177710

Students explore and prepare to work in a variety of health occupational areas using project and problem-based learning, clinical experiences, and classroom/lab instruction. This course is designed to provide the student with an overview of the therapeutic, diagnostic, environmental, and information systems of the health care industry. Students will learn about ethical and legal responsibilities, as well as the history and economics of health care. They will engage in processes and procedures that are used in the delivery of essential health care services including the use of medical terminology. They will also investigate the body's basic responses to external environment, maintenance of homeostasis, electrical interactions, transport systems, and energy processes. Basic bedside procedures that are performed in a variety of health care careers are also emphasized. Career exploration is addressed during the second semester when students visit approximately 16 different sites to experience opportunities in a variety of areas: hospital, nursing homes, doctor's offices, veterinary clinics, dental offices, and home care situations.

CREDIT: 2 (1 per semester) TYPE: Standard GRADE: 10
PREREQUISITE: Grade 9 Mathematics and Science courses with C or better

REQUIRED COURSE: INTRODUCTION TO HUMAN ANATOMY AND PHYSIOLOGY (CM) – 043080

BioStudents learn the structure and function of human systems. Topics include basic chemistry, cell structure and function, tissues and the skeletal, muscular, nervous, cardiovascular, respiratory, urinary, digestive, endocrine, and reproductive systems. Students study the basic anatomy and functioning of human systems including musculoskeletal, cardiovascular, respiratory, digestive, nervous, and urogenial. This is a College of Southern Maryland course offered at the Dr. James A. Forrest Career and Technology Center. This course fulfills a science credit.

CREDIT: 1 (0.5 per semester) TYPE: Certificate of Merit GRADE: 11
PREREQUISITE: Academy of Health Professions 1

REQUIRED COURSE: ACADEMY OF HEALTH PROFESSIONS 2 (CM) – 177810

Students continue to study care of patients, including maternal/child health, the geriatric patient, and learn skills such as performing EKGs and obtaining blood specimens. During the year, students focus on two specific areas of health care that they are interested in pursuing. This experience is designed to support the student's clinical experience or internship. Students are also eligible to obtain a certificate in Nurse Assisting from the Maryland State Board of Nursing upon full completion of requirements. This certificate is needed for many entry level positions in health care. Students are prepared for actual experience in the clinical setting with a focus on the human disease process. They will be conducting a guided research project using a mentor as part of their capstone activities. By the end of the second year, students generally feel confident in their career choice in health care and as a result, there is much emphasis on continued education at the collegiate level.

CREDIT: 3 (1.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: Academy of Health Professions 1 with a C or better in both theory and clinical aspects of the course

LIFE SCIENCE AND ENVIRONMENTAL STUDIES - DENTAL ASSISTING

Completer Program: **Dental Assisting**
Credits Needed for Completion: **5**

CIP Number: **510601**
Completer Code: **4G**

REQUIRED COURSE: DENTAL ASSISTING 1 – 177720

This course will introduce students to the diverse dental assisting careers in a rapidly changing profession. Students will develop knowledge and skills with regards to medical records, sterilization and safety in a dental laboratory setting, equipment preparation and maintenance, patient preparation, topical anesthetics, and the arrangement of dental instruments and materials during a variety of procedures. In addition, students will begin an exploration of x-ray processing and oral diagnostic studies.

CREDIT: 2 (1 per semester) TYPE: Standard GRADE: 11
PREREQUISITE: Biology with a grade of C or better

REQUIRED COURSE: DENTAL ASSISTING 2 (CM) – 177730

This course will continue skill development with the topics addressed in the Level 1 course and expand to include: detailed oral examination and evaluation processes, laboratory procedures, oral hygiene techniques, patient instruction, developing and mounting X-rays, and preventive dentistry treatments. Students will gain valuable knowledge through guest speakers and clinical experiences in local dental offices.

CREDIT: 3 (1.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: Dental Assisting 1

LIFE SCIENCE AND ENVIRONMENTAL STUDIES - NATURAL RESOURCES MANAGEMENT

Completer Program: **Natural Resources Management**
Credits Needed for Completion: **5**

CIP Number: **0301024**
Completer Code: **4C**

REQUIRED COURSE: NATURAL RESOURCES MANAGEMENT 1 – 175210

This specialized field experience course is designed to explore a wide range of environmental career fields including fish and wildlife management, land-use planning, water resource management, and forestry management. Students will experience a blend of classroom instruction with numerous field and laboratory experiences in order to apply what has been learned as theory. A wide variety of field sampling methods, unique lab equipment, and industry-based technology will be used in this course.

CREDIT: 2 (1 per semester) TYPE: Standard GRADE: 10-11
PREREQUISITE: Biology 1

REQUIRED COURSE: NATURAL RESOURCES MANAGEMENT 2 (CM) – 175200

Students will learn and apply advanced techniques of natural resources monitoring (e.g. water quality, wildlife populations), restoration, management, and analysis. Learning and applications will be a direct result of students participating in a number of authentic projects in collaboration with professionals from federal, state, and local agencies and academic institutions. In collaboration with a mentor, the students will complete a year-long independent capstone project. The successful student will be prepared for post-secondary education or entry level employment in their chosen natural resources management field.

CREDIT: 3 (1.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: Natural Resources Management 1

LIFE SCIENCE AND ENVIRONMENTAL STUDIES - HORTICULTURE

Completer Program: **Horticulture**
Credits Needed for Completion: **5**

CIP Number: **0106014**
Completer Code: **4D**

REQUIRED COURSE: HORTICULTURE 1 – 175000

This course covers the fundamentals of horticulture and agriculture. Included are topics such as biotechnology, plant parts and their functions, propagation and growth of crops and flowers, climate and watering requirements, beginning landscaping and floral design, pest management, turf and soil conservation, maintenance, and greenhouse operations. Students will also gain an understanding of the selection and use of the equipment and technology used in the industry.

CREDIT: 2 (1 per semester) TYPE: Standard GRADE: 11

REQUIRED COURSE: HORTICULTURE 2 (CM) – 175100

This is a specialized course in which the students make a choice between floriculture and horticulture. Students who choose floriculture grow crops for specific seasons, make flower arrangements, topiary, dish gardens, and grow house plants. Students who choose horticulture specialize in nursery operations: pruning plants, planting trees, landscaping school grounds, etc.

CREDIT: 3 (1.5 per semester) (This is the CTE concentrator course for this pathway.)
TYPE: Certificate of Merit GRADE: 12

PREREQUISITE: Horticulture 1

TECH CONNECT

TECH CONNECT – 175120

This course seeks to develop "technological literacy" through problem-solving activities that challenge students to apply mathematics and science concepts to real-world engineering problems. Students will work independently and collaboratively as part of an engineering team. The focus on all activities will be a better understanding of the nine core technologies, (i.e., mechanical, electrical, electronic, structural, fluid, optical, thermal, biotechnical, material). A wide variety of technical, craft, and engineering careers will be explored. This course is offered in a unique laboratory setting at the Dr. James A. Forrest Career and Technology Center. The course serves students who have been selected per recommendations by middle school principal, counselors, and teachers for placement during the ninth grade year. This course satisfies the technology education credit required for graduation.

CREDIT: 0.5 unit each semester of technology credit and 0.25 unit credit of mathematics (030010).
TYPE: Standard GRADE: 9
PREREQUISITE: Referral by middle school principal required.

ELECTIVE COURSES

BROADCAST PRODUCTIONS – 178210

Students learn abut music, theatre, and the visual arts as related to the history of radio, television, and video. Students study the production of various video and audio productions. Students also learn the relationship the fine arts have in the audio/radio/television/video production process and will gain hands-on experience producing productions for the school system, community organizations, and Channel 96. This course benefits students interested in careers and creative aspects of audio/video production and the fine arts. Students taking this course will benefit from prior knowledge of experiences in audio video, live performances, theatrical productions, and visual arts, but prior course experience is not required. This course fulfills a high school fine arts credit only for those students who are in the completer program for TV/Video Production.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12

NASA AEROSPACE AND AERONAUTIC CONCEPTS – 179100

This course was developed by NASA and is taught in the Forrest Center Aeronautics Education Laboratory (AEL). Students interested in flight related careers will benefit from this course. It will allow students to explore the aeronautics and aerospace industries. Students will be able to investigate areas such as: principles of flight, propulsion systems, communications, aerodynamics, microgravity, flight simulations, meteorology, remote sensing, FPS/radio systems, aircraft design, air traffic control, space station design, and satellites.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Algebra 1

SCULPTURE THROUGH WELDING – 170200

This is an introductory course on the basic concepts of sculpture through welding in two- and three-dimensional design. The lab/studio experience will focus on creative problem-solving skills by creation of original sculptural works with steel. The class will explore a variety of techniques such as burning, cutting, welding, and finishing effects using the oxygen-acetylene gas, and Arc and MIG welding processes.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12

GENERAL WELDING – 177190

Students will explore the world of welding through diverse techniques in the welding field by cutting, shaping, forming, and welding metals together to create metal sculpture projects such as water fountains, gardens, and other artistic

sculpture. They will learn to safely use oxygen acetylene cutting, welding and torch brazing (OAC, OAW, and TB), ARC Welding (SMAW), MIG Welding (GMAW) and TIG Welding (GTAW) to fabricate their own design in various ferrous and non ferrous metals such as steel, copper, and stainless steel. Students will also learn how to safely use various hand and electric power tools used intricately in the welding world.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12

LANDSCAPE DESIGN – 175010

This elective will provide students the opportunity to learn site planning architecture and design as well as installation of plants, ponds, walkways, etc. Students will gain experience in designing both residential and commercial projects. Student projects will be designed through the use of industry standard computer software. There will also be field experiences with practical applications.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12

ROBOTICS – 176810

This is an advanced engineering class that will focus on the development of robotic systems. Instruction will include design and research, development and implementation of systems, including: structural, mechanical, pneumatic, electrical, optical, and programming. This class is aligned with the elements of the F.I.R.S.T. Robotics Program which includes the marquee project of the Engineering Technology program.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12

SHEET METAL DESIGN AND FABRICATION – 176610

This elective is an introduction to metal work, layout, design, and fabrication. In this course, students will gain experience in artistic, industrial, and technical applications of sheet metal fabrication. Computer Aided Drafting and Design (CADD) software will be used in the design of projects. Projects will be geared toward student interest.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Algebra 1

ENGINEERING DESIGN AND ANALYSIS (CM) – 031930

Students will explore how engineers apply higher levels of mathematics in order to create sophisticated engineering drawings and designs. These applications will lead to challenging and rigorous engineering drawings used in a wide range of industrial/technical career fields. Applications of coordinate systems, non-uniform rational b-splines, solid 3-D imaging, surface transfers, engineering notation, nominal and actual sizes and vectoring will be explored. Students will use various industry based design software in an authentic design laboratory. Students will be required to connect numerous theoretical mathematics concepts with current engineering design practices. This course fulfills a mathematics credit.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: Algebra 2 or approval of the instructor required.

GEOGRAPHIC INFORMATION SYSTEMS (GIS) – 179200

Students will learn to use spatial analysis software for analyzing environmental and biological data in relation to geographic locations. GIS can also be used to analyze demographic data, police and emergency response, crime clusters, utility and road maintenance, evacuation areas and routes, buffer zones, or any other data that can be plotted on a map to establish location.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 11-12
PREREQUISITE: Two credits of Science required.

INTRODUCTION TO HUMAN ANATOMY AND PHYSIOLOGY (CM)– 043080

Students learn the structure and function of human systems. Topics include basic chemistry, cell structure and function, tissues and the skeletal, muscular, nervous, cardiovascular, respiratory, urinary, digestive, endocrine, and reproductive systems. Students study the basic anatomy and functioning of human systems including musculoskeletal, cardiovascular, respiratory, digestive, nervous, and urogenial. This is a College of Southern Maryland course offered at the Dr. James A. Forrest Career and Technology Center. This course fulfills a science credit.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: A minimum of 3.0 GPA and "B" or better in Biology CM or Biology Honors required.

SALES MANAGEMENT AND ENTREPRENEURSHIP – 176390

This course will build on the foundation and experience students received from designated prerequisite courses. Students will identify, plan, and develop a wide variety of entrepreneurship and management procedures and skills relating to the culinary and hospitality industry. Students will manage authentic situations and be required to perform at industry level standards.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 11-12

COURSE DESCRIPTIONS

Grade levels listed are recommendations.
Courses are listed first by recommended grade level and then alphabetically.

CAREER AND TECHNOLOGY EDUCATION

TECHNOLOGY

Technology Education provides students with the opportunity to explore nine core technologies that provide the foundation for all technological development. These include: mechanical electrical, structural, fluid, optical, thermal, biotechnical and material). Each of these will be studied in the context of human enterprises such as, but not limited to: Manufacturing, Construction, Transportation, Communication, Power and Energy, Health and Medicine, Agriculture, and Military. Students will be introduced to the world of engineering through problem-solving activities with a focus on applying mathematics and science concepts to real-world problems.

FOUNDATIONS OF TECHNOLOGY – 171140

This course seeks to develop technological literacy through problem solving activities that challenge students to apply mathematics and science concepts to real-world engineering problems. The course focuses on the nine core technologies, (i.e., mechanical, electrical, electronic, structural, fluid, optical, thermal, biotechnical, material). Students work independently and collaboratively as part of an engineering team. A wide variety of technical, craft, and engineering careers will be explored. This course satisfies the technology education credit required for graduation.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-10

ENGINEERING

ENGINEERING LEADERSHIP – 177540

During this course, students will plan and implement engineering and technology related activities/projects. Students will become involved in all aspects of the national Technology Student Association (TSA) as part of regional, state, and national competitions. Students will develop and refine technical skills as well as leadership abilities. Engineering activities will focus on the nine core technologies. Several partnerships with local engineering organizations will be part of student career exploration and job shadowing.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12

PRE-ENGINEERING 1 (CM) – 132200

This course will challenge students to investigate a wide variety of technological systems that include one or more of the "core technologies." A special emphasis will be placed on activities such as, but not limited to: research and experimentation, designing, construction, prototype development, product testing, data analysis, and technical writing. This course is designed for students interested in careers in engineering, science, mathematics, technology, or industrial trades. Career exploration in these fields will be accomplished through field trips, job shadowing, internet research, and guest speakers. This course may be used as one of two credits necessary for completion of an Advanced Technology Education sequence.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 10-12

INDEPENDENT STUDY ENGINEERING – 177590

This course is designed for advanced students interested in the world of engineering, building, designing, and related technical careers. Students must complete a minimum of 66 hours of supervised engineering activities for each 0.5 unit of credit and submit a minimum of two projects as determined by the student and the instructor. (A maximum of six units of elective credit may be earned through independent study and/or work study programs while in high school.)

COURSE NOTE: This unit(s) may not count as a required course.
CREDIT: 0.5 per semester TYPE: Standard GRADE: 11-12
PREREQUISITE: Foundations of Technology and approval of department chairperson, principal, supervisor of instruction, and director of Teaching, Learning and Professional Development required.

PRE-ENGINEERING 2 (CM) – 134330

This course continues the study of advanced technology systems through problem-solving and engineering activities. This advanced level course will allow students to pursue individual interests in a wide variety of technological innovations. Students will be challenged to complete a rigorous independent research project. Career exploration will continue to be part of the required course work. This course may be used as one of two credits necessary for completion of an Advanced Technology Education sequence.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: Pre-Engineering 1 and/or approval of the instructor.

BUSINESS

Teachers of the business education department make every effort to help all students select their programs according to their personal interests. After completing a basic business program, students may enter a model office simulation where they can realistically "integrate" their knowledge and skills. Students successfully completing the business program should have the necessary skills to find entry-level employment in a wide variety of business environments.

INDEPENDENT STUDY BUSINESS EDUCATION – 172100

Independent Study Business Education is designed for advanced students who wish to pursue individualized course work beyond the school day. All work is supervised by a member of the Career and Technology Education department. Students must complete a minimum of 66 hours of supervised activities for each 0.5 unit of credit and submit a minimum of two projects as determined by the student and the instructor. (A maximum of six units of elective credit may be earned through independent study and/or work study programs while in high school.)

COURSE NOTE: This unit(s) may not count as a required course.
CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: 2.0 average and approval of department chairperson, principal, supervisor of instruction, and director of Teaching, Learning and Professional Development required.

BUSINESS ADMINISTRATION 1 (CM) – 172500

This course will allow students to learn more about business as they work independently and collaboratively on a variety of business related projects that require critical and creative thinking skills. Students will develop an understanding of what is required in the business world, such as the roles a manager must perform and the skills needed to be a manager, the skills needed to be an entrepreneur, the role of ethics and social responsibility in the workplace, and the different laws affecting businesses. Students will work to build their technical skills in information technology and will begin to ready themselves for the workplace. This course will establish a strong business foundation through participation in local, regional, state, and national competitions in the areas of business management and administration.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 10
PREREQUISITE: Principles of Business, Administration, and Management AND Computer Applications 1 or approval of the instructor required.

COMPUTER APPLICATIONS IN FINANCIAL AND DATA MANAGEMENT – 172130

This introductory computer course will refine and develop data entry skills, teach students to manage resources and information. Students will use MS Office software to develop application skills in spreadsheets, databases, presentations, and electronic communications and to prepare financial documents. Students will also develop the knowledge and practice they need to make informed financial decisions. Students will be taught to analyze the various financial resources of a business and the risk management process (insurance). The financial management standards taught in this course are consistent with the Maryland Council on Economic Education components.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10

COMPUTER WEBSITE DEVELOPMENT 1 (CM) – 178330

This course is designed to provide the necessary skills and training needed to create a website from start to finish. The course will focus on Object Orienting Programming, Unified Modeling Language (UML), Internet basics, planning, basic design, layout and construction, and set up and maintenance of a website. Students may use any of the following Web Development programming languages: VisualBasic.NET, C#.NET, Java, PHP, AJAX, or Cold Fusion. Students will be introduced to flowcharts and pseudo-codes. Students are encouraged to concurrently enroll in Web Essentials.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 10

PRINCIPLES OF BUSINESS, ADMINISTRATION, AND MANAGEMENT – 171110

The Principles of Business, Administration, and Management course provides students with knowledge of the types of businesses, as well as various applications, laws, and theories of business. Along with a brief historical perspective, business terminology and principles will be emphasized. Students will learn to analyze the functions of business through planning, organizing, and evaluating. Students will be expected to think analytically; improve written and oral communication skills; enhance listening and questioning skills; learn and practice the art of conversation; improve public speaking skills; broaden awareness of career options; practice using team work to make decisions and solve problems; and learn why people skills, human resource skills, communications skills, and networking skills can help them succeed in their careers. Upon successful completion of this course, the students will understand the business world and be more prepared to meet their career goals and objectives.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10

BUSINESS LAW – 172220

This course explores the foundations of business law, while introducing personal law topics that interest students. The textbook combines the content with interactive technology and video to maintain student interest and support active learning. The course content includes: contracts, criminal law, consumer protection, wills and estates, marriage and divorce, property law, agency, employment contracts, unions, commercial paper, and credit obligations.

Some of the instructional strategies will include: opportunities to analyze, discuss, and research cases; hot debates to promote discussions on important legal issues; discussion of law related video clips; staging of mock crimes and trials; using technology to complete assignments and gather information; participation in games that teach chapter concepts; panel discussions with community leaders and other guest speakers; field trips to related businesses; and opportunities to work in groups, pairs, and individually on special projects.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12

PRINCIPLES OF ACCOUNTING 1 – 171820

This course provides students with the knowledge necessary to manage and maintain a company's financial resources in daily operating decisions. Students will learn to apply generally accepted accounting principles to determine the value of assets, liabilities, and owner's equity as they apply to various forms of business ownership. Students will also prepare, interpret, and analyze financial statements using manual and computerized systems for service and merchandising businesses. Students will be exposed to work study, mentorship, internship, and job shadow opportunities.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: A minimum of a 2.0 cumulative grade point average or approval of the instructor required.

ADVANCED MICROSOFT OFFICE SPECIALIST TRAINING (CM) – 172230

The students will develop advance skills using Microsoft Office 2007 (Word, PowerPoint, Access, Excel, and Outlook) and Adobe InDesign software applications. Students will be expected to think analytically, manipulate information, and use the computer as a productivity tool through integrated application programs. Upon successful completion, the students may be eligible to sit for one or more industry certifications.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11
PREREQUISITE: Minimum of 2.0 GPA in Computer Applications in Financial and Data Management required.

BUSINESS ADMINISTRATION 2 (CM) – 172090

This course continues to develop the skills needed to perform in the business world. This course requires students to take charge and become self-regulated as they work on meaningful, real-world applications. The skills acquired in the level one course will be applied to a variety of challenging activities. The activities will focus on entrepreneurship, management and administration, careers in management, and the implementation of a school-wide activity. The curriculum activities will require students to apply communication, decision-making, organizational, leadership, creative thinking, problem solving, and technology skills. Students will be required to read and report on weekly business issues. Students will also write business reports, letters, and memos as they work through the various business activities. Throughout the course, the students will be required to participate in the following experiences: mentoring, an independent study, and career to work.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11
PREREQUISITE: Business Administration 1 or approval of the instructor required.

COMPUTER PROGRAMMING 1 (CM) – 172020

This year-long course is designed as an introduction to computer technology. Students will study the historical development, operations, and functions of the computer. An emphasis will be placed on program development. Students will be introduced to computer programming through object-oriented languages such as, but not limited to, Visual Basic and C++. Internet use will also be part of this course. Students will complete a variety of programming projects.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11
PREREQUISITE: A minimum of a 2.0 average in Computer Applications 1 or approval of the instructor required.

INTERACTIVE WEB MEDIA (CM) – 178350

Interactive Media will focus on concepts of color theory, the history of design, and basic graphics/animation. Students will learn skills and techniques required to use specialized software to create and manipulate art with computers and to edit digital images. Using a popular desktop publishing software, students will learn color, composition, layout design, digital photography, animation, typography of computer images, publication, advertising, statistical charts, and graphs. Students will be introduced to basic principles for the design, use, and application of computer graphic systems. This course may require students to complete a work-based learning experience. Upon successful completion of the course, students will be equipped with the necessary entry-level skill sets needed to pursue employment in the information technology profession, enroll in an information technology program at a post secondary school, and sit for the Adobe certification examination.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11
PREREQUISITE: Computer Website Development 1

COMPUTER WEBSITE DEVELOPMENT 2 (CM) – 178340

This advanced course continues to build on previously taught skills. It is recommended for students interested in specializing in designing websites and/or furthering their education in design at a post secondary institution. Using a project-based curriculum, students are introduced to the advanced components of web design software to augment and enhance their web design skills. Students create web applications and web forms and use interactive animation development tools and Internet applications.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: Computer Website Development 1

FINANCIAL LITERACY – 171150

The role of the student as a citizen, consumer, and active participant in the business world will be the focus. Students explore many areas of financial planning that will enhance their financial security. Students learn how to prepare a financial plan that includes investing, saving, borrowing, and budgeting. Using credit, obtaining insurance, and purchasing securities will be included. In addition, students learn about risk management and laws that will protect them as consumers.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 11-12

COMPUTER PROGRAMMING 2 (CM) – 172030

This course is designed to help students become proficient in writing, testing, and maintaining coded instructions that direct computer functions or processes. Students will continue to develop proficiency in using C++ (an advanced object-oriented programming language). In addition, students will study the practices and procedures of a second language (Java). Topics covered will include input and output, flow of control features, data structures, searching, and sorting algorithms, and program design and analysis.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: Computer Programming 1

ADVANCED PLACEMENT COMPUTER SCIENCE A – 178950

Advanced Placement Computer Science A is both a course for potential computer science majors and a foundation course for students planning to study in other technical fields such as engineering, physics, chemistry, and geology. It involves the study of the object-oriented paradigm using the Java programming language. Concepts such as classes, objects, inheritance, polymorphism, and reusability will be covered, as well as input and output, flow of control features, data structures, searching and sorting algorithms, and program design and analysis. The course is designed to challenge students to be active learners and critical thinkers. Students are provided time for hands-on learning. During this time, their programs can be individually evaluated, and their progress can be informally tracked. Assistance can be provided and students can talk about their programs and ask specific questions about any problems they may have. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement (AP) examinations, although 400 institutions do grant credit.

CREDIT: 0.5 per semester TYPE: Advanced Placement GRADE: 12
PREREQUISITE: Algebra 2 with a 3.0 average or concurrent enrollment in Algebra 2 required.

OFFICE SYSTEMS AND PROJECT MANAGEMENT TRAINING (CM) – 172330

During this year-long course, the students will develop managerial and technical skills for business support operations through applied learning. Problem-solving skill development is incorporated throughout the course to meet the recommendations made through Maryland Skills for Success. Additionally, students will use the features of MS Project to develop the basic competencies (complete/develop plans, assign resources to tasks, track progress, manage budgets, and analyze workloads) needed to successfully pursue a program of study in Project Management at a post-secondary school. Upon successful completion of the course, the students may be eligible to sit for the Project Management Professional (PMP) certification exam.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: Advanced Microsoft Office Specialist Training

PRINCIPLES OF ACCOUNTING 2 (CM) – 171930

This course provides students with the accounting knowledge that will prepare them for post high school levels of education and entry-level positions in the work force. Focus will be on accounting procedures necessary to address long and short-term asset investments and liabilities. Career pathways for accounting will be examined and the use of accounting knowledge in a variety of career clusters is also expected. Awareness of ethical issues and application of ethical decision-making models will be reinforced throughout the course. This course will employ industry standard accounting software. Students will be encouraged to participate in work study, mentorship, internship, and job shadow opportuni-

ties. Upon successful completion of the program, students will be encouraged to take the CLEP-Financial Accounting exam offered by Educational Testing Service (ETS).

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: Principles of Accounting 1

WEB ESSENTIALS (CM) – 178320

This course is recommended for students desiring to develop and enhance the computer skills needed to prepare for a work experience and/or secondary education in Web Developing or Interactive Media. Students will construct web documents. Emphasis will be placed on FTP, HTML, CSS, XHTML, W3 Standards, Basic Scripting, web standards, and Internet concepts. Students will maintain a digital portfolio and are encouraged to concurrently enroll in Computer Website Development 1.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: Computer Website Development 2

FAMILY AND CONSUMER SCIENCE

Family and consumer sciences education offers students an experience-based, integrated program, which addresses the demands of personal and family living. Students develop knowledge and skills from lessons in resource management, child and family development, food and nutrition, living environments, fashion trends, and use of technology at home and the workplace. A major focus of these programs is preparation for the challenges of both independent and family living.

INDEPENDENT STUDY FAMILY AND CONSUMER SCIENCES – 121110

Independent Study Family and Consumer Sciences is designed for advanced students who wish to pursue individualized course work beyond the school day. All work is supervised by a member of the Career and Technology Education department. Students must complete a minimum of 66 hours of supervised activities for each 0.5 unit of credit and submit a minimum of two projects as determined by the student and the instructor. (A maximum of six units of elective credit may be earned through independent study and/or work study programs while in high school).

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: 2.0 average and approval of department chairperson, principal, supervisor of instruction, and director of Teaching, Learning and Professional Development required.

PERSONAL LIVING (CM) – 121100

This course is designed to help students understand the many challenges facing them as young adults during and after high school. Students will explore all facets of daily living, including, but not limited to: personal style, personality, careers, food and nutrition, personal health, parenting, child development, personal finances, consumerism, decision-making, family roles and relationships, multiculturalism, and self awareness. This course seeks to improve decision-making skills in all aspects of personal living. This curriculum will include an integration of Family Economics and Financial Education. Students will complete a variety of simulations on spending, saving, and investing.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 9-12

FOOD AND NUTRITION SCIENCE 1 – 124430

This course examines the nutritional needs of the individual. Emphasis is placed on the relationship of diet to health, kitchen and meal management, food preparation and sustainability for a global society, and time and resource management. Skills in science, reading, and mathematics literacy are reinforced in this course. Work-based learning strategies appropriate for this course include field trips, job shadowing, and service learning.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 11
PREREQUISITE: Personal Living and/or approval of the instructor required.

CHILD DEVELOPMENT 1 – 179000

This course provides students with basic theories and principles concerning pregnancy, prenatal development, prenatal care, childbirth, and an in-depth study of the physical, emotional, social, and intellectual needs and development of the child beginning at birth and progressing to age eight. Observations will be required in addition to regular classroom instruction and field trips to local libraries, day care centers, and elementary schools. Students prepare themselves for careers working with young children as well as parenting responsibilities. Successful completion of this course with Child Development 2 meets the Maryland requirement for preschool teacher in a licensed child care facility. These credits also articulate with the College of Southern Maryland classes, EDU 1012 and 1013.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 11-12
PREREQUISITE: Personal Living and/or approval of the instructor required.

CHILD DEVELOPMENT 2 (CM) – 179030

This course provides students with theories and principles for understanding how children develop physically, socially, emotionally, and intellectually. Students acquire the skills to prepare the environment for children from ages birth through age twelve. Instruction includes development of observation skills, classroom management, program planning and curriculum; and participation in preschool, day care, and other child care training activities. How children learn through active exploration, participation and interaction with adults, children, and materials are also explored. Students are required to have a current medical report. Successful completion of this course combined with Child Development 1 meets the Maryland requirement for preschool teacher in a licensed child care facility and the credits articulate to the College of Southern Maryland classes EDU 1012 and 1013.

CREDIT: 1.5 per semester TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: Child Development 1 and/or approval of the instructor required.

FOOD AND NUTRITION SCIENCE 2 (CM) – 124530

This course focuses on advanced food preparation techniques while applying nutrition, food science, and test kitchen concepts using new technology. Food safety and sanitation receive special emphasis, with students taking the exam for the ServSafe credential from the National Restaurant Association. Work-based learning strategies appropriate for this course include school-based enterprises, field trips, job shadowing, and service learning.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: Food and Nutrition Science 1

CAREER RESEARCH AND DEVELOPMENT

CAREER EXPLORATION – 17760

Students will demonstrate their ability to evidence positive work maturity skills in a continuum of classroom, school, and community work experiences. This course is only for students who will receive a Maryland High School Certificate.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Approval of the Individualized Education Program Team required.

CAREER RESEARCH AND DEVELOPMENT 1 (CRD) – 171120

The overall goals of this course are to teach students the process of self-awareness, career exploration, and setting academic and career-related goals. Students will demonstrate an understanding of how accurate, current, and unbiased career information is necessary for successful career planning and management using Maryland's career clusters and pathways. In addition, students will be introduced to basic concepts of financial literacy to help them manage their personal finances. Course content will integrate the development of the student's competency in business writing as well as the Skills for Success (i.e., communication, learning, interpersonal, technology, and critical thinking). Students will also be required to prepare for and participate in an interview process.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 11

CAREER RESEARCH AND DEVELOPMENT 2 (CRD) – 171130

Students will continue building and strengthening their career portfolio to demonstrate proficiencies in workplace readiness, personal financial management, personal growth and development, and employment experiences. Students will use the portfolio as part of the interviewing process. The portfolio will serve as part of the student's end-of-program assessment/culminating project. Students will benefit from joining one of the career technology student organizations to assist in refining and developing their leadership and workplace readiness skills.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 12
PREREQUISITE: Career Research and Development 1 (CRD)

CAREER RESEARCH AND DEVELOPMENT WORK-BASED LEARNING – 171281

The work-based learning experience takes place at the worksite, includes a minimum of 270 hours, and may be paid or unpaid. This experience is directed by the Work-Based Learning (WBL) agreement and plan developed by the student, WBL coordinator, and employer. The WBL plan identifies the appropriate competencies, duties and tasks in academic, technical, and work readiness areas that apply directly to students' goals for a specific work-related placement. The goal of the WBL experience is to expose students to authentic employment opportunities that link to students' career interests. WBL placements have the potential to prepare students for employment that leads to a family-supporting wage. The worksite placement is secured, based on students' interests, and employer demand. The WBL coordinator is responsible for monitoring students' placements, documenting students' progress, and accounting for students' completion of their plan and portfolio.

CREDIT: 2 TYPE: Standard GRADE: 12

EDUCATIONAL MEDIA TECHNOLOGY – 181300

This course is a practicum in which students gain experience in information literacy, library procedures, storage, retrieval and distribution of information and materials, equipment operation, processing and production of materials, and clerical tasks. Opportunities are provided for students to interact with and assist student and adult patrons in a respectful workplace environment. This course offers opportunities for students to develop and use higher order thinking and organizational skills which are applicable to a variety of career paths. Students may register for a second or third year of this course. Second and third year students will expand upon workplace and research skills learned in the first year. They may be called upon to act as trainers or facilitators for first-year students. Emphasis is placed on specific workplace projects (i.e. Internet applications, replacement and minor repair of equipment and computers, selected data entry and collection building tasks, and organization of physical space. All students will be evaluated on information projects, work habits, and research, organizational, and workplace skills, Students successfully completing this course will gain knowledge and skills which will be valuable in all curricular areas as well as the workplace.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: A minimum of a 2.5 cumulative grade point average and/or approval of the library media specialist required.

ENGLISH

The English curriculum is designed to provide students with courses which will better enable them to meet their individual needs and interests in language arts. At each grade level, courses are designed to accommodate students' varying cognitive levels and learning styles. Students are provided with instruction which will assist them in mastering the skills of reading, writing, listening, and speaking. A more intense study is offered in the Honors and Advanced Placement English programs in order to capitalize on students' interests, abilities, and career plans. Research papers are required in grades 11 and 12. This curriculum design will ensure that all students are equipped with the skills which will enable them to meet their optimum levels of achievement and be successful in continued study and their chosen careers.

During the summer, all students registered for Honors and Advanced Placement English courses must complete the required reading list published and distributed in April by the English faculty at each school site. This reading list will correspond with the literature study planned for the school year.

Students must successfully complete course work for English 9, English 10, English 11, and English 12 (four credits in English) in order to meet the English requirement for graduation from high school.

ENGLISH 9 – 011120

This course focuses on the study of grammar and composition with emphasis on a review of language arts skills. The students are introduced to various literary types, such as drama, short stories, essays, articles, biographies, poetry, and novels. Vocabulary development is emphasized throughout the year.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9

ENGLISH 9 (CM) – 011130

This course is designed for ninth grade students who plan to attend college or who desire a strong background in English. The skills of composition are introduced and practiced. The study of literature focuses on the components of various literary types, such as drama, short stories, essays, articles, biographies, poetry, and novels. More advanced language arts skills and concentrated vocabulary development are emphasized throughout the year.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 9
PREREQUISITE: Recommendation of 8th grade English instructor required.

ENGLISH 9 (HONORS) – 011140

This course is designed to challenge ninth grade students who have shown interest and ability in above grade level work in English. Focus will be on in-depth study and analysis in English grammar, writing, and literature. Advanced knowledge and skills of research, composition, vocabulary development, and literary analysis will be introduced and strengthened. Summer reading must be completed prior to the first class.

CREDIT: 0.5 per semester TYPE: Honors GRADE: 9
PREREQUISITE: Recommendation of 8th grade English instructor required.

ENGLISH 9/90 – 011160

This course is designed to assist students' transition from middle school reading/language arts to high school English. This course helps students acquire the skills and concepts necessary to progress from their entry level to a tenth grade reading level. It is designed to provide decoding/encoding, fluency, comprehension, and writing instruction according to assessed student needs. These core skills will be integrated with the standard grade 9 English curriculum during a 90-minute class period.

CREDIT: 1 per semester TYPE: Standard GRADE: 9
PREREQUISITE: Recommendation of 8th grade English instructor required.

ACADEMIC LITERACY A – 010100

This reading intervention course is designed to help students improve their reading in the areas of decoding and fluency. Decoding emphasis will be on basic sound units. The course materials and instructional sequence is based upon the latest research in reading instruction.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: 2.0 average and approval of department chairperson, and principal required.

ACADEMIC LITERACY B – 010110

This course is designed to help students improve their reading in the areas of decoding, comprehension, and fluency. Decoding emphasis will be on multi-syllabic words. The course materials and instructional sequence is based upon the latest research in reading instruction.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Approval of the instructor required.

INDEPENDENT STUDY ENGLISH – 012090

Independent Study English is designed for advanced students who wish to pursue individualized course work beyond the school day. All work is supervised by a member of the English department. Students must complete a minimum of 66 hours of supervised activities for each 0.5 unit of credit and submit a minimum of two projects as determined by the student and the instructor. (A maximum of six units of elective credit may be earned through independent study and/or work study programs while in high school.)

COURSE NOTE: This unit(s) may not count as a required course.
CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: 2.0 grade point average and approval of department chairperson, principal, supervisor of instruction, and director of Teaching, Learning and Professional Development required.

READING FOR DAILY LIVING – 016410

Students will focus on the continued acquisition of literacy skills that encompass symbol recognition, concepts of print, features of text, sight word recognition, phonemic awareness, interpretation of informational text, and independent reading. Emphasis is on the functional application of skills in order to maximize independence in the home, school, community, and world of work. This course is only for students who will receive a Maryland High School Certificate.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Approval of the Individualized Education Program Team required.

WRITING FOR DAILY LIVING – 016420

Students will explore aspects of writing that include selection of appropriate topics, using symbols and words to generate ideas and to share information, and to achieve independence in the home, school, community, and world of work. This course is only for students who will receive a Maryland High School Certificate.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Approval of the Individualized Education Program Team required.

ENGLISH 10 – 012220

Emphasis is placed on clear and effective writing to be taught in conjunction with the necessary grammar and oral language skills. World literature is the focus of literary study with language arts, research skills, and vocabulary development emphasized throughout the course. This course will prepare students for the High School Assessment in English.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10
PREREQUISITE: English 9

ENGLISH 10 (CM) – 012230

This course is designed to challenge tenth grade students who have shown interest and ability in above grade level work in English. Advanced instruction in English grammar, writing, and literature will be provided. Literary study will focus on world literature, especially the literature of Western culture. In-depth study of research, composition, vocabulary development, and literary analysis will be introduced and strengthened. Summer reading must be completed prior to the first class. This course will prepare students for the High School Assessment in English.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 10
PREREQUISITE: A minimum of a 3.0 average in English 9 or the recommendation of the English 9 instructor required.

ENGLISH 10 (HONORS) – 012240

This course is designed to challenge tenth grade students who have shown interest and ability in above grade level work in English. Advanced instruction in English grammar, writing, and literature will be provided. Literary study will focus on world literature, especially the literature of Western culture. In-depth study of research, composition, vocabulary development, and literary analysis will be introduced and strengthened. Summer reading must be completed prior to the first class. This course will prepare students for the High School Assessment in English.

CREDIT: 0.5 per semester TYPE: Honors GRADE: 10
PREREQUISITE: A minimum of a 3.0 average in previous English courses or approval of the English 10 instructor required.

YEARBOOK – 016820

The students in this course are responsible for the production of the yearbook. Prior to its publication, they are required to familiarize themselves with the necessary planning and production procedures and to apply these procedures to the layout, photography, and copy. Students also learn the business side of producing a yearbook, including staff organization and advertising.

COURSE NOTE: Previous or concurrent enrollment in Journalism and/or approval of the yearbook adviser recommended.
CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12

ENGLISH 11 – 013320

Effective composition and research skills are emphasized in this course. There is continued emphasis on the development of vocabulary and the use of grammar. The literary focus consists of the study of the prose and poetry of American Literature.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 11
PREREQUISITE: English 10

ENGLISH 11 (CM) – 013330

This course is designed for eleventh grade students who plan to attend college or desire a strong background in English. In addition to the continuation of advanced work in grammar and composition, research skills are emphasized and taught.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11
PREREQUISITE: A minimum of a 3.0 average in previous English courses or the recommendation of the English 10 instructor.

ADVANCED PLACEMENT ENGLISH LANGUAGE AND COMPOSITION – 013530

This course will focus on intensive study of major fiction and nonfiction works in the survey of American literature and will emphasize critical reading, effective writing, and research skills. Selections may include British and world literature. The reading, writing, and research assignments will emphasize analytical and interpretive skills beneficial in college work. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

CREDIT: 0.5 per semester TYPE: Advanced Placement GRADE: 11
PREREQUISITE: A minimum of a 3.0 average in previous Certificate of Merit courses and approval of instructor required.

ENGLISH 12 – 014420

Emphasis is placed on a thorough study of grammar and expository writing. There is a complete review of capitalization, punctuation, and business and social letter forms. Effective composition and research skills are emphasized in this course.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 12
PREREQUISITE: English 11

ENGLISH 12 (CM) – 014430

This course is designed for twelfth grade students who plan to attend college or who desire a strong background in English. Advanced grammar, expository writing, and research skills are emphasized in conjunction with the study of major authors, works, and movements in British literature. Vocabulary development is emphasized along with the reinforcement of effective writing techniques. There is a thorough review of literary types, techniques, styles, and periods in preparation for college literature classes.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: A minimum of a 3.0 average in previous English courses or the recommendation of the English 11 instructor required.

ADVANCED PLACEMENT ENGLISH LITERATURE AND COMPOSITION – 015430

This course includes intensive study of the major works of the traditional English literature survey course and will emphasize critical reading and advanced composition. Some masterpieces of literature not originally written in English will also be studied. The reading, writing, and research assignments will emphasize analytical and interpretive skills beneficial in college work. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

CREDIT: 0.5 per semester TYPE: Advanced Placement GRADE: 12
PREREQUISITE: A minimum of a 3.0 average in previous Certificate of Merit courses and approval of instructor required..

ENGLISH ELECTIVES

FORENSICS – 017920

This elective course is based upon the study, preparation, and delivery techniques of speechmaking. Actual participation in tournaments is encouraged.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: A minimum of a 2.0 average in previous English class and approval of the English instructor required.

JOURNALISM – 016520

This course introduces students to the news media and provides theoretical and practical knowledge of some aspects of journalism. Both print and broadcast media may be covered, with consideration given to objectivity in current press

coverage of news events. Emphasis is placed on journalistic writing style and grammar. Students learn to evaluate the methods of presenting current events to the general public.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Recommendation by previous year's English instructor and approval of the Journalism instructor required.

NEWSPAPER – 016720

Students in this course produce the school newspaper. The production includes writing, editing, layout, photography, and selling advertisement necessary for financing the newspaper.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Previous or concurrent enrollment in Journalism and/or approval of the newspaper adviser required.

PSAT/SAT PREPARATION – 018520

This course is designed for college-bound students who are interested in improving their reading rate, comprehension, vocabulary, mathematics, writing, and test-taking skills. Emphasis will be placed on strategies for using these skills and on techniques for improving performance on the PSAT/SAT.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Completion or concurrent enrollment in Algebra 1 or Geometry required.

PUBLICATIONS – 016620

This is a class for experienced student writers and editors. The course focuses on creative writing in a variety of genres and layout, design, and production of a school literary magazine. The students also produce original material for publication outside of class and study writing as a profession.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Previous or concurrent enrollment in Journalism, Newspaper, or Yearbook or approval of the Publications instructor required.

SPECIAL STUDIES IN LITERATURE: CONTEMPORARY LITERATURE – 017820

This elective course will focus on modern and contemporary stories, plays, poems, and novels which represent various ethnic and cultural groups. The course will present issues in contemporary fiction as well as in-depth survey and analysis of multicultural perspectives through literature. By focusing on contemporary literature, students can identify and analyze the conflicts and challenges facing modern society. Opportunities will be provided to integrate content with psychology and anthropology.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 11-12
PREREQUISITE: A minimum of a 3.0 average in English 10 or English 11 or approval of the previous English instructor required.

ENGLISH FOR SPEAKERS OF OTHER LANGUAGES

The English for Speakers of Other Languages (ESOL) program is available to English language learners. The program is open only to students who have been born in a foreign country, speak a language other than English as their primary language, and/or have immediate family members who speak a language other than English living in their home. In addition, students must qualify through their scores on an English proficiency test that assesses oral, reading, and writing abilities. Instruction is provided in English.

ENGLISH FOR SPEAKERS OF OTHER LANGUAGES 1 – 012010

This class provides instruction to students who need assistance in learning to speak, read, and write in English. Students will meet daily and work on the various skills needed to achieve proficiency in English. The ESOL class does not replace English 9, English 10, English 11, and/or English 12 (regular course, certificate of merit, honors, and /or Advanced Placement level).

COURSE NOTE: Course may only be taken for two years for credit but may be taken each year in high school.
CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Qualifying scores on an English proficiency test required.

ENGLISH FOR SPEAKERS OF OTHER LANGUAGES 2 – 012020

This class provides instruction to students who need assistance in learning to speak, read, and write in English. Students will meet daily and work on the various skills needed to achieve proficiency in English. The ESOL class does not replace English 9, English 10, English 11, and/or English 12 (regular course, certificate of merit, honors, and /or Advanced Placement level).

COURSE NOTE: Course may only be taken for two years for credit but may be taken each year in high school.
CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Qualifying scores on an English proficiency test required.

FINE ARTS

The fine arts program is designed to meet the needs of students who have varying degrees of interest and capability in visual arts, music, and theatre. Students must earn a minimum of one credit in fine arts as a requirement for graduation. Some courses have a performance component, and students will be required to perform in public. Students who plan to pursue their interest in fine arts should follow the suggested sequence for the fine arts specialization in the Communication, Media, and Arts cluster.

In all fine arts courses, students will gain knowledge of techniques and personal skill development in expression, historical and cultural background, and aesthetic awareness. Students enrolled in an instrumental music course should own or have access to an instrument. Students enrolled in fine arts courses may be required to pay certain fees to maintain the materials and equipment entrusted to them. Students enrolled in classes which have performing components are required to attend all rehearsals as well as school programs and concerts.

FINE ARTS – 068100

This course is a nonperformance-based course in which visual arts, music, architecture, theatre, and dance are approached through common elements (line/melody, color/tone color, texture, shape, form) and a study of genre in the first semester. Second semester students explore visual arts, music, architecture, theatre, and dance through the common principles of balance, rhythm and harmony, and a historical study from the medieval to the modern periods.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12

RECREATIONAL ARTS – 066100

Students will explore a range of arts and leisure activities that include visual arts, music appreciation, personal hobbies/interests, and organized games. Emphasis is on assisting students with disabilities to refine and expand their social, communication, motor, and problem-solving skills in individual and group activities. This course is only for students who will receive a Maryland High School Certificate.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Approval of the Individualized Education Program Team required.

MUSIC

BAND 1 (BEGINNERS) – 087120

This course is designed to help individual players who have not had extensive previous musical experience. Students are ready to participate in the marching band, but are not ready to participate in Band 2. Fundamentals are stressed, and ensemble experience is provided when instrumentation permits.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Audition and approval of the instructor required.

BAND 2 (ADVANCED) (CM)– 088120

This course is designed for students who have had previous instrumental experiences and are ready to participate in the concert band. Performance materials reflect a variety of musical styles, historical contexts, and theoretical pursuits and are designed to build technical facility.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 9-12
PREREQUISITE: Audition and approval of the instructor required.

CHAMBER ORCHESTRA (CM) – 088330

This course is designed for students who play string instruments found in a traditional orchestra. Performance materials reflect a variety of musical styles, historical contexts, and theoretical pursuits and are designed to build technical facility.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 9-12
PREREQUISITE: Audition and approval of the instructor required.

CHAMBER SINGERS (ADVANCED) (CM) – 086230

This course is designed to provide the training and experience for advanced vocal students who have had school and/or community choral experiences. This course provides small ensemble experience for students interested in performing choral music which includes multiple parts. The course includes greater emphasis on period study. Most of the music is a cappella. Emphasis is placed on quality public performance.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 9-12
PREREQUISITE: Audition and approval of the instructor required.

CHORUS 1 – 085100

This course is a preparatory course for Chorus 2/Chamber Singers and is designed to teach vocal techniques, music history, basic music theory, and music reading skills. Students work occasionally on an individual basis with the instructor. Students perform for and listen to each other to help the overall quality of the performing chorus.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Audition and approval of the instructor required.

CHORUS 2 (CM) – 086120

Students will be auditioned for this performing group. The focus will be to enhance students' vocal techniques, understanding of music theory, and music reading skills. Various styles of music will be studied. The course is geared toward the attainment of quality performances.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 9-12
PREREQUISITE: Audition and approval of the instructor required.

CLASS VOICE – 089430

This course is designed for students who want to improve their solo voice. It includes basic vocal techniques, music history, basic music theory, music reading skills, and a variety of vocal literature. Students will work with the instructor on both an individual and small group basis.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12

INDEPENDENT STUDY MUSIC – 082090

Independent Study Music is designed for advanced students who wish to pursue individualized course work beyond the school day. All work is supervised by a member of the music department. Students must complete a minimum of 66 hours of supervised activities for each 0.5 unit of credit and submit a minimum of two projects as determined by the student and the instructor. (A maximum of six units of elective credit may be earned through independent study and/or work study programs while in high school.)

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: 2.0 cumulative grade point average and approval of department chairperson, principal, supervisor of instruction, and director of Teaching, Learning and Professional Development required.

JAZZ BAND (CM) – 089130

This course is designed for more advanced instrumentalists who are members of one of the band programs. Music of the 1920s through current jazz is discussed and performed. Performances are given each semester.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 9-12
PREREQUISITE: Audition and approval of the instructor required.

MARCHING BAND – 088110

This course is designed for students who have had some previous instrumental experiences and are ready to participate in the marching band. Performance materials reflect a variety of musical styles and are designed to build technical facility, while marching. Students participate in local and regional competitions.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Audition and approval of the instructor required.

MEN'S CHORUS – 083100

This course is designed for the development of the male voice. It includes basic vocal techniques, music history, basic music theory, and music reading skills. Students work occasionally on an individual basis with the instructor. Many styles of music are studied and performed.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Approval of the instructor required.

PIANO CLASS – 082100

This course is designed to teach students skills necessary to play the piano. Music reading skills, technical skill development, basic music theory, and historical perspectives are stressed. Performing opportunities are provided at least twice during the school year.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Approval of the instructor required.

SOLO AND ENSEMBLE CLASS – 088500

The class is for instrumental students wishing to challenge themselves to higher levels of music performance. Music literature will be selected to advance the skill level of the students while advancing their knowledge of instrument repair and maintenance. Students will perform in a recital each semester. These recitals will include at least one solo and one ensemble performance by each student. Students will be expected to participate in the District IV Solo and Ensemble Festival and at the state level, if appropriate.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Approval of the instructor and concurrently enrolled in a performing ensemble required.

STRING ORCHESTRA – 088130

This course is designed to assist individual players who have not had extensive previous orchestra experience. Fundamentals are stressed and ensemble experience is provided as instrumentation permits. Performance experience is provided.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Approval of the instructor required.

THEORY 1 – 081120

This course is recommended for students who wish to improve their understanding of music fundamentals, tonal harmony, music history, and ear training. Part writing and composition are introduced in the second semester.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12

TRENDS IN MUSIC (MUSIC 1) – 080100

This course is designed primarily as a music-listening course. Its chief aim is to create knowledgeable music lovers. The basic format centers around past, present, and future trends in American music. It includes attendance at various free concerts in the county.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12

WOMEN'S CHORUS – 084100

This course is designed for the development of the female voice. It includes basic vocal techniques, music history, basic music theory, and music reading skills. Students work occasionally on an individual basis with the instructor. Many styles of music are studied and performed.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Approval of the instructor required.

ADVANCED PLACEMENT MUSIC THEORY – 089200

The goal of the Advanced Placement Music Theory course is to develop a student's ability to recognize, understand, and describe the basic materials and processes of music that are heard or presented in a score. Components of this course include the development of notation skills, knowledge of terminology, performance skills, aural skills, composition skills, and analytical skills. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

CREDIT: 0.5 per semester TYPE: Advanced Placement GRADE: 11-12
PREREQUISITE: Two years in a performing ensemble, Theory I, or equivalent competency, and approval of the instructor required.

THEATRE

INDEPENDENT STUDY THEATRE ARTS – 017090

Independent Study Theatre Arts is designed for advanced students who wish to pursue individualized course work beyond the school day. All work is supervised by a theatre arts instructor. Students must complete a minimum of 66 hours of supervised activities for each 0.5 unit of credit and submit a minimum of two projects as determined by the student and the instructor. A maximum of six units of elective credit may be earned through independent study and/or work study programs while in high school.

COURSE NOTE: This unit(s) may not count as a required course.
CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: 2.0 cumulative grade point average and approval of department chairperson, principal, supervisor of instruction, and director of Teaching, Learning and Professional Development required.

THEATRE ARTS 1 – 017520

This course consists of a basic introduction to the performance, technical, and academic aspects of drama. This includes a survey of major plays and theatre history. It develops students' appreciation of the theatre through a variety of projects, performances, and activities.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12

ADVANCED STUDIES IN TECHNICAL THEATRE – 017500

In this course, students are instructed in the theoretical base and the practical application of the various areas of theatre technology. The goal is to develop a cadre of qualified stage crew members who can manage the auditorium, thus meeting both school and community needs.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Previous participation in the theatre through the after school activity and/or Theatre 1 and approval of the instructor required.

THEATRE ARTS 2 – 017620

This course introduces theatre criticism and builds on the performance skills acquired in Theatre Arts 1. Students are expected to work collaboratively and independently on projects. A more in-depth study of plays, character development, and technical areas is stressed.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Theatre Arts 1

THEATRE ARTS 3 (CM) – 017720

This course introduces directing and continues to build on the skills developed in Theatre Arts 2. Advanced level work is done in acting, directing, and stagecraft with an emphasis on production. Students continue their study of classic plays and auditioning skills. At this level, students are expected to begin to develop a specialty area. Emphasis is placed on public performance as well as theatrical design, theory, and practice.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: Theatre Arts 2

THEATRE ARTS 4 (CM) – 017830

This course is designed for advanced experiences in theatre. Instruction is planned collaboratively with students to produce and direct a play for public performance. Emphasis is placed on quality performance and the collaborative design and production process of directing. Students continue to develop skills needed in their areas of interest.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: Theatre Arts 3

VISUAL ARTS

CRAFTS 1 – 066200

Students will discover the importance of design elements and principles through a variety of media. The elements to be explored are color, line, texture, shape, form, and balance. Each element will be emphasized through crafts. Students will be introduced to each craft's history and aesthetic qualities.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12

INDEPENDENT STUDY VISUAL ARTS – 062090

Independent Study Visual Arts is designed for advanced students who wish to pursue individualized course work beyond the school day. All work is supervised by a member of the Visual Arts Department. Students must complete a minimum of 66 hours of supervised activities for each 0.5 unit of credit and submit a minimum of two projects as determined by the student and the instructor. (A maximum of six units of elective credit may be earned through independent study and/or work study programs while in high school.)

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: 2.0 cumulative grade point average and approval of department chairperson, principal, supervisor of instruction, and director of Teaching, Learning and Professional Development required.

VISUAL ARTS 1 – 061100

This course is designed to enable students to acquire and use the basic elements and principles of art. Through the use of the various media, students will work with line, color, texture, shape, and form. Students will also learn to create unity, movement, variety, proportion, balance, rhythm, and emphasis.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12

COMMERCIAL ART – 065200

During this course, students study the principles of design basic to advertising design, such as lettering, posters, layout, and printing processes, and applied design, such as ceramics, jewelry, metal, textiles, and wood.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Visual Arts 1

CRAFTS 2 – 066000

This course expands on the use of the elements and principles of design, which include color, line, texture, shape, form, and balance, in creating projects in a variety of media. Each element will be emphasized through crafts. Students will continue their study of the history of crafts and the unique aesthetic value of each craft.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Crafts 1

PHOTOGRAPHY – 069010

Students will explore photography as an artistic medium both in the initial composing of the visual image during shooting as well as in processing. Processing of the print may be in the form of traditional developing and/or digital manipulation. Students will learn to use a 35mm camera and/or digital camera to influence the final image by manipulating camera settings. In digital photography, students will gain an understanding of digital photography, current computer technology, and digital developing. They will gain an understanding of photographic principles such as the reaction of light on film and photographic paper and how various techniques can be creatively employed to achieve a variety of effects. In traditional photography, students will learn to process negatives and print black and white photographs. After learning and experimenting with processes, students will be given assignments to solve visual problems. Critiques will be held to discuss and share ways in which individuals have approached and solved these problems. Students will explore the medium through the effective use of the elements and principles of art. During the course students will be expected to complete written assignments on the history of photography and formal art criticisms of well-known photographs. Students will need to have a basic background in computer operating systems for digital photography.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Visual Arts 1 and approval of the instructor required.

SCULPTURE – 067200

During this course, students will explore the fundamentals of ceramics and sculpture using varied media. Emphasis will be placed upon the principles of art.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12

VISUAL ARTS 2 – 062200

This course expands upon the basic elements and principles to a more technical level. Students will also experience additional media, such as antique crayon, tissue paper, painting, watercolor, and sculpture.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Visual Arts 1

ADVANCED PLACEMENT ART HISTORY – 069550

The Advanced Placement Art History course makes it possible for highly motivated high school students to do college level work. Students will gain an understanding and enjoyment of architecture, sculpture, painting, and other art forms within historical and cultural contexts. Students will examine major forms of artistic expression from the past and the present from a variety of cultures. They learn to look at works of art critically, with intelligence and sensitivity, and to analyze what they see. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

CREDIT: 0.5 per semester TYPE: Advanced Placement GRADE: 11-12
PREREQUISITE: Completion of at least two high school visual arts and/or social studies courses and approval of the instructor required.

ADVANCED PLACEMENT STUDIO ART - DRAWING PORTFOLIO – 069250

The Advanced Placement Studio Art course makes it possible for highly motivated high school students to do college level work. Students submit a portfolio of work for evaluation at the end of the school year. The drawing portfolio represents a composite of various introductory college drawing courses. Students prepare their portfolios through organized AP instruction. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

CREDIT: 0.5 per semester TYPE: Advanced Placement GRADE: 11-12
PREREQUISITE: Completion of at least two high school visual arts courses, including Visual Arts 2, and approval of the instructor required.

ADVANCED PLACEMENT STUDIO ART - THREE-DIMENSIONAL DESIGN PORTFOLIO – 069450

The Advanced Placement Studio Art course makes it possible for highly motivated high school students to do college level work. The portfolio is intended to address a broad interpretation of three-dimensional design issues. Students will demonstrate proficiency in three-dimensional design using a variety of sculptural issues in depth and space. These may include mass, volume, form, plane, light, and texture. Such elements and concepts can be articulated through additive, subtractive, and/or fabrication processes. Student portfolios may include traditional sculpture, architectural models, apparel, ceramics, fiber arts, or metal works. Students submit a portfolio of work for evaluation at the end of the school year. Students prepare their portfolios through AP instruction. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

CREDIT: 0.5 per semester TYPE: Advanced Placement GRADE: 11-12
PREREQUISITE: Completion of at least two high school visual arts courses, including Visual Arts 2, and approval of the instructor required.

ADVANCED PLACEMENT STUDIO ART - TWO-DIMENSIONAL DESIGN PORTFOLIO – 069350

The Advanced Placement Studio Art course makes it possible for highly motivated high school students to do college level work. The portfolio is intended to address a very broad interpretation of two-dimensional design issues. Students will demonstrate proficiency in two-dimensional design using a variety of art forms. These may include, but are not limited to graphic design typography, digital imaging, photography, collage, fabric design, weaving, illustration, painting, and print making. Students submit a portfolio of work for evaluation at the end of the school year. Students prepare their portfolios through organized AP instruction. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

CREDIT: 0.5 per semester TYPE: Advanced Placement GRADE: 11-12
PREREQUISITE: Completion of at least two high school visual arts courses, including Visual Arts 2, and approval of the instructor required.

VISUAL ARTS 3 (CM) – 063330

This course is designed for students who plan to enter art-centered professions. Individualized instruction based on students' specific interests allows them to develop their visual arts skills. In addition to individual contracts, students work on required projects.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: Visual Arts 2

VISUAL ARTS 4 (CM) – 064430

This course provides additional art experiences for highly advanced students. During the course, students continue developing individualized art activities, projects, and portfolios.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 12

PREREQUISITE: Visual Arts 3

JUNIOR RESERVE OFFICER TRAINING CORPS

The Junior Reserve Officer Training Corps Program (JROTC) is a program which helps today's high school student become tomorrow's citizen. The JROTC program ensures that the requirements of public law are met and provides guidance concerning effective operation of the unit in accordance with military standards. The JROTC also provides uniforms and curriculum materials. Required activities may be held after school and on weekends. Instructors are retired officers and noncommissioned officers who are members of the school faculty.

Enrollment in JROTC does not require students to complete any military obligation and is not a recruiting program. Enrollment in JROTC is not a guarantee of one's eligibility to enter the military after graduation. It is the intent of the program to provide students with the tools for success after high school, regardless of a student's career path. Benefits available for students wishing to pursue further military avenues are:

- *Qualified cadets who complete two years of the program may compete for JROTC College Scholarships.*
- *Qualified cadets are eligible for application to military academies.*
- *Cadets who complete the JROTC program are entitled to enlist at higher pay grades than normal enlisted.*

JROTC - CHS

AIR FORCE JUNIOR RESERVE OFFICER TRAINING CORPS 1 – 179900

Aerospace science studies the heritage of flight beginning with the early legends of flight and continuing with the contributions of flight through World War I. The development of air power including the advances made in aviation and the role of air power through World War II; the importance of flight in the post World War II, Korea, and Vietnam eras; and contemporary aviation, focusing on humanitarian airlifts, missions in support of national objectives, and Desert Shield/Desert Storm are studied. Leadership education studies customs and courtesies, including United States flag etiquette, the hand salute, respect for authority, and allegiance to our country. Students gain an appreciation of the need for discipline in military activities and instruction on the proper wear and care of the uniform. Study habits, time management, suicide prevention, smoking prevention, gangs and youth violence prevention, ethics, drug and alcohol abuse prevention, and first aid are covered.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12

AIR FORCE JUNIOR RESERVE OFFICER TRAINING CORPS 2 – 179910

Aerospace science studies the atmospheric environment, human requirements of flight, and the basic principles of flight physiology, including contribution of aerospace medicine and human engineering. Protective equipment and simulators are examined, along with surviving and living in space. The principles of aircraft including aerodynamics forces and their relationship to atmospheric properties, and the examination of the structure of the aircraft, its central mechanisms, and its flight characteristics are studied. Principles of navigation introduces students to aircraft instruments, including both flight and navigational procedures. Leadership education focuses on listening skills, nonverbal communication, speaking before a group, understanding individual and group behaviors, and basic leadership concepts. Students are placed in positions of responsibility that directly contribute to running the cadet corps.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: AIr Force Junior Reserve Officer Training Corps 1

AIR FORCE JUNIOR RESERVE OFFICER TRAINING CORPS 3 – 179920

Aerospace science studies the space environment, space programs, space technology, and manned spacecraft. Areas of concentration include the solar system, international space exploration, and manned space flight from Mercury to the present. Leadership education focuses on personnel counseling and the fundamentals of financial, personal, and stress management. Students are given the experience of holding leadership positions in the cadet organization.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: AIr Force Junior Reserve Officer Training Corps 2

AIR FORCE JUNIOR RESERVE OFFICER TRAINING CORPS 4 – 179930

The fourth year curriculum, determined by the instructor, is based upon the needs of the students. Options include management of the cadet corps, a ground school course that provides the foundation for students interested in receiving a private pilot's license, and the study of aerospace careers. Leadership education places emphasis on which path to take after high school with information on how to apply for admission to college, how to begin the job search including completing the job application, writing the resume, and preparing for the job interview.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 12
PREREQUISITE: AIr Force Junior Reserve Officer Training Corps 3

JROTC - GMHS

NAVY JUNIOR RESERVE OFFICER TRAINING CORPS 1 – 178900

Students are introduced to the meaning of citizenship, the elements of leadership, and the historically significant role of sea power in the United States. Course content includes the Navy's mission and organization, maritime geography, sea power, Naval history through 1815, navigation, basic seamanship, oceanography, health education, first aid, and drugs, alcohol, and tobacco abuse prevention.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-11

NAVY JUNIOR RESERVE OFFICER TRAINING CORPS 2 – 178910

The course further develops the traits of citizenship and leadership, introduces the technical areas of Naval science, and explores the vital importance of the world oceans to the continued well-being of the United States. Course content includes leadership theory, career planning, Naval history 1815 through 1930, Naval ships and shipboard evolutions, weapons, navigation fundamentals, small boat seamanship, meteorology, weather, survival training, and orienteering.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Navy Junior Reserve Officer Training Corps 1

NAVY JUNIOR RESERVE OFFICER TRAINING CORPS 3 – 178920

Military leadership, teamwork, order and discipline, and fundamentals of United States democracy are studied. Course content includes leadership and discipline, military justice, astronomy, international law and the sea, Naval history 1930 through the nuclear age, intelligence and national security, challenges of research, electricity, and electronics.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 11-12

PREREQUISITE: Navy Junior Reserve Officer Training Corps 2

NAVY JUNIOR RESERVE OFFICER TRAINING CORPS 4 – 178930

The course is focused on practical leadership and includes instruction in theoretical and applied aspects of leadership, training, and evaluation of performance. Students become aware of the techniques used to create motivation, develop goals and activities for a work group, and the proper way to set a leadership example. Cadets will apply these principles with other cadets in the areas of military drill and inspections, athletic events, and in other school activities.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 12
PREREQUISITE: Navy Junior Reserve Officer Training Corps 3

ARMY JUNIOR RESERVE OFFICER TRAINING CORPS 1 – 179950

The course includes classroom instruction and laboratory instruction in the history, customs, traditions, and purposes of Army ROTC. Basic leadership skills, including leadership principles, values, and attributes are stressed. Students receive instruction on the proper wear and care of the uniform. Study habits, test taking techniques, reading, comprehension strategies, communication skills, conflict management, and writing skills are covered. Financial planning is introduced. Physical fitness, diet, nutrition, healthy lifestyles, substance abuse prevention, and basic first aid are covered. Also included in the course is an overview of geography, study of the United States Constitution, responsibilities of United States citizens, and the federal justice system.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-11

ARMY JUNIOR RESERVE OFFICER TRAINING CORPS 2 – 179960

The course includes classroom instruction and laboratory instruction expanding on the content and skills taught in Army JROTC 1. Equal opportunity and sexual harassment are introduced. Instruction on leadership styles and theories, as well as the basic principles of management are covered. Students complete self-assessments to determine their learning style and skill levels. Students learn to develop lesson plans for instruction. Community projects to assist in drug prevention efforts are held. Dietary guidelines, map reading skills, history of the United States Constitution and the role of political parties in the election process are taught.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Army Junior Reserve Officer Training Corps 1

ARMY JUNIOR RESERVE OFFICER TRAINING CORPS 3 – 179970

This course includes classroom and laboratory instruction to expand and refine the concepts and principles introduced and developed during the level 1 and 2 courses. Students will be involved with highly focused military protocol and content areas that include: citizenship, specific leadership strategies, presentation skills, conflict management, career planning, social responsibility, financial planning and money management, and citizenship in American history. Students will experience appropriate command and leadership roles as part of this course.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 11-12
PREREQUISITE: Army Junior Reserve Officer Training Corps 2

ARMY JUNIOR RESERVE OFFICER TRAINING CORPS 4 – 1799870

This course includes classroom and laboratory instruction to refine the command and leadership qualities for young cadets. Students will be placed in primary leadership roles with significant responsibility consistent with Army requirements. Content areas include: citizenship in action, service to the nation, leadership theory and application, qualities for success, financial planning and applications for fiscal responsibility, and teaching skills. This course will enable students to focus on high quality command and decision situations as leaders in a military environment.

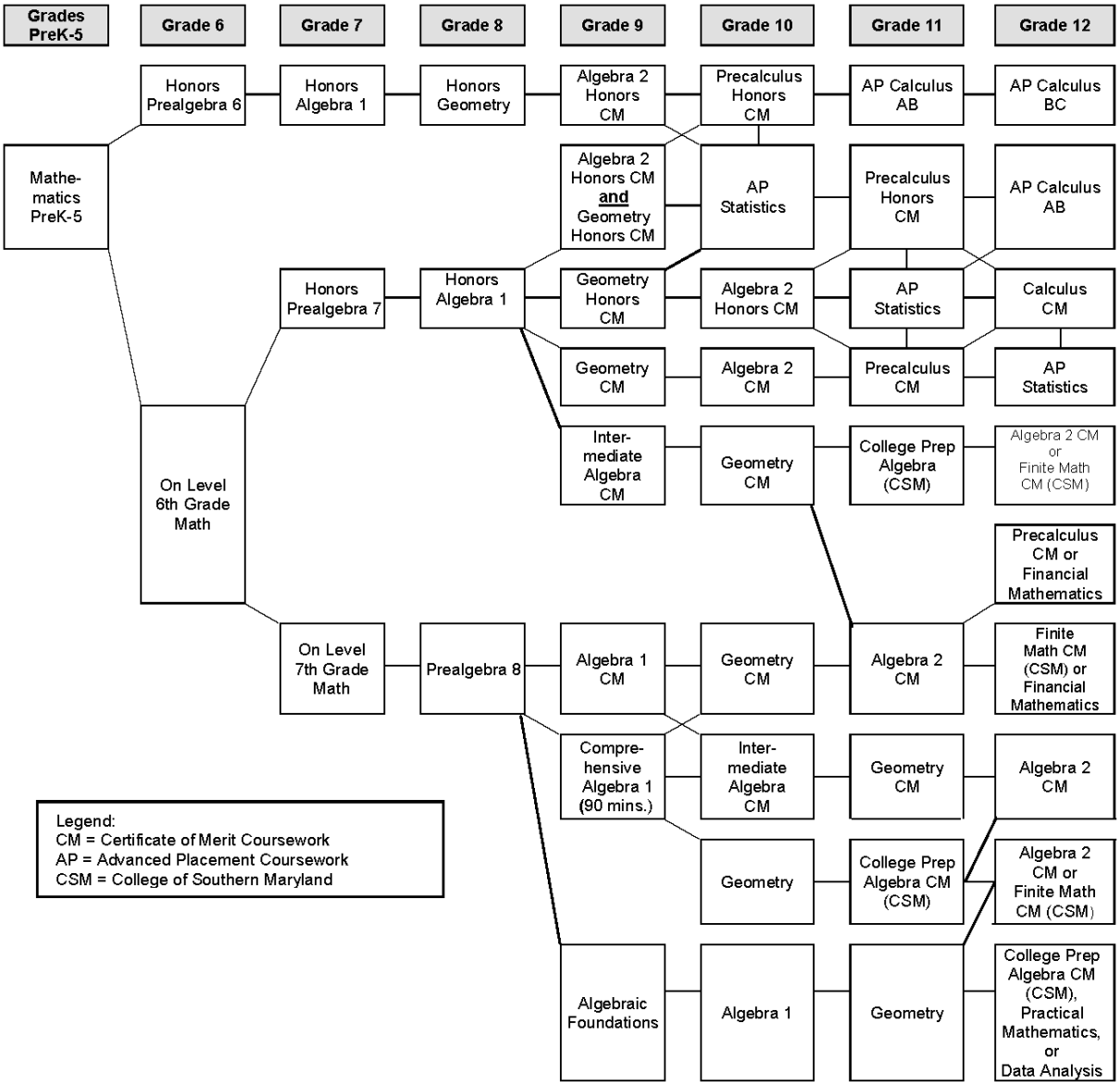
CREDIT: 0.5 per semester TYPE: Standard GRADE: 12
PREREQUISITE: Army Junior Reserve Officer Training Corps 3

The mathematics program is designed to provide students with a level of mathematics competency sufficient for entry into either the world of work or higher education. Students are required to earn a minimum of three credits in mathematics for graduation that must include one credit in topics of algebra and one credit in topics of geometry. Students are required to pass the Maryland High School Assessment for Algebra/Data Analysis.

Students should be preparing for a career, be aware of the mathematics skills necessary for that career field, and plan their mathematics schedules accordingly. The efficient use of graphing calculators will be part of the high school assessments for mathematics and, therefore; instruction using the Texas Instruments TI-84 Silver Edition or another calculator with equivalent capability will be included in nearly all mathematics courses. Students who are planning to attend a four-year college should take, as a minimum, 4 credits to include Algebra 1, Geometry, and Algebra 2. They should also take as many additional mathematics courses as possible. Close attention should be paid to the prerequisites for each course and any deviation from them requires the prior approval of the department chairperson.

Some students may complete Algebra 1 and Geometry in middle school. Those students will receive high school credit for this/these course(s) but the grades will not be used for the calculation of high school grade point average or rank in class. Students entering grade 9 having successfully completed Algebra 1 and Geometry should enroll in Algebra 2 (CM or Honors). Students entering grade 9 with an A, B, or C in Algebra 1 should be enrolled in Geometry. Students entering grade 9 with a D in Algebra 1 should be encouraged to enroll in Intermediate Algebra.

PROSPECTIVE K-12 MATHEMATICS SEQUENCE



MATHEMATICS FOR DAILY LIVING – 030120

Students will explore aspects of number concepts, money management, and measurement in school-based and community settings. Emphasis is on the functional application of skills in order to maximize independence in the home, school, community, and world of work. This course is only for students who will receive a Maryland High School Certificate.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Approval of the Individualized Education Program Team required.

ALGEBRAIC FOUNDATIONS – 030130

At the conclusion of the course, the students will demonstrate an understanding of variables, positive and negative numbers, mathematical equations in one variable, and an ability to calculate with algebraic expressions. They will have a beginning proficiency with graphing, and will interpret data displayed in bar graphs, line plots, and scatter plots. They will use manipulatives and physical models to estimate probabilities.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9
PREREQUISITE: Recommendation of middle school principal required.

ALGEBRA 1 COMPREHENSIVE – 031160

At the conclusion of the course, the students will be able to demonstrate an ability to interpret and use variable expressions. They will perform multi-step calculations following the correct order of operations. They will have proficiency with graphing that includes plotting in the coordinate system and the ability to write the linear equation from the slope of a line and a point on the line. They will be able to interpret data displayed in graphs and calculate mean, median, quartiles, and ranges. The Texas Instrument TI-84 Silver Edition, or a calculator with equivalent capability, is recommended. This course will prepare students for the High School Assessment in Algebra/Data Analysis. This course meets for a 90 minute period.

COURSE NOTE: This is a 90 minute course.
CREDIT: 1 per semester TYPE: Standard GRADE: 9

ALGEBRA 1 (CM) – 031130

At the conclusion of the course, the students will demonstrate the ability to interpret, use, and apply polynomial expressions and equations, graph linear equations and linear systems, factor algebraic expressions, calculate with rational, radical, and exponential expressions, and apply appropriate technologies and statistical methods for interpreting data and communicating results. The use of a graphing calculator will be an integral part of the course. The Texas Instruments TI-84 Silver Edition or a calculator with equivalent capability is recommended. This course will prepare students for the High School Assessment in Algebra/Data Analysis.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 9-12
PREREQUISITE: Recommendation of previous mathematics instructor required.

ALGEBRA 1 – 031120

At the conclusion of the course, the students will demonstrate an ability to interpret and use variable expressions. They will perform multi-step calculations following the correct order of operations. They will have a proficiency with graphing that includes plotting in the coordinate system, and the ability to write the linear equation from the slope of a line and a point on the line. They will be able to interpret data displayed in graphs and calculate mean, median, quartiles, and ranges. The Texas Instruments TI-84 Silver Edition or a calculator with equivalent capability is recommended. This course will prepare students for the High School Assessment in Algebra/Data Analysis.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-11
PREREQUISITE: Recommendation of previous mathematics instructor required.

INTERMEDIATE ALGEBRA (CM) – 031630

This course is intended for students who wish to take Algebra 2, but need additional preparation. At the conclusion of the course, the students will demonstrate the competencies listed for Algebra 1. They will have additional exposure to methods of graphing, statistical methods, and appropriate technologies for interpreting data and communicating results. The use of a graphing calculator will be an integral part of the course. The Texas Instruments TI-84 Silver Edition or a calculator with equivalent capability is recommended.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 9-12
PREREQUISITE: Recommendation of Algebra 1 instructor required.

GEOMETRY – 032220

At the conclusion of the course, the students will demonstrate an ability to interpret and use parallel lines and planes. They will demonstrate the ability to apply the properties of similar and congruent figures. They will be able to calculate perimeter, circumference, area, volume, and surface area of two- and three-dimensional figures. They will use the Pythagorean Theorem, apply the properties of classic triangles, and understand the trigonometric ratios for right triangles. The Texas Instruments TI-84 Silver Edition or a calculator with equivalent capability is recommended.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Algebra 1

GEOMETRY (CM) – 032230

At the conclusion of the course, the students will demonstrate the ability to interpret, use, and apply the properties of geometric figures by using inductive and deductive reasoning. This study includes parallel and perpendicular lines, angle relationships, and triangle congruencies and similarities. Additional topics include area and perimeter of polygons and circles; the volume of prisms, cones and spheres; the Pythagorean Theorem; and introduction to the sine, cosine, and tangent ratios. The Texas Instruments TI-84 Silver Edition or a scientific calculator is recommended.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 9-12
PREREQUISITE: A minimum of a 2.0 average in Algebra 1 or equivalent competency required.

GEOMETRY (HONORS) – 032240

This course is an honors course for ninth grade students who took Algebra 1 in the eighth grade. The course outline is the same as 032230 Geometry, but with enhancements, more sophisticated applications, and a thorough treatment of right triangle trigonometry. The Texas Instrument TI-84 Silver Edition or a scientific calculator is recommended.

CREDIT: 0.5 per semester TYPE: Honors GRADE: 9
PREREQUISITE: A minimum of a 2.0 average in Algebra 1 (Honors) or equivalent competency required.

COLLEGE PREPARATORY ALGEBRA (CM) – 031230

College Preparatory Algebra is taught as a partnership between the College of Southern Maryland and St. Mary's County Public Schools. This course is designed for students who plan to attend the community college in the fall and need to strengthen their mathematics skills. The curriculum, course materials, and grading policy is set by the College of Southern Maryland and is taught by teachers of the St. Mary's County Public Schools. The emphasis of this course is to review and strengthen algebraic concepts enabling students to enroll in the College of Southern Maryland mathematics credit courses.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: 2 credits in mathematics including one credit in Algebra and one credit in Geometry and plan to attend community college after high school required.

ALGEBRA 2 (CM) – 032130

At the conclusion of the course, the students will demonstrate the ability to interpret, use, and apply polynomial expressions and equations, graph linear and quadratic equations, linear inequalities, and linear systems. They will be introduced to the conic sections and polar coordinates. They will also factor algebraic expressions; calculate with rational, radical, absolute value, and exponential expressions; and will solve quadratic equations by a variety of methods. They will apply appropriate technologies and statistical methods, including matrices and determinants, for interpreting data and communicating results. The use of a graphing calculator will be an integral part of the course. The Texas Instruments TI-84 Silver Edition or a calculator with equivalent capability is recommended. Students passing this course with an A or a B will receive a pre-requisite waiver with the College of Southern Maryland (CSM), and be eligible for placement in MTH-1100 or higher at CSM.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 9-12
PREREQUISITE: A minimum of a 2.0 average in Algebra 1 or equivalent competency required.

ALGEBRA 2 (HONORS) – 032140

This course is for ninth or tenth grade students who have successfully completed Algebra 1 and Geometry. The course description is the same as 032130, Algebra 2, but with enhancements, more detailed applications, and greater acceleration. Exponential and logarithmic functions, sequences and series, coordinate geometry, matrix algebra, and the conic sections will be added and/or enriched. Students passing this course with an A or a B will receive a pre-requisite waiver with the College of Southern Maryland (CSM), and be eligible for placement in MTH-1100 or higher at CSM.

CREDIT: 0.5 per semester TYPE: Honors GRADE: 9-10
PREREQUISITE: A minimum of a 2.0 average in Geometry (CM) or equivalent competency required.

ALGEBRA 3 (CM) – 032210

This course is designed to improve higher order algebra skills. The skills learned in this course will prepare students for college placement examinations. The topics to be studied include logarithms, rational functions with emphasis on graphing and domain/range, conics, basic data analysis, sequences and series, trigonometric rations, functions, identities, and graphs.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: Algebra 2

FINITE MATHEMATICS (CM) – 033140

Finite Mathematics is taught as a partnership between the College of Southern Maryland and St. Mary's County Public Schools. Students learn linear modeling, graphical linear programming, matrix solutions to systems of equations, logic, sets, counting, probability, and the use of recursive formulas in the mathematics of finance. Particular emphasis is placed on developing problem solving skills with graphing calculators used extensively as tools to enhance those skills. The curriculum, course materials, and grading policy is set by the College of Southern Maryland and is taught by teachers of the St. Mary's County Public Schools. Students may also seek college credit through the College of Southern Maryland.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: A minimum of a 2.0 average in Algebra 2 or equivalent competency required.

PRECALCULUS (CM) – 031430

At the conclusion of the course, the students will demonstrate the ability to interpret, use, and apply mathematical concepts from a wide variety of functional relationships including trigonometric, circular, composite, inverse, exponential, and logarithmic. They will apply the fundamental concepts of trigonometry and make connections with analytic geometry. They will also isolate roots of algebraic expressions, investigate parametric equations, and solve absolute value, logarithmic and exponential expressions. They will apply appropriate technologies and statistical methods for studying measures of central tendency, measures of dispersion, and correlation of data. The use of a graphics calculator will be an integral part of the course. The Texas Instruments TI-84 Silver Edition or a calculator with equivalent capability is recommended.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 10-12
PREREQUISITE: A minimum of a 2.0 average in Algebra 2 and Geometry (CM) required.

PRECALCULUS (HONORS) – 031440

This course is for students who have successfully completed Algebra 2 and Geometry. The course outline is the same as 031430 Precalculus, but with enrichment topics, more sophisticated applications, a formal study of limits, and an introduction to differential calculus. The Texas Instruments TI-84 Silver Edition or a calculator with equivalent or greater capability is recommended.

CREDIT: 0.5 per semester TYPE: Honors GRADE: 10-12
PREREQUISITE: A minimum of a 2.0 average in Geometry (Honors) or equivalent with approval of the instructor required.

CALCULUS (CM) – 031530

At the conclusion of the course, the students will demonstrate the ability to interpret, use, and apply the basic tenets of differential and integral calculus. They will have reviewed the fundamental concepts of trigonometry and the connections with analytic geometry. They will apply the derivatives and integrals of algebraic and trigonometric functions in complex problem-solving situations. They will have been introduced to the differentiation and integration of transcendental functions and some advanced methods of integration. The Texas Instruments TI-84 Silver Edition or a calculator with equivalent or greater capability is recommended.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: Precalculus

ADVANCED PLACEMENT CALCULUS AB – 031730

This course will review the properties of algebraic, trigonometric, exponential, and logarithmic functions. Other topics will include limits, continuity, differentiation, applications of derivatives, antiderivatives, techniques of integration, the definite integral, and applications of integration. The Texas Instruments TI-84 Silver Edition or a calculator with equivalent or greater capability is recommended. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

CREDIT: 0.5 per semester TYPE: Advanced Placement GRADE: 11-12
PREREQUISITE: Precalculus

ADVANCED PLACEMENT CALCULUS BC – 031830

This course is designed to emphasize a multirepresentational approach to calculus, with concepts, results, and problems being expressed graphically, numerically, analytically, and verbally. Technology will be used regularly to reinforce the relationships among the multiple representations of functions, to confirm written work, and to implement experimentation, and to assist in interpreting results. The Texas Instruments TI-84 Silver Edition or a calculator with equivalent or greater capability is recommended. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

CREDIT: 0.5 per semester TYPE: Advanced Placement GRADE: 11-12
PREREQUISITE: Advanced Placement Caluculus AB

ADVANCED PLACEMENT STATISTICS – 030930

At the conclusion of the course, the students will demonstrate an understanding of collecting, analyzing, and drawing conclusions for data. They will have proficiency in exploring data to observe patterns and variations. They will know how to plan a statistical study through deciding what and how to measure, and by anticipating patterns. They will produce models and simulations, and use confirming models for statistical inferences. The Texas Instruments TI-84 Silver Edition or a calculator with equivalent or greater capability is recommended. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

CREDIT: 0.5 per semester TYPE: Advanced Placement GRADE: 11-12
PREREQUISITE: Algebra 1, Algebra 2, and Geometry or equivalent, and recommendation of previous instructor required.

PRACTICAL MATHEMATICS – 030350

At the conclusion of the course, the students will demonstrate an understanding of mathematics as a meaningful tool in daily living. They will explore the applications of proportionality, variation, patterns, and calculations. An emphasis will be given to statistical representations, mathematical modeling, and the use of mathematics in information sharing.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 11-12
PREREQUISITE: 2 credits in mathematics including one credit in Geometry or equivalent required.

DATA ANALYSIS PLUS (CM) – 030370

At the conclusion of the course, the students will demonstrate the ability to analyze and interpret data. Students will explore the awareness that problems with a foundation in reality must be developed by the collecting, summarizing, analyzing, and communicating of data. Topics of discrete mathematics will be discussed. Students will explore the use of technology in these applications. The Texas Instrument TI-84 Silver Edition graphing calculator is recommended.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: 2 credits in mathematics including one credit in Algebra and one credit in Geometry (CM) required.

ALGEBRA/DATA ANALYSIS HIGH SCHOOL ASSESSMENT REVIEW – 031100

This one-semester course is designed to assist students who passed Algebra, but need assistance with passing the Algebra/Data Analysis High School Assessment. The two Core Learning Goals assessed on the Algebra/Data Analysis High School Assessment, Functions and Algebra and Data Analysis and Probability will be emphasized. The 0.5 credit is awarded when the student successfully passes the Algebra/Data Analysis High School Assessment and does not count toward the three credits of mathematics required for high school graduation.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Need to satisfy the Algebra/Data Analysis HSA requirement. This does not count toward the three-credit mathematics requirement for graduation.

APPLIED ALGEBRA AND GEOMETRY – 030300

This course is designed to emphasize the application of the principles of Algebra, Geometry, and Data Analysis in a context of work-related situations. It will include video programs, problem-solving activities, calculators, and hands-on laboratory activities. The course is intended for students who learn best by applying skills in situations that are relevant to their lives.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Geometry

APPLIED DATA ANALYSIS – 030360

At the conclusion of this course, students will demonstrate the ability to interpret data that surrounds them in the real world. Students will explore that most problems are solved in the real world beginning with the collection of data followed by the summarization, analysis, and communication of results. Students will use Algebra concepts and technology in these applications. The Texas Instrument T1-84 Silver Edition graphing calculator is recommended.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 11-12
PREREQUISITE: 2 credits in mathematics including one credit in Algebra and one credit in Geometry required.

PRACTICAL STATISTICS AND PROBABILITY – 031920

The focus of this course will be on the use of statistics and data within business and industry today. Data will be collected, summarized, analyzed, and presented according to business and industry standards. Students will use algebra concepts and technology in these applications. The Texas Instruments T1-84 Silver Edition graphing calculator is recommended.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 11-12
PREREQUISITE: 2 credits in mathematics including one credit in Algebra and one credit in Geometry required.

ENGINEERING DESIGN AND ANALYSIS (CM) – 031930

Students will explore how engineers apply higher levels of mathematics in order to create sophisticated engineering drawings and designs. These applications will lead to challenging and rigorous engineering drawings used in a wide range of industrial/technical career fields. Applications of coordinate systems, non-uniform rational b-splines, solid 3-D imaging, surface transfers, engineering notation, nominal and actual sizes and vectoring will be explored. Students will use various industry based design software in an authentic design laboratory. Students will be required to connect numerous theoretical mathematics concepts with current engineering design practices. This course fulfills a mathematics credit and is taught at the Dr. James A. Forrest Career and Technology Center.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: Algebra 2 or approval of the instructor required.

INDEPENDENT STUDY MATHEMATICS – 032090

Independent Study Mathematics is designed for advanced students who wish to pursue individualized course work beyond the school day. All work is supervised by a member of the mathematics department. Students must complete a minimum of 66 hours of supervised activities for each 0.5 unit of credit and submit a minimum of two projects as determined by the student and the instructor. (A maximum of six units of elective credit may be earned through independent study and/or work study programs while in high school.)

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: 2.0 cumulative grade point average and approval of the department chairperson, principal, supervisor of instruction, and director of Teaching, Learning and Professional Development. This unit(s) of credit may not count as a required course.

PHYSICAL EDUCATION/HEALTH

Physical education programs provide students with the opportunity to learn skills necessary to perform a variety of physical activities, develop and maintain physical fitness through participation in regular physical activities, know the implications of and benefits from involvement in physical activities, and value physical activity and its contribution to a healthful lifestyle. Students must earn a minimum of 0.5 credit in physical education as a requirement for graduation.

Health education programs provide students with an understanding of health promotion and disease prevention concepts and the opportunity to identify and practice health-enhancing behaviors. Students will demonstrate the ability to use goal-setting and decision-making skills to address issues related to personal, family, and community health. Students must earn a minimum of 0.5 credit in health education as a requirement for graduation.

HEALTH EDUCATION – 070300

This course integrates physical education and health education concepts with an emphasis being placed on the decision-making process. Physical activities promote health-related fitness and personal skills development. This is the only course that satisfy the health education requirement for graduation (.5 credit total). It is recommended that students complete this course in grade 9.

COURSE NOTE: If you take this course, you must also take Physical Education.
CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-10

PHYSICAL EDUCATION – 070100

This course integrates physical education and health education concepts with an emphasis being placed on the decision-making process. Physical activities promote health-related fitness and personal skills development. This is the only course that satisfy the physical education requirement for graduation (.5 credit total). It is recommended that students complete this course in grade 9.

COURSE NOTE: If you take this course, you must also take Health Education.
CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-10

ADAPTED PHYSICAL EDUCATION – 071300

This course is designed to meet the unique physical education needs of individuals with disabilities through an individualized program of developmental activities, exercises, games, rhythms, and sports. An emphasis is placed on developing personal wellness and physical conditioning.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Approval of the Individualized Education Program Team required.

PERSONAL HEALTH MANAGEMENT – 071400

Students will focus on their ability to increase skills in the areas of personal needs, appropriate health and safety practices, managing routines, and participation in transition planning with adult service providers. Emphasis is on increasing personal independence in the home, school, and community. This course is only for students who will receive a Maryland High School Certificate.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Approval of the Individualized Education Program Team required.

AEROBICS AND PERSONAL FITNESS – 072000

This course is designed to assist students in developing muscular strength, flexibility, cardiovascular endurance, muscular endurance, and improving body composition. Students will recognize and monitor physical improvement through the use of a variety of assessment methods. This course is designed for students wishing to develop and then maintain an improved level of personal fitness.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Approval of the instructor required.

ATHLETIC COACHING AND OFFICIATING – 071510

This course is designed to provide students with the opportunity to develop the knowledge and skills associated with effective coaching and officiating. Students will study coaching theory, safety, physical conditioning, skill progression, and dealing with equipment and facility issues. Game rules and officiating techniques will be applied to game-like situations.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Approval of the instructor required.

ATHLETIC CONDITIONING 1 – 071200

This course is designed to help students improve their muscular strength, flexibility, cardiovascular endurance, muscular endurance, speed, and agility. Students will identify personal goals relative to the sport(s) they are interested in. Following an individualized assessment, students will adhere to a physical conditioning plan designed to meet their personal needs.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Approval of the coach and physical education department chairperson required.

OUTDOOR ADVENTURE AND LIFETIME SPORTS 1 – 070500

This course allows students to experience a variety of activities which will provide them with the skills and knowledge necessary to successfully participate in leisure activities throughout their lives. These activities will be seasonal in nature.

Students will learn the rules, terms, historical background, basic skills and safety aspects of a variety of individual, team and adventure activities such as Orienteering, Frisbee Golf or Badminton.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Successful completion of the Physical Education requirement for graduation.

OUTDOOR ADVENTURE AND LIFETIME SPORTS 2 – 070510

This course allows students to experience a variety of activities which will provide them with the skills and knowledge necessary to successfully participate in leisure activities throughout their lives. These activities will be seasonal in nature.

Students will learn the rules, terms, historical background, basic skills and safety aspects of a variety of individual, team and adventure activities such as Orienteering, Frisbee Golf or Badminton.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Successful completion of the Physical Education requirement for graduation.

PERSONAL WELLNESS – 071520

This course offers students a structured program that addresses personal weight and wellness concerns. Students will develop a personal weight management plan that addresses diet and physical exercise. Students will follow a personalized exercise plan and diet developed to achieve their personal goals. Body weight and measurements will be monitored and recorded on a weekly basis in a manner that respects individual privacy.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Approval of the instructor required.

SPECIAL STUDIES IN PHYSICAL EDUCATION – 072190

This course is designed to meet the special interests of students. Jogging/running, weight training, lifetime sports, the study of weight control as related to nutrition and fitness, and the physiology of a healthy body are possible focus areas for special study.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Approval of the instructor required.

TEAM SPORTS – 070200

This course is designed to move students toward higher levels of individual physical performance. Some advanced techniques and strategies are included with emphasis on participation. This course focuses on individual, lifetime, and selected team sports.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12

WELLNESS WALKING – 071600

This course is designed to meet the needs of students who are interested in becoming fit and healthy but are not interested in participating in traditional sports or athletic programs. Students will walk their way to personal fitness by designing and implementing a personalized walking routine as well as focusing on healthy nutritional food choices to encourage weight management, cardiovascular health, and disease prevention. On-campus trails, the running track, and exercise rooms will be used throughout the course. Students will utilize technology such as heart rate monitors and pedometers and record their progress on a regular basis.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Successful completion of the Physical Education requirement for graduation.

YOGA, PILATES, AND DANCE – 071800

This course fuses the best of ancient yoga practice with the core stabilizing and regenerative dynamics of Pilates and the creative flow of a variety of energizing dance moves. The course focuses on controlled physical movements that stretch and strengthen major muscle groups. Correct breathing technique is emphasized throughout workouts to help increase lung capacity, and enhance stamina and endurance. The breath activates the abdominal and pelvic floor muscles helping to protect and strengthen the lower back, tone the abdomen, and assist with core stability.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Successful completion of the Physical Education requirement for graduation.

ATHLETIC CONDITIONING 2 – 071700

This advanced course builds on the fundamentals learned in Athletic Conditioning 1 and focuses on performance at a higher level. The course is designed to help students further improve their muscular strength, flexibility, cardiovascular endurance, muscular endurance, speed, and agility. Students will identify personal goals relative to the sport(s) they are interested in. Following an individualized physical fitness assessment, students will adhere to a physical conditioning plan designed to meet their personal goals. Students will record and evaluate their progress on a continual basis and modify their goals and program accordingly. Students will continue to demonstrate correct form, technique, and safety procedures for a variety of conditioning exercises, and participate in more challenging exercises such as plyometrics.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 11-12
PREREQUISITE: Successful completion of Athletic Conditioning 1

FAMILY LIFE AND HUMAN DEVELOPMENT – 027300

This course is designed to assist students in understanding the basis of human sexual behavior and family relationships, responsibilities of marriage and parenthood, and the values underlying these concepts in American society. The work in this course includes the use of approved audiovisual materials.

COURSE NOTE: This course does not count toward the four year social studies credit requirement for graduation.
CREDIT: 0.5 per semester TYPE: Standard GRADE: 11-12
PREREQUISITE: Parental approval required.

SCIENCE

The science program in the high school is designed to meet the needs of students who have varying degrees of interest in science. Students must earn a minimum of three credits in science in order to meet the graduation requirement for high school. One credit of Biology is required for high school graduation. All science courses have a laboratory component and will include experimental design.

Students preparing for a specific career should be aware of the science background needed for that occupation and plan their science programs to meet that need. Students preparing to meet college entrance requirements should schedule additional science courses, including chemistry and physics. Students planning careers in scientific or technical vocations should enroll in as many science courses as their schedules permit.

Students are required to pass the Maryland High School Assessment for Biology. Scores will be recorded on students' high school transcripts as part of the high school graduation requirements.

CONCEPT-BASED PHYSICS (CM) – 044230

Ninth grade students are exposed to the ideas of physics and develop applied mathematical tools to guide their thinking. Students learn to describe and explain motion, the laws of electricity and magnetism, the laws of thermodynamics, vibrations and waves, and topics in modern physics. Concepts, practical applications, and scientific reasoning are emphasized. This laboratory-oriented course emphasizes scientific observation, investigation, experimental design, interpretation of data, problem-solving, critical thinking, analysis of scientific literature, and use of technology.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 9
PREREQUISITE: Algebra 1 (CM) or concurrent enrollment and proficient in mathematics on Maryland State Assessments (MSA) required.

EXPLORATIONS IN SCIENCE – 041110

This course provides an overview of the four core high school sciences: Physics, Chemistry, Biology, and Earth/Space Science. Concepts within each content with application to biology will be explored. Topics of study include physics concepts as they apply to Biology, chemical elements and compounds important to life, and Earth systems as they relate to life. The highly engaging course uses a product-based approach. The skills and process of science, including data analysis, reading strategies, and content specific writing, will be emphasized.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9

BIOLOGY 1 (HONORS) – 042240

This course is designed to challenge the highly able student who has been identified as talented in the area of science. Students learn how living organisms interact with living and nonliving components of the environment. They learn about the mechanism of evolutionary change and how traits are inherited and passed on to succeeding generations. The structure and function of cells and multicellular organisms is addressed, including biologically important molecules and their relationship to cell processes. This course is designed for students who have demonstrated above-grade level work in previous science courses. Advanced instruction will be given, preparing students for other advanced courses such as AP Biology. This laboratory-oriented course includes very high-level expectations in scientific observation, investigation, experimental design, interpretation of data, problem-solving, critical thinking, analysis of scientific literature, and use of technology. An extended project involving experimental design is required. Students who object to dissection will be given alternative activities. This course will prepare students for the High School Assessment in Biology. Biology is a required course, since passing the Biology High School Assessment is a requirement for graduation.

CREDIT: 0.5 per semester TYPE: Honors GRADE: 9-12
PREREQUISITE: A minimum of a 3.0 average in Algebra 1 and proficient in reading and mathematics on Maryland State Assessments (MSA) required.

INDEPENDENT STUDY SCIENCE – 042090

Independent Study Science is designed for advanced students who wish to pursue individualized course work during or beyond the school day. Students must complete a minimum of 66 hours of supervised activities for each 0.5 unit credit and submit a minimum of two projects as determined by the student and the instructor. All projects must include lab-based experimental design and be presented or published in a public venue such as Science Fair, on a public website, or at a seminar. Approval must be obtained through the Independent Study approval process. All work is supervised by a member of the science department. (A maximum of six units of elective credit may be earned through independent study and/or work study programs while in high school.)

COURSE NOTE: This unit may not count as a required course.
CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Biology (CM), 2.0 cumulative grade point average and approval of the department chairperson, principal, supervisor of instruction, and director of Teaching, Learning and Professional Development required.

BIOLOGY 1 – 042220

This course focuses on the study of biology with an emphasis on development of science skills and processes. Students learn how living organisms interact with living and nonliving components of the environment. They learn about the mechanism of evolutionary change and how traits are inherited and passed on to succeeding generations. The structure and function of cells and multicellular organisms is addressed, including biologically important molecules and their relationship to cell processes. This laboratory course emphasizes the development of skills in observation, investigation, interpretation of data, reading of scientific texts, and related writing skills. Students who object to dissection will be given alternative activities. This course will prepare students for the High School Assessment in Biology. Biology is a required course since passing the Biology High School Assessment is a requirement for graduation.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: One credit of science required.

BIOLOGY 1 (CM) – 042230

This course is designed for students who plan to attend college or who desire a strong background in science. Students learn how living organisms interact with living and nonliving components of the environment. They learn about the mechanism of evolutionary change and how traits are inherited and passed on to succeeding generations. The structure and function of cells and multicellular organisms is addressed, including biologically important molecules and their relationship to cell processes. This laboratory-oriented course emphasizes scientific observation, investigation, experimental design, interpretation of data, problem-solving, critical thinking, analysis of scientific literature, and use of technology. Students who object to dissection will be given alternative activities. This course will prepare students for the High School Assessment in Biology. Biology is a required course since passing the Biology High School Assessment is a requirement for graduation.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 10-12
PREREQUISITE: Concept-Based Physics (CM), Earth/Space Science, or a minimum of 3.0 in Earth/Space Science required.

BIOLOGY HIGH SCHOOL ASSESSMENT REVIEW – 042100

This course is designed to assist students who passed Biology, but need assistance with passing the Biology High School Assessment. The five content standards assessed on the Biology High School Assessment will be emphasized: Biological Molecules, Cells and Organisms, Inheritance of Traits, Evolutionary Change, and Independence of Organisms. The 0.5 credit is awarded when the student successfully passes the Biology High School Assessment and does not count toward the three credits of science required for high school graduation. Animal dissection will not be included.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Need to satisfy the Biology HSA requirement. This does not count toward the three-credit science requirement for graduation.

CHEMISTRY 1 – 043320

This course focuses on the study of chemistry with an emphasis on development of science skills and processes. This course emphasizes the application of chemistry to students' daily lives. Students learn about atomic structure and the relationship between structure, the properties of elements, and the bonds they form. The properties of compounds related to the arrangement and types of atoms they contain are addressed. Students learn how thermodynamics are related to chemical change and change of state. Students learn how to represent substances symbolically with chemical formulas. Also, students learn how matter is transformed in chemical reactions and how those chemical equations are represented symbolically. This laboratory course emphasizes the development of skills in observation, investigation, interpretation and analysis of data, reading of scientific texts, and related writing skills.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Algebraic Foundations or Algebra 1

CHEMISTRY 1 (CM) – 043330

This course is designed for students who plan to attend college or who desire a strong background in science. Students learn about atomic structure and the relationship between this structure, the properties of elements, and the bonds they form. The properties of compounds related to the arrangement and types of atoms they contain are addressed. Students learn how thermodynamics are related to chemical change and change of state. Students learn how to represent substances symbolically with chemical formulas. Also, students learn how matter is transformed in chemical reactions and how those chemical equations are represented symbolically. This laboratory-oriented course emphasizes scientific observation, investigation, experimental design, interpretation of data, problem-solving, critical thinking, analysis of scientific literature and use of technology.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 10-12
PREREQUISITE: Algebra 1

CHEMISTRY 1 (HONORS) – 043340

This course is designed to challenge the highly able student who has been identified as talented in the area of science and mathematics. Students learn about atomic structure and the relationship between this structure, the properties of elements, and the bonds they form. The properties of compounds related to the arrangement and types of atoms they contain are addressed. Students learn how to represent substances symbolically with chemical formulas. Also, students learn how matter is transformed in chemical reactions and how those chemical equations are represented symbolically. This course is designed for students who have demonstrated above grade level work in previous science courses. Advanced instruction will be given preparing students for other advanced courses such as AP Chemistry. This laboratory-oriented course includes very high-level expectations in scientific observation, investigation, experimental design, interpretation of data, problem-solving, critical thinking, analysis of scientific literature, and use of technology. An extended project involving experimental design is required.

CREDIT: 0.5 per semester TYPE: Honors GRADE: 10-12
PREREQUISITE: Algebra 1

CONCEPT-BASED PHYSICS – 044130

Students are exposed to the ideas of physics and develop applied mathematical tools to guide their thinking. Students learn to describe and explain motion, the laws of electricity and magnetism, the laws of thermodynamics, vibrations and waves, and topics in modern physics. Concepts, practical applications, and scientific reasoning are emphasized. This laboratory-oriented course emphasizes scientific observation, investigation, experimental design, interpretation of data, problem-solving, critical thinking, analysis of scientific literature, and use of technology. Emphasis will be placed on the development of algebra skills related to physics concepts.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Algebra 1 or concurrent enrollment required.

EARTH/SPACE SCIENCE – 041120

This course focuses on the study of Earth and the universe with an emphasis on development of science skills and processes. Students learn how advances in technology have enabled scientists to learn about Earth and the universe. The role of natural forces in the formation and movement of celestial bodies, including the Sun-Moon-Earth system is addressed. A study of how the transfer of energy and matter affect Earth systems such as atmospheric and oceanic circulation and how human activity affects these systems is included. The physical and historical nature of Earth is addressed in terms of the origin and structure of rocks, the rock cycle, plate tectonics, and geological changes over time. This laboratory course emphasizes the development of skills in observation, investigation, interpretation of data, reading of scientific texts, and related writing skills.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12

ENVIRONMENTAL SCIENCE (CM) – 046430

This course is designed for students who plan to attend college, or who desire a strong background in science. Students learn how matter and energy move through the biosphere. They investigate the relationships between organisms within the environment. The relationship between humans and Earth's resources is addressed. Students develop and apply knowledge and skills gained from an environmental issue investigation into an action project, which protects and sustains the environment. This extended project involves experimental design. This laboratory-oriented course emphasizes scientific observation, investigation, experimental design, interpretation of data, problem-solving, critical thinking, analysis of scientific literature, and use of technology. Students may not earn credit for both this course and the science part of Natural Resources Management 1.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 10-12
PREREQUISITE: Biology 1

ASTRONOMY (CM) – 043060

Students learn the structure of the solar system and universe, as well as the natural laws that govern both. Topics include solar system formation, planetary and celestial mechanics, and stellar evolution. This laboratory-oriented course includes high-level expectations in scientific observation, investigation, experimental design, interpretation of data, problem-solving, critical thinking, analysis of scientific literature, and use of various technologies.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: 1 credit in one or more of the following: Biology 1 (CM or H), Concept-Based Physics (CM) or Chemistry (CM or H) plus 1 credit in Algebra 1 or Algebra 1 (CM) required.

BIOLOGY 2 (CM) – 047330

This course extends the concepts of Biology 1 incorporating more depth in the areas of botany, microbiology, and zoology. A detailed study of the plant kingdom and its relationship to humans is covered in the first quarter. During the second quarter, students study microbiology, developing skills in working safely with bacteria while stressing the relationship between microbiology and the modern world. During the second semester, students study organ systems of animals and their life functions, including respiration, movement, obtaining food, digestion, excretion, circulation, behavior, and reproduction. This laboratory-oriented course emphasizes scientific observation, investigation, experimental design, interpretation of data, problem-solving, critical thinking, analysis of scientific literature, and use of technology. An extended project involving experimental design is required. Students who object to dissection will be given alternative activities. Students may enroll in either or both semesters of this course.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: 1 unit of credit of Biology or Biology (CM) and 1 additional science credit required.

ADVANCED PLACEMENT BIOLOGY – 047350

This course is designed to develop a conceptual framework for modern biology and to help students gain an appreciation of science as a process. The primary emphasis is on developing a deeper understanding of biological concepts and their application to real-world situations. The following ideas are essential to the understanding of AP Biology: a grasp of science as a process of inquiry; recognition of unifying themes that integrate the major topics of biology; and the application of biological knowledge and critical thinking to environmental and social concerns. Topics of study within this course include: molecules and cells, heredity and evolution, and organisms and populations. Students who object to dissection will be given alternative activities. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

CREDIT: 1 TYPE: Advanced Placement GRADE: 11-12
PREREQUISITE: A minimum of a 3.0 average in Biology (CM) and a minimum of a 3.0 average in Chemistry 1 (CM) and approval of the science instructor required.

CHEMISTRY 2 (CM) – 043350

This course extends the concepts of Chemistry 1, incorporating more depth in the areas of chemistry such as organic chemistry, nuclear chemistry, electrochemistry, chemical kinetics, and thermodynamics. This laboratory-oriented course emphasizes scientific observation, investigation, experimental design, interpretation of data, problem-solving, critical thinking, analysis of scientific literature, and use of technology. An extended project involving experimental design is required.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: Chemistry 1 and approval of the instructor required.

ADVANCED PLACEMENT CHEMISTRY – 043360

This course will allow students to attain a depth of understanding of fundamentals and a reasonable competence in dealing with chemical problems. It will contribute to the development of the students' abilities to think clearly and to express their ideas, orally and in writing with clarity and logic. Emphasis will be placed on chemical calculations and the mathematical formulation of principles and the kind of laboratory work done. Topics that are included within the course are: structure of matter, states of matter, reactions, descriptive chemistry, and laboratory. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

CREDIT: 1 TYPE: Advanced Placement GRADE: 11-12
PREREQUISITE: Approval of the instructor, Chemistry 1, and Algebra 2 required.

ADVANCED PLACEMENT ENVIRONMENTAL SCIENCE – 043090

This course provides students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them. Themes include science as a process, energy conversions that underlie all ecological processes, the interconnected systems of Earth, how humans alter natural systems, the cultural and social contexts of environmental problems, and the importance of developing practices that will achieve sustainable systems. It will contribute to the development of the students' abilities to think clearly and to express their ideas orally and in writing with clarity and logic. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

CREDIT: 1 TYPE: Advanced Placement GRADE: 11-12
PREREQUISITE: A minimum of 3.0 average in Biology and either Chemistry or Earth/Space Science, Algebra 1 and approval of the instructor required.

GEOLOGY (CM) – 043070

Students learn the dynamics of the Earth's surface and subsurface and the forces involved in shaping and reshaping them. Topics include geochemistry, rocks, plate tectonics, weathering, erosion, and geological time. This laboratory oriented course includes high-level expectations in scientific observation, investigation, experimental design, interpretation of data, problem-solving, critical thinking, analysis of scientific literature, and use of various technologies.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: 1 credit in 1 or more of the following: Biology 1 (CM or H), Concept-Based Physics (CM) or Chemistry (CM or H) plus 1 credit in Algebra 1 or Algebra 1 (CM) required.

INTRODUCTION TO HUMAN ANATOMY AND PHYSIOLOGY (CM) – 043080

Students learn the structure and function of human systems. Topics include basic chemistry, cell structure and function, tissues and the skeletal, muscular, nervous, cardiovascular, respiratory, urinary, digestive, endocrine, and reproductive systems. Students study the basic anatomy and functioning of human systems including musculoskeletal, cardiovascular, respiratory, digestive, nervous, and urogenial. This is a College of Southern Maryland course offered at the Dr. James A. Forrest Career and Technology Center. This course fulfills a science credit.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: A minimum of 3.0 GPA and "B" or better in Biology CM or Biology Honors.

PHYSICS 1 (CM) – 044330

This course is designed for students who plan to attend college or who desire a strong background in science. Students learn about and apply the concepts of vectors, motion, and forces to explain the physical world. The concepts of electricity and magnetism are studied and related to their role in nature and technology. Practical applications of the laws of thermodynamics are explored. Wave motion and its relationship to the understanding of various physical phenomena are studied. Also, students explore various topics in modern physics including the wave/particle duality of matter and nuclear energy. This laboratory-oriented course strongly emphasizes scientific observation, investigation, experimental design, interpretation of data, problem-solving, critical thinking, analysis of scientific literature, and use of technology.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: A minimum of a 3.0 average in Geometry and concurrent enrollment in Algebra 2 or completion of Algebra 2 required.

ADVANCED PLACEMENT PHYSICS B – 044450

This course will develop the student's ability to: read, understand, and interpret physical information, describe and explain the sequence of steps in the analysis of a particular physical phenomenon or problem, use basic mathematical reasoning, perform experiments, and interpret the results of observations, including making an assessment of experimental uncertainties. It will contribute to the development of the students' abilities to think clearly and to express their ideas, orally and in writing, with clarity and logic. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

CREDIT: 1 TYPE: Advanced Placement GRADE: 11-12
PREREQUISITE: A minimum of a 3.0 average in Physics 1 and Precalculus, or completion of Physics 1 with approval of the instructor required.

ADVANCED PLACEMENT PHYSICS C – 044460

This course integrates the concepts of calculus as appropriate in formulating physical principles and in applying them to physical problems. The sequence is more intensive and analytic than AP Physics B. Strong emphasis is placed on solving a variety of challenging problems, some requiring calculus. During the first semester, students will use calculus to analyze physics concepts related to Newtonian mechanics. The use of calculus in problem solving and in derivations increases as the course progresses. During the second semester, students will use calculus to analyze physics concepts

related to electricity and magnetism. Calculus is used in formulating principles and in solving problems. Technology will be used regularly to reinforce the relationships among the multiple representations of functions, to confirm written work, to implement experimentation, and to assist in interpreting results. The Texas Instruments TI-84 Silver Edition or a calculator with equivalent or greater capability is recommended. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

CREDIT: 1 TYPE: Advanced Placement GRADE: 11-12
PREREQUISITE: A 3.0 in Precalculus. Also, completion of Physics 1 or 5.0 in AP Chemistry with approval of the instructor required.

SOCIAL STUDIES

The social studies program is designed to provide students with a description of the development and organization of human society through the acquisition of knowledge and the use of critical thinking skills. Instruction embraces the concepts of human freedom, human dignity, citizenship, and interdependence; discusses them openly; and relates them to history and contemporary affairs. Through this process, students will become more informed, will learn to more fully use analytical skills, and will become more empathetic toward other human beings.

Three units of credit in social studies are required for graduation. The prescribed social studies course sequence includes United States History, Government, and World History.

UNITED STATES HISTORY – 023320

This study reviews the evolution of governmental, social, and economic institutions in the United States from the Civil War through Reconstruction. The study continues with a chronological survey of United States history focusing on important domestic and foreign issues which have helped determine conditions in contemporary America. Industrialization, the Progressive Era, world involvement, the Great Depression, the New Deal, and recent domestic and international developments are included. This course also includes service-learning.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9

UNITED STATES HISTORY (CM) – 023330

This study deals with the growth of American ideas and institutions. It views the United States in its world setting with an emphasis on the economic, social, political, and diplomatic development of the United States. The first part of the study reviews the period from the Civil War through Reconstruction. The study continues with a chronological survey of United States history focusing on important domestic and foreign issues which have helped determine the conditions in contemporary America. Industrialization, the Progressive Era, world involvement, the Great Depression, the New Deal, and recent domestic and international developments are included. This course also includes student service-learning.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 9
PREREQUISITE: Recommendation of previous social studies instructor required.

COMMUNITY LIVING – 022300

Students will apply academic, interpersonal, problem-solving and communication skills as they access stores, restaurants, community services (hospital, post office, etc.), and recreational facilities. Emphasis will be on accessing resources to get about safely in the environment, including the ability to participate in general community activities. This course is only for students who will receive a Maryland High School Certificate.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Approval of the Individualized Education Program Team required.

INDEPENDENT STUDY SOCIAL STUDIES – 022090

Independent Study Social Studies is designed for advanced students who wish to pursue individualized course work beyond the school day. All work is supervised by a member of the social studies department. Students must complete a minimum of 66 hours of supervised activities for each 0.5 unit of credit and submit a minimum of two projects as determined by the student and the instructor. (A maximum of six units of elective credit may be earned through independent study and/or work study programs while in high school.)

COURSE NOTE: This unit of credit may not count as required course.
CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: 2.0 cumulative grade point average and approval of department chairperson, principal, supervisor of instruction, and director of Teaching, Learning and Professional Development required.

INDEPENDENT STUDY STUDENT SERVICE-LEARNING – 555590

Independent Study Student Service-Learning is designed to give students the opportunity to assist others in their community. Students must complete a minimum of 75 hours of supervised activities beyond the school day for each 0.5 unit of credit. Students and members of the school staff will determine acceptable Student Service-Learning activities and will maintain a record of the service.

COURSE NOTE: This unit may be used to fulfill the Student Service-Learning requirement.
CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12

MULTICULTURAL HERITAGE – 022520

This course is designed to assist students in understanding and valuing the diverse cultures present in the United States. Students will demonstrate attainment of a positive self-concept and empathy toward others in order to improve interaction among individuals and groups in our democratic society. Students will demonstrate the application of knowledge and skills through historical perspectives, case studies, role-playing, conflict resolution, problem-solving techniques, and simulation activities.

COURSE NOTE: This course does not count toward the three-year social studies credit requirement for graduation.
CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Recommendation of previous social studies instructor required.

SCHOOL STUDENT SERVICE-LEARNING – 555690

The School Student Service-Learning course is designed to give students the opportunity to assist others within the community. This course will focus on reasons to be involved in student service as well as present ideas for procuring service positions. Student preparation, service, and reflection will be provided during the class period and will be extended beyond the school day. Students and members of the school staff will determine acceptable school student service activities and will maintain a record of the service. Students must complete a minimum of 75 hours of student service activities in this course.

COURSE NOTE: This unit may be used to fulfill the Student Service-Learning requirement.
CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12

GLOBAL DIPLOMACY 10 (CM) – 022630

Global Diplomacy will include the study of the history, diversity, and commonalities of the peoples of the world and will develop an awareness of the reality of human interdependence and the need for global cooperation. Students will examine historical and current attempts and international diplomatic efforts to solve problems. Students will demonstrate attainment of understandings and attitudes permeating the globe through the use of case studies, role playing, conflict resolution, problem-solving techniques, and simulation activities. The following topics are included in the course of study: world geography and its impact on global relationships, current global issues and their foundations, previous and current attempts at global diplomacy, regional studies with a current emphasis on multicultural perspectives, background and structure of the United Nations, and Model United Nations simulations.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 10

GOVERNMENT – 021120

This study presents the ideas, values, and institutions underlying the American democratic system. The forms, functions, and processes of local, state, and national governments are studied to illustrate citizens` relationships to democratic government. The rights guaranteed to each citizen in a democratic society, the responsibilities for citizens to serve the community and to participate in government, and the protections extended to each citizen through a system of law are studied. This course will prepare students for the High School Assessment in Government. This course also includes student service-learning.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10

GOVERNMENT (CM) – 021130

This study presents the ideas, values, and institutions underlying the American democratic system. The forms, functions, and processes of local, state, and national governments are studied to illustrate citizens` relationships to democratic government. Analysis and comparisons of different forms of government illustrate the value and worth of the individual in various societies. The rights guaranteed to each citizen in a democratic society, the responsibilities for citizens to serve the community and to participate in government, and the protections extended to each citizen through a system of law are studied. An analysis of selected problems develops the nature of conflict and identifies approaches used by individuals, groups and governments to solve those problems. This course will prepare students for the High School Assessment in Government. This course also includes student service-learning.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 10
PREREQUISITE: 3.0 average or recommendation of previous social studies instructor required.

ADVANCED PLACEMENT UNITED STATES GOVERNMENT AND POLITICS – 024530

The course is designed to give students a critical perspective on government and politics in the United States. This course involves both the study of general concepts used to interpret American politics and the analysis of specific case studies. It also requires familiarity with the various institutions, groups, beliefs, and ideas that make up the American political scene. The following topics are included in this course of study: constitutional underpinnings of American government, political beliefs and behaviors, political parties and interest groups, institutions and policy processes of national government, and civil rights and civil liberties. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit. This course may be substituted for Government (Certificate of Merit Course) and will prepare students for the High School Assessment in Government. This course also includes student service-learning.

CREDIT: 0.5 per semester TYPE: Advanced Placement GRADE: 10
PREREQUISITE: A minimum of a 3.0 average in certificate of merit social studies courses and approval of the instructor required.

GEOGRAPHY – 029200

This course stresses the study of the physical features of the world through the use of geographic skills. The study continues with the development of relationships between the earth's physical features and the cultures of various populations around the world.

COURSE NOTE: This course does not count toward the three-year social studies credit requirement for graduation.
CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12

GOVERNMENT HIGH SCHOOL ASSESSMENT REVIEW – 021100

This one-semester course is designed to assist students who passed Government, but need assistance with passing the Government High School Assessment. The four content standards assessed on the Government High School Assessment will be emphasized: Political Science, Peoples of the Nations and World, Geography, and Economics. The 0.5 credit is awarded when the student successfully passes the Government High School Assessment and does not count toward the three credits of social studies required for high school graduation.

COURSE NOTE: Need to satisfy the Government HSA requirement. This does not count toward the three credit social studies requirement for graduation.
CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12

GLOBAL DIPLOMACY 11 (CM) – 023630

Global Diplomacy will include the study of the history, diversity, and commonalities of the peoples of the world and will develop an awareness of the reality of human interdependence and the need for global cooperation. Students will examine historical and current attempts and international diplomatic efforts to solve problems. Students will demonstrate attainment of understandings and attitudes permeating the globe through the use of case studies, role playing,

conflict resolution, problem-solving techniques, and simulation activities. The following topics are included in this course of study: world geography and its impact on global relationships, current global issues and their foundations, previous and current attempts at global diplomacy, regional studies with an emphasis on multicultural perspectives, background and structure of the United Nations, and Model United Nations simulations.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11
PREREQUISITE: Approval of the instructor required.

WORLD HISTORY – 022220

World History will examine major civilizations from Asia, Middle East, Africa, Europe, and the Americas with the emphasis on the era from 1450 A.D. to the present. The course will examine the social, political, cultural, economic, intellectual, and technological developments that played an essential role in shaping the modern world. This study also places an emphasis on global diversity, and economic and political interdependence and cooperation.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 11

WORLD HISTORY (CM) – 022230

World History will examine major civilizations from Asia, Middle East, Africa, Europe, and the Americas with the emphasis on the era from 1450 A.D. to the present. The course will investigate, analyze, and evaluate the social, political, cultural, economic, intellectual, and technological developments that played an essential role in shaping the modern world. This study also places an emphasis on global diversity and economic and political interdependence and cooperation.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11
PREREQUISITE: 3.0 average or recommendation of previous social studies instructor required

ADVANCED PLACEMENT WORLD HISTORY – 022240

AP World History course is to develop a greater understanding of the evolution of different types of human societies. The study will focus upon the time period from approximately 6000 B.C.E. to the present. Students will examine a truly global history by identifying global patterns and processes that have affected human history throughout time through a combination of factual knowledge and appropriate analytical skills. The course will stress six themes: the impact of interaction, change and continuity, the impact of technology and demography, social structure and gender, cultural and intellectual developments, and politics. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

CREDIT: 0.5 per semester TYPE: Advanced Placement GRADE: 11
PREREQUISITE: A minimum of a 3.0 average in social studies courses and approval of the instructor required.

ADVANCED PLACEMENT ECONOMICS – 024300

Advanced Placement Economics includes both Macro and Micro Economics. Macro Economics is designed to give students an understanding of the principles of economics that apply to an economic system as a whole. Emphasis is placed on the study of national income and price determination and develops familiarity with economic performance measures, economic growth, and international economics. Micro Economics provides an understanding of the principles of economics that apply to the functions of individual decision makers, both consumers and producers, within the larger economic system. The course emphasizes the nature and functions of product markets, and includes the study of factor markets and of the role of government in promoting greater efficiency and equity in the economy. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

COURSE NOTE: This course does not count toward the social studies credit requirement for graduation.
CREDIT: 0.5 per semester TYPE: Advanced Placement GRADE: 11-12
PREREQUISITE: A minimum of a 3.0 average in social studies courses and approval of the instructor required.

PSYCHOLOGY – 025300

This course is a study of the complexities of human behavior and the problems of adjustment to the environment. Individual and group applications of psychological principles are examined to provide a further understanding of human behavior.

COURSE NOTE: This course does not count toward the three-year social studies credit requirement for graduation.
CREDIT: 0.5 per semester TYPE: Standard GRADE: 11-12

ADVANCED PLACEMENT PSYCHOLOGY – 025500

The core curriculum introduces the methods of inquiry and evaluation used by psychologists. The course contains information relating to issues that all individuals encounter, not only in themselves, but in their relationships with friends and families; its study leads to an appreciation of a tolerance for individual differences. All students should acquire insight into the complex determinants of behavior and prepare to be intelligent consumers of psychological services. Topics in the course may include but are not limited to: scientific methods of psychology, growth and development, learning, personality, mental health and behavioral disorders, and social psychology. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

COURSE NOTE: This course does not count toward the three-year social studies credit requirement for graduation.
CREDIT: 0.5 per semester TYPE: Advanced Placement GRADE: 11-12
PREREQUISITE: A minimum of a 3.0 average in social studies courses or a 3.0 in Psychology required.

CONTEMPORARY ISSUES – 024420

Contemporary Issues will provide the students the opportunity to study and examine some of the major issues facing the United States and the world today for the twenty-first century. The course will emphasize government and economic systems, regional cooperation, and world interdependence. Through this process, students will develop the understanding and skills, which are necessary for citizens to influence the American political and economic system and global community. Final opportunities are provided for students to complete their student service-learning requirements

CREDIT: 0.5 per semester TYPE: Standard GRADE: 12

CONTEMPORARY ISSUES (CM) – 024430

Contemporary Issues will provide the students the opportunity to examine, analyze, and evaluate some of the major issues facing the United States and the world today for the twenty-first century. The course will emphasize government and economic systems, regional cooperation, and world interdependence. Through this process, students will develop the understanding and skills, which are necessary for citizens to influence the American political and economic system, and global community. Final opportunities are provided for students to complete their student service-learning requirements.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: 3.0 average or recommendation of previous social studies instructor required.

GLOBAL DIPLOMACY 12 (CM) – 024630

Global Diplomacy will include the study of the history, diversity, and commonalities of the peoples of the world and will develop an awareness of the reality of human interdependence and the need for global cooperation. Students will examine historical and current attempts and international diplomatic efforts to solve problems. Students will demonstrate attainment of understandings and attitudes permeating the globe through the use of case studies, role playing, conflict resolution, problem-solving techniques, and simulation activities. The following topics are included in this course of study: world geography and its impact on global relationships, current global issues and their foundations, previous and current attempts at global diplomacy, regional studies with an emphasis on multicultural perspectives, background and structure of the United Nations, and Model United Nations simulations.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: Approval of the instructor required.

ADVANCED PLACEMENT UNITED STATES HISTORY – 023430

The course is designed to provide students with the analytic skills and factual knowledge necessary to deal critically with the issues in American history. Students will learn to assess historical materials - their relevance to a given interpretive problem, their reliability, and their importance - and to weigh the evidence and interpretations presented in historical scholarship. Topics included in this course begin with the discovery and settlement of the New World, 1492-1650, and conclude with a study of America since 1974. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

CREDIT: 0.5 per semester TYPE: Advanced Placement GRADE: 12
PREREQUISITE: A minimum of a 3.0 average in certificate of merit social studies courses and approval of the instructor required

WORLD LANGUAGES

The modern world languages curriculum is designed to prepare students to function successfully in the country where the language originates and/or to meet the requirements for college entrance. Emphasis is placed on proficiency in listening, speaking, reading, and writing the language. The outcome of studying a classical language is to increase students' language power. Etymology and vocabulary are emphasized. College admission is usually aided if students complete at least three years of the same language.

Students who complete and pass Level I Spanish and Level I French in middle school will receive high school credit for these courses, but the grades will not be used in calculation of grade point averages, quality points, or rank in class.

AMERICAN SIGN LANGUAGE 1 – 050100

Students will learn the basic vocabulary and grammatical structures of American Sign Language to conduct basic conversations with fluency. Students will explore the deaf culture in order to gain sensitivity to the culture of the deaf community and its influence.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12

AMERICAN SIGN LANGUAGE 2 – 050200

Students will continue learning content related vocabulary; more conversational dialogues using the advanced grammatical uses of American Sign Language; see how sign movements can be modified to change meaning; how and when facial expressions occur; and how body, head, and eye movements are used in phasing and agreement. Students will continue to explore the deaf culture in order to gain sensitivity to the culture of the deaf community and its influence.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: American Sign Language 1

AMERICAN SIGN LANGUAGE 3 (CM) – 050300

This course is a continuation of skills learned in American Sign Language (ASL) 2. Its focus is on conversational competence to increase ASL fluency and accuracy in both receptive and expressive skills when signing. Students will continue to demonstrate signing skills using complex ASL grammatical features and vocabulary, short stories, narratives, and dialogues. Supplemental readings will be provided to increase awareness of the deaf culture within the community.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: American Sign Language 2

CHINESE 1 – 055120

Students begin to speak and understand Mandarin Chinese through repetition and variation, stressing proper pronunciation and intonation. The vocabulary acquired deals with realistic life-like situations. Students learn how to write Chinese using pinyin as well as simplified Chinese characters. Chinese culture is introduced through simple reading selections. As conversational skills are developed and strengthened, grammatical structures are introduced and emphasized. Students learn about China and its people.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12

CHINESE 2 – 055230

Students improve fluency and comprehension of the Mandarin Chinese language and increase knowledge of proper pronunciation and intonation. Students increase their knowledge of how to write Chinese using pinyin as well as implied Chinese characters. Students read more coherently and fluently in Chinese. Students participate in frequent structured conversations about daily life and business, and continue their study of Chinese culture.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Chinese 1

CHINESE 3 (CM) – 055320

Students improve their oral, reading, and writing competency, with emphasis placed on improving vocabulary. Reading selections increase in difficulty and include simplified excerpts from Chinese classics, as well as short stories and articles. Students continue to learn about Chinese culture and civilization. Grammar and composition also continue to be emphasized.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: Chinese 2

CHINESE 4 (CM) – 055420

Chinese 4, primarily conducted in Chinese, furthers the communication skills acquired in Chinese 3, with the aim of language proficiency. Chinese 4 engages students in extensive oral expressions, using authentic audio/video recordings as well as native Chinese speakers to improve comprehension and conversation. Selections from authentic materials and Chinese literature are read for reading comprehension. Discussion, projects, compositions, and other writings demonstrate understanding of the culture and the complexities of the language and vocabulary.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 12
PREREQUISITE: Chinese 3

FRENCH 1 – 050120

In this course, students begin to speak and understand French through repetition and variation, stressing proper French pronunciation and intonation. The vocabulary acquired deals with realistic, lifelike situations. Students are introduced to French civilization through simple reading selections. As conversational skills are strengthened and increased, grammatical structures are introduced and emphasized. Students learn more about France and the people.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: A minimum of a 2.0 average in English and approval of English and/or World Languages instructor required.

FRENCH 2 – 050130

Students improve fluency and comprehension, learn solid grammatical structures, and learn to read more coherently and intelligently in French. Students participate in frequent structured conversations and continue to learn about France. Reading activities and expanded writing skills are developed.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: French 1

FRENCH 3 (CM) – 050230

Students improve their oral, reading, and writing competency, with emphasis placed on reading. Reading selections increase in difficulty and include simplified excerpts from French classics. Students continue to learn about French culture and civilization. Grammar and composition also continue to be emphasized.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 10-12
PREREQUISITE: French 2

FRENCH 4 (CM) – 050330

Students increase their knowledge of grammatical structure, writing, and formal and informal vocabulary through frequent usage. Stress is placed on advanced conversation, independent reading, and original composition. The course includes excerpts from literature, journals, and periodicals.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: French 3

ADVANCED PLACEMENT FRENCH LANGUAGE – 050550

Students who enroll in AP French Language should already have a good command of French grammar and vocabulary and have competence in listening, reading, speaking, and writing. The course will emphasize the use of language for active communication and help students develop the following:

- the ability to understand spoken French in various contexts;
- a French vocabulary sufficiently ample for reading newspaper and magazine articles, literary texts, and other nontechnical writings without dependence on a dictionary; and
- the ability to express themselves coherently, resourcefully, and with reasonable fluency and accuracy in both written and spoken French.

Course content can reflect intellectual interests shared by the students and teacher (the arts, current events, literature, sports, etc.). Materials will include audio recordings, films, newspapers, and magazines. The course seeks to develop language skills (reading, writing, listening, and speaking) that can be used in various activities and disciplines rather than to cover any specific body of subject matter. Extensive training in the organization and writing of compositions will be emphasized. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

CREDIT: 0.5 per semester TYPE: Advanced Placement GRADE: 11-12
PREREQUISITE: A minimum of a 3.0 average in French 4 or approval of the instructor required.

GERMAN 1 – 053120

In this course, students begin to speak and understand German through repetition and variation, stressing proper pronunciation and intonation. The vocabulary acquired deals with realistic, lifelike situations. Students are introduced to German civilization through simple reading selections. As conversational skills are strengthened and increased, grammatical structures are introduced and emphasized. Students learn more about Germany and the people.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: A minimum of a 2.0 average in English and approval of English and/or World Languages instructor required.

GERMAN 2 – 053230

Students improve fluency and comprehension, learn solid grammatical structures, and learn to read more coherently and intelligently in German. Students participate in frequent structured conversations and continue to learn about Germany. Reading activities and expanded writing skills are developed.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: German 1

GERMAN 3 (CM) – 053330

Students improve their oral, reading, and writing competency, with emphasis placed on reading. Reading selections increase in difficulty and include simplified excerpts from German classics. Students continue to learn about German culture and civilization. Grammar and composition also continue to be emphasized.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: German 2

GERMAN 4 (CM) – 053430

Vocabulary enrichment in German continues through the use of informational articles related to walks of life such as artists, musicians, and scientists. German literature is carefully read and discussed through excerpts from short stories, plays, and novels by some of the great masters. Original composition is practiced. A short story or play is written by the students. Grammatical structures are strengthened through frequent usage.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: German 3

INDEPENDENT STUDY WORLD LANGUAGES – 052090

Independent Study World Languages is designed for advanced students who wish to pursue individualized course work beyond the school day. All work is supervised by a member of the world languages department. Students must complete a minimum of 66 hours of supervised activities for each 0.5 unit of credit and submit a minimum of two projects as determined by the student and instructor. (A maximum of six units of elective credit may be earned through independent study and/or work study programs while in high school.)

COURSE NOTE: This unit(s) may not count as a required course.
CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: 2.0 cumulative grade point average and approval of department chairperson, principal, supervisor of instruction, and director of Teaching, Learning and Professional Development required.

LATIN 1 – 052120

Students are introduced to the basic grammar and vocabulary of the language of ancient Rome. Students are also taught how to find the Latin roots of English derivatives and different Latin phrases that can be used in modern life. Grading is based on the written word rather than the spoken. Students read myths and passages on daily life, history and culture, as well as an abridged form of the Aeneid.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: A minimum of a 2.0 average in English and approval of English and/or World Languages instructor required.

LATIN 2 – 052230

Students learn more grammatical constructions, vocabulary, and derivatives. The stories for translations gradually become more difficult, and Roman authors are introduced. Grading is based on the written word rather than the spoken.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 10-12
PREREQUISITE: Latin 1

LATIN 3 (CM) – 052330

Students study the subjunctive mood and other grammatical constructions. Outstanding Roman authors are read with more in-depth study and analysis. Emphasis on vocabulary and derivatives continue. Grading is based on the written word rather than the spoken.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: Latin 2

LATIN 4 (CM) – 052430

Students read from the famous Roman authors Cicero, Vergil, and Ovid. There may be some study and analysis of medieval Latin and songs. Grading is based on the written word rather than the spoken.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: Latin 3

ADVANCED PLACEMENT LATIN LITERATURE – 052650

AP Latin Literature is intended for students who wish to intensify their studies of Latin through the translation of works by the original authors. Students who enroll should already have an intermediate knowledge of Latin grammar and vocabulary and a background in Roman culture, politics and government.

An AP Latin Literature course covers the equivalent of a college Latin course, encompassing not only translation but also analysis and interpretation. Students taking such a course will have the following objectives:

- The ability to read and comprehend written Latin
- The acquisition of vocabulary, some of which may be author-specific

- The application and interpretation of literary devices within a work
- The exploration of the events and people surrounding an author and influencing their work
- The application of Latin grammar learned in earlier levels

Course content will be determined by which of the AP Latin Literature tests is offered for any given school year; e.g., Vergil (2010-2011) or Vergil/Caesar (2011-2012). All projects and essays will be adapted to fit the exam content as necessary.

This course will seek to provide a deeper knowledge of the people, culture, and events surrounding any particular work in addition to expanding the students' understanding of Latin grammar and vocabulary. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
Prerequisite: A minimum of a 3.0 in Latin 3 or approval of instructor required.

SPANISH 1 – 051120

Students begin to speak and understand Spanish, with simple and practical conversation as a goal. There is an introduction to pronunciation, vocabulary, and grammatical structures. Cultural and geographical points of interest of Spanish-speaking areas of the world are highlighted through various short articles incorporated as a part of the instructional program.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: A minimum of a 2.0 average in English and approval of English and/or World Languages instructor required.

SPANISH 2 – 051130

Students improve their fluency and comprehension through practice in conversation. They master new vocabulary and grammatical structures. Cultural and geographical points of interest continue to be discussed. Students begin reading short narratives which are paired with discussion and written assignments. The majority of classwork is oral.

CREDIT: 0.5 per semester TYPE: Standard GRADE: 9-12
PREREQUISITE: Spanish 1

SPANISH 3 (CM) – 051230

Students receive a general grammar review with an increase in vocabulary and the reading of short stories and articles. Conversation periods and some composition work are involved. The Spanish-speaking countries and their cultures are discussed as well as contemporary issues affecting these countries. Students continue with more advanced work on grammar and structure. Reading materials become more challenging.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 10-12
PREREQUISITE: Spanish 2

SPANISH 4 (CM) – 051330

Students increase their knowledge of grammatical structure, writing, and formal and informal vocabulary through frequent usage. Stress is placed on advanced conversation, independent reading, and original composition. The course includes excerpts from literature, journals, and periodicals.

CREDIT: 0.5 per semester TYPE: Certificate of Merit GRADE: 11-12
PREREQUISITE: Spanish 3

ADVANCED PLACEMENT SPANISH LANGUAGE – 051450

AP Spanish Language is intended for students who wish to develop their proficiency in all four language skills: listening, speaking, reading, and writing. Students who enroll should already have a basic knowledge of the language and culture

of Spanish-speaking peoples and should have attained a reasonable proficiency in listening comprehension, speaking, reading, and writing. An AP Spanish Language course covers the equivalent of a third-year college course in advanced Spanish writing and conversation. It encompasses aural/oral skills, reading comprehension, grammar, and composition. Students taking such a course, emphasizing the use of Spanish for active communication, have the following objectives:

- the ability to comprehend formal and informal spoken Spanish;
- the acquisition of vocabulary and a grasp of structure to allow the easy, accurate reading of newspaper and magazine articles, as well as of modern literature in Spanish;
- the ability to compose expository passages; and
- the ability to express ideas orally with accuracy and fluency.

Course content might best reflect intellectual interests shared by the students and teacher (the arts, history, current events, literature, culture, sports, etc.). Materials will include recordings, films, newspapers, and magazines. The course seeks to develop language skills that are useful in themselves and that can be applied to various activities and disciplines rather than to the mastery of any specific subject matter. Extensive training in the organization and writing of compositions will be an integral part of the AP Spanish Language course. Students should be aware that not all colleges grant credit for qualifying grades on the Advanced Placement examination, although over 400 institutions do grant credit.

CREDIT: 0.5 per semester TYPE: Advanced Placement GRADE: 11-12
PREREQUISITE: A minimum of a 3.0 average in Spanish 4 or approval of the instructor required.

EVENING
HIGH SCHOOL

The Evening High School program provides an opportunity for students and young adults to earn high school credits. The Evening High School program is designed to:

- provide additional credit courses for secondary school students enrolled in day school
- provide an alternative daily class schedule for those students who wish to continue their education but are unable to attend day school
- provide an educational program for those under 21 who only need to earn a few credits in order to obtain a Maryland High School Diploma.

Students participating in the Evening High School program can earn academic credit in the areas required for graduation.

Registration is held each September and January. Registration and all classes are held at Leonardtown High School. Students currently enrolled in day school should contact their school counselor.

ELIGIBILITY FOR ENROLLMENT

Applicants must meet the following requirements:

1. Minimum age - 16 years of age (Students under 16 years of age may be admitted to Evening High School only with special permission from the appropriate director.
2. Written permission of parent(s)/guardian(s), if the student is under 18 years of age.
3. Approval of the appropriate director if the student is expelled from day school.

LOCATION

Evening High School classes are held at Leonardtown High School.

TRANSPORTATION

Students are responsible for providing their own transportation arrangements to Evening High School.

COST PER SEMESTER

Registration Fee: A nonrefundable fee will be charged to all students each semester in addition to a tuition cost for each course. The registration fee and tuition must be paid when students register (unless it is waived by the appropriate director.)

HIGH SCHOOL
SUMMER SCHOOL

The High School Summer School program offers **review** courses for high school students who have not earned passing grades for subjects taken during the regular school year. Students will need to have at least a 45% in the failed course and no more than 10 unlawful absences in the semester to register for summer school. Certain courses are offered in English, social studies, mathematics, health, science, and technology. Information about summer school location and a listing of specific courses offered will be available in the school counseling office of each high school.

Two semester sessions are held, each corresponding to the semesters at the home school. Each semester session lasts for twelve days, with students allowed only one absence. Students have the opportunity to take two courses each semester. Specific dates and registration material will be available at each school. A fee is charged for each course taken and students are responsible for their own transportation.

All courses completed during summer school will be added to the student's record as a separate course. The summer school course grade does not eliminate the previous grade for the same course taken at the home school. The summer school course grade will be used to calculate the overall grade point average (GPA) for each student. It should be noted, however, that school system policy states that summer school credit will **not** apply in determining the grade point average (GPA) for students to become eligible for extracurricular activities.

ALTERNATIVE TO FOUR-YEAR
HIGH SCHOOL ATTENDANCE

In recognition of the fact that four-year enrollment in a public high school may not serve the best interests of some students, the following alternatives are available:

1. **Early College Admission Program:** A student may receive a Maryland High School Diploma through participation in the early college admission program, provided that:

   a. The student is accepted for early admission to an accredited college prior to high school graduation and has a 2.5 average through the junior year.

   b. A written request by the student and parent/guardian is made to and approved by the director of Teaching, Learning, and Professional Development certifying the early admission acceptance. The student's program for the first year of college must be approved by the director of Teaching, Learning, and Professional Development if such a program is included toward the issuance of a high school diploma.

   c. At the conclusion of a full year of study, a written request for the high school diploma is submitted to the appropriate director together with a transcript or letter from the college to the high school principal indicating that the student has successfully completed a year of college work.

2. **Early Admission to Approved Vocational, Technical, or Other Post-Secondary School:** A student may receive a Maryland High School Diploma through participation in an early admission program of an approved vocational, technical, or post-secondary school provided that:

   a. The student is accepted for early admission by an approved vocational, technical, or post-secondary school prior to high school graduation.

   b. A written request by the student and parent/guardian is made to and approved by the director of Teaching, Learning, and Professional Development certifying the early admission acceptance. The student's program for the first year must be approved by the director of Teaching, Learning, and Professional Development if such a program is included toward the issuance of a high school diploma.

   c. At the conclusion of a full year of study, a written request for the high school diploma is submitted to the director of Teaching, Learning, and Professional Development together with a transcript or letter from the vocational, technical, or post-secondary school to the high school principal indicating that the student has successfully completed a year of post-secondary work.

3. **Concurrent Enrollment Program:** A student may be accepted in a concurrent enrollment program in a qualified college provided that:

   a. The student is in grade 11 or 12.

   b. The student is enrolled for not more than 15 semester hours (three credit system) or 18 semester hours (four credit system) of college credit each college semester. Summer courses count as one semester. Additional corresponding lab semester hours might exceed this limit.

   c. Each college course counts as one semester; therefore two college courses are required to fulfill a high school requirement such as English, mathematics, and social studies.

   d. The payment of all college tuition and fee expenses and the provision of the student's own transportation to the college campus are arranged.

   e. The student has demonstrated the ability to do college-level work (as evidenced by a 2.5 average in the preceding year of high school).

   f. The student has completed the Concurrent Enrollment Recommendation/Approval Form with all the required signatures by September 30. This form should be obtained from the student's school counselor after discussion about the student's eligibility for the program.

   g. One unit of high school credit shall be awarded for successfully completing any three-credit or four-credit

college course. Labs are counted as part of the course receiving the one unit of high school credit.

4. **Work Experience Program:** A student may receive credit toward a Maryland High School Diploma through participation in a work experience program provided that:

   a. The student has been accepted in **an approved** work experience program.

   b. Both the **student** and the **student's parent/guardian** approve the cooperative agreement between the school and the employer, or other approved sponsor, relative to the training program.

   c. The student fulfills, through the regular day school or an approved optional plan, the units of credit in the subjects required for graduation.

5. **Released Time Program:** The program is designed to provide an opportunity for students to participate in structured community work situations when appropriate approval has been received. **Students accepted into this program will be responsible for transportation to and from school, if existing transportation is not available. Students applying for this program must be employed.**

PROCEDURES:

Students who elect to follow any of these alternatives must follow the procedures listed below:

1. In order to be considered for a waiver of the four-year enrollment requirement for graduation, students must present to their principal a letter signed by the parent or guardian which states the reason or reasons for the request of such a waiver and a completed application form.

2. The principal will review the recommendations of the committee and forward the request, along with personal comments, to the director of Teaching, Learning, and Professional Development for final action.

3. The director of Teaching, Learning, and Professional Development will act on the request and return it to the principal, who in turn will advise the student and the student's parent(s)/guardian(s).

4. If a parent/guardian and/or student wishes to appeal the decision, a letter requesting such reconsideration must be directed to the superintendent of schools or designee.

Written applications should be made through the school counseling office prior to preregistration in the spring of the year preceding entrance into the program. Further information is available in the school counseling office.

GRADE LEVEL DESIGNATIONS

High school grade level assignments will be made according to the total number of credits the student has earned as follows:

Grade 10 (Sophomore)	5 units of credit earned
Grade 11 (Junior)	10 units of credit earned
Grade 12 (Senior)	15 units of credit earned

STUDENT PLACEMENT

Students will be placed according to their career goals and academic preparation. **All students are encouraged to take challenging courses to meet their career goals.** Students will not be arbitrarily grouped and tracked into separate curriculums. Previous academic course work, teacher recommendations, Maryland State Assessments (MSA), High School Assessments (HSA), and standardized test results may be considered in assisting the placement of students. Students and parent(s)/guardian(s) are encouraged to discuss their concerns with the school counselor.

GRADING SCALE

The high school marking period grading scale for St. Mary's County Public Schools is:

A	**100%-90%**	Outstanding Progress
B	**89%-80%**	Good Progress
C	**79%-70%**	Acceptable Progress
D	**69%-60%**	Little Progress
F	**59%-0**	Unsatisfactory Progress
I		Incomplete

The high school semester grading scale designation for St. Mary's County Public Schools is:

A	**100%-90%**	Outstanding Progress
B	**89%-80%**	Good Progress
C	**79%-70%**	Acceptable Progress
D	**69%-60%**	Little Progress
E	**59%-45%**	Unsatisfactory Progress and No More Than 10 Unlawful Absences - Eligible for Summer School
F	**44%-0**	Unsatisfactory Progress - Ineligible for Summer School

CLASS RANKINGS AND SELECTION OF VALEDICTORIAN AND SALUTATORIAN

Beginning with the Class of 2009, Board of Education Policy (IKC) and Regulation (IKC-R) are in effect. Valedictorian and salutatorian will be determined by class rank using cumulative grade point averages. The valedictorian will be the student with the highest weighted grade point average. The salutatorian will be the student with the second highest weighted grade point average.

All co-valedictorians will be listed as first in the class rank, and all co-salutatorians will be listed as second in class rank. The next student will be listed as whatever number the person happens to be, considering the number of co-valedictorians and co-salutatorians (e.g., fifth in the class).

Both the valedictorian and salutatorian must be enrolled under a regular enrollment status in St. Mary's County Public Schools for the two consecutive semesters of the senior year preceding high school graduation.

Students must maintain full-time equivalent enrollment status.

Class rank shall be determined for students in grades 11 and 12.

Semester grades are used for the purpose of determining class rank. Class rank shall be calculated by dividing the quality points by the number of credits taken.

All courses that appear on the transcript that produced a letter grade of A, B, C, D, E, or F shall be included in the grade point average calculation.

Grade point values for the purpose of the calculations will be A=4.0, B=3.0, C=2.0, D=1.0, E=0, and F=0.

Weighted grade point values are used for advanced placement and college level English, mathematics, science, social studies, and world language courses taken at a college or university. No remedial or pre-high school, or high school level courses taken at a college or university, will be weighted. Weighted grade point values for the purpose of the calculations will be A=5.0, B=4.0, C=3.0, D=1.0, E=0, and F=0.

Weighted grade point values are also used for Science, Technology, Engineering, and Mathematics (STEM) designated courses. Weighted grade point values for the purpose of the calculations will be A=4.5, B=3.5, C=2.5, D=1.0, E=0, and F=0.

No more than two independent studies may be counted in calculating class rank. The two credits with the highest grades will be used.

In computing class rank, a course may be counted only one time. If a course is repeated due to having failed in order to achieve a higher grade, the highest grade is the only grade that is to be used in computing class rank.

Courses being accepted for transfer credit, which are the same as those included on the list of weighted courses, are to be considered a weighted course. The final decision regarding whether a transfer course is to be considered a weighted course will be made by the Chief Academic Officer.

No pluses or minuses will be attached to any letter grade. No partial points will be attached to the total.

The letter grade will be used for courses accepted for transfer credit regardless of the grading scale used in the previous school(s) unless the numerical grades are provided. In the event numerical grades are provided, the numerical grades will be converted to the grading scale used by St. Mary's County Public Schools.

Any course dropped after September 15 is to be assigned an F and included in the class rank. Exceptions for cause may be granted by the principal.

Class rank is inclusive of all final grades prior to graduation and is inclusive of summer school, evening high school, correspondence, credit by examination, college, and university courses.

Grade point average shall be calculated to the thousandths place and rounded to the hundredths place with .005 being rounded up.

Foreign exchange students will not be included in class rankings.

Only grades earned in the first four years following grade 8 are used for calculating class rank. High school courses taken in middle school or earlier are not included.

Courses in subject areas not traditionally taught in St. Mary's County Public Schools, such as religion or driver education, are not included unless the course objectives meet the objectives of an approved course taught in St. Mary's County Public Schools.

SCHEDULE AND PROGRAM CHANGES

Once students register for courses in the spring, they have the responsibility to be certain that the correct courses were requested. **Students who fail required courses should make up these courses in summer school or retake the course during the next school year.** Specific information concerning the summer school program may be obtained from the counseling center at each high school. Students who do not plan to make up failed courses in summer school should submit schedule change requests to guidance counselors.

Student schedules for the school year will be posted by mid-August. It Is important that students carefully review their schedules. The period for student-initiated requests to change schedules will follow mailing of the schedules. Students must contact their guidance counselor in person to initiate a request for change. Requests will be considered and changes made depending on the students' career plans and available space in the class requested. It may also become necessary for some administrative schedule changes to occur.

Student-initiated requests for a schedule change will not be considered once the semester begins, unless the subject teacher and school counselor concur that the student is inappropriately placed. A grade of F for the marking period and semester will appear on the report card and the permanent record for any course that is dropped after September 15.

GUIDELINES FOR INDEPENDENT STUDY

Independent study is a program to provide for student-initiated learning. Students wishing to apply for an independent study course must have a minimum of a 2.0 cumulative grade point average and a satisfactory discipline record. Acceptance into the program requires the approval of teachers, parent(s)/guardian(s), department chairperson, principal, supervisor, and director of Teaching, Learning and Professional Development. The following guidelines must be followed:

A student may initiate an independent study course during the first marking period for the first semester, during the second and third marking periods for the second semester, and during the fourth marking period for the summer. Students should obtain the necessary approval as early as possible in order to avoid disappointment and misunderstanding.

- A minimum of two completed projects and 66 clock hours are required for each 0.5 unit of independent study course credit awarded. Projects must receive prior approval from designated staff. An independent study course to fulfill the student service-learning graduation requirement requires 75 clock hours.
- Courses required for graduation and extracurricular activities, other than Model General Assembly, Model United Nations, and Model Congress, will not be accepted for independent study. Projects involving a student's employment will also not be approved.
- Clock hours must be documented for each independent study course. It is recommended that a minimum of one-fourth of the independent study course clock hours be spent with the teacher sponsoring the study.
- Students generally may register for one unit of credit each year for an independent study course or an independent study student service-learning.

- Grades will be recorded by the sponsoring teacher upon the successful completion of the independent study course. A grade of D or F will be recorded if a student fails to complete the independent study course satisfactorily. Students who receive a D, F, or "I" (incomplete) as an independent study course grade will not be permitted to participate in an independent study course during the following semester. Independent study student service-learning may be repeated the following semester.
- Assignment of nine-week grades will depend on the initial beginning date and progress recorded on projects. It is the teacher's responsibility, as appropriate, to assign a letter grade or an incomplete.
- An "I" (incomplete) should not prevent students from being listed on the honor roll or merit roll.
- Students may withdraw the request for independent study credit, without penalty, up to six weeks before the semester ends.
- Students may have three weeks beyond the end of the semester to complete the program satisfactorily.
- No more than two independent study credits may be counted in the calculation for class rank. The two credits with the highest grades will be used. Additional independent study credits earned by a student will not count in the calculation.
- A maximum of six units of elective credit may be earned through independent study and/or work study program while in high school.
- Any expenses incurred as a result of the independent study activity will be the responsibility of the student.

COURSES APPROVED FOR
FINE ARTS CREDIT

The following courses in the High School Program of Studies are approved for Fine Arts credit:

017500	Advanced Studies in Technical Theatre (10-12)	088500	Solo and Ensemble (9-12)
069550	AP Art History (11-12)	088130	String Orchestra (9-12)
087120	Band 1 (9-12)	069250	AP Studio Art - Drawing Portfolio (11-12)
088120	Band 2 (9-12)	069450	AP Studio Art - Three-Dimensional (11-12)
088330	Chamber Orchestra (9-12)	069350	AP Studio Art - Two-Dimensional (11-12)
086230	Chamber Singers (9-12)	017520	Theatre Arts 1 (9-12)
089430	Class Voice (9-12)	017620	Theatre Arts 2 (10-12)
065200	Commercial Art (10-12)	017720	Theatre Arts 3 (11-12)
066200	Crafts 1 (9-12)	017830	Theatre Arts 4 (12)
066000	Crafts 2 (9-12)	080100	Trends in Music (9-12)
068100	Fine Arts (9-12)	081120	Theory 1 (9-12)
089130	Jazz Band (9-12)	061100	Visual Arts 1 (9-12)
083100	Men's Chorus (9-12)	062200	Visual Arts 2 (10-12)
089200	AP Music Theory (11-12)	063330	Visual Arts 3 (110-12)
082100	Piano Class (9-12)	064430	Visual Arts 4 (12)
069010	Photography (10-12)	084100	Women's Chorus (9-12)
067200	Sculpture (10-12)		

COURSES APPROVED FOR
REPEATED CREDIT

The following courses in the High School Program of Studies can be repeated for credit:

071300	Adapted Physical Education
017500	Advanced Studies in Technical Theatre
072000	Aerobics and Personal Fitness
071200	Athletic Conditioning 1
087120	Band 1 (Beginners)
088120	Band 2 (Advanced)
088330	Chamber Orchestra
086230	Chamber Singers (Advanced)
085100	Chorus 1
086120	Chorus 2
089430	Class Voice
065200	Commercial Art
022300	Community Living
181300	Educational Media Technology
012010/012020	English For Speakers of Other Languages
022630/023630/024630	Global Diplomacy
170090	Independent Study in Career and Technology Education
177590	Independent Study Engineering
012090	Independent Study English
032090	Independent Study Mathematics
082090	Independent Study Music
042090	Independent Study Science
022090	Independent Study Social Studies
555590	Independent Study Student Service-Learning
017090	Independent Study Theatre Arts
062090	Independent Study Visual Arts
052090	Independent Study World Language
170100	Individualized Product and Services Technology
089130	Jazz Band
030120	Mathematics for Daily Living
088110	Marching Band
083100	Men's Chorus
016720	Newspaper
070500	Outdoor Adventures and Lifetime Sports 1
070510	Outdoor Adventures and Lifetime Sports 2
071400	Personal Health Management
069010	Photography
082100	Piano Class
016620	Publications
016410	Reading for Daily Living
066100	Recreational Arts
555690	School Student Service-Learning
067200	Sculpture
088500	Solo and Ensemble Class
072190	Special Studies in Physical Education
088130	String Orchestra
166110	Study Skills Development
070200	Team Sports
165100	Transition Seminar
084100	Women's Chorus
016420	Writing for Daily Living
016820	Yearbook

COURSES APPROVED FOR ADVANCED TECHNOLOGY EDUCATION CREDIT

The following courses in the High School Program of Studies are approved for Advanced Technology Education Credit.

132200	Pre-Engineering 1	134330	Pre-Engineering 2
132201		134331	
132202		134332	

EARN COLLEGE CREDIT NOW

Students who successfully complete high school courses articulated with the College of Southern Maryland will be eligible to receive the college credits as soon as they apply to the college. Generally a minimum final grade of B is required. To receive the college credit, a student should:

- Complete a College of Southern Maryland admissions application (no fee required)
- Complete a tech prep application
- Request that the high school send an official copy of the high school transcript upon completion of the articulated courses
- Apply within two years of high school graduation
- Forward above materials to:

  Admissions Office
  College of Southern Maryland
  8730 Mitchell Road, P.O. Box 910
  La Plata, Maryland 20646-0910

Do you need more information? Contact your high school guidance counselor or call the college Admissions Office at 1-301-884-8131, extension 7530, or 1-800-933-9177, extension 7530.

COURSE ARTICULATION GUIDE FOR
ST. MARY'S COUNTY PUBLIC SCHOOLS

The minimum grade required to be eligible for college credit is a B.

COLLEGE OF SOUTHERN MARYLAND

HS PROGRAM	*HS COURSE*	*CSM COURSE*	*CSM PROGRAM*
Academy of Finance	Financial Planning/Financial Services 170460 (1) Business, Economics and Ethics 170450 (1) Principles of Finance/Applied Finance 170440 (1)	ECN 1015 – Introduction to Business in a Market Economy (3)	Certificate: Accounting - Advanced Certificate: Management Development Certificate: Management Development - Marketing Associate Of Applied Science: Accounting Associate Of Applied Science: Computer Information Systems Associate Of Applied Science: Construction Management Technology Associate Of Applied Science: Electric Power Technician Associate Of Applied Science: Electric Wiring Technician Associate Of Applied Science: Hospitality Management Associate Of Applied Science: Management Development
Accounting***	Principles of Accounting 1 171820 (1) Principles of Accounting 2 171930 (1)	ACC 2010 – Principles of Accounting (3)	Certificate: Accounting – Basic Certificate: Accounting – Advanced Associate of Applied Science: Accounting Associate of Applied Science: Computer Information Systems Associate of Applied Science: Electric Power Technician Associate of Applied Science: Management Development
Academy of Healthcare Professions	Academy of Healthcare Professions 1 177710 (2) Academy of Healthcare Professions 2 177810 (3)	HTH 1100 – Medical Terminology (1) HTH 1030 – Issues of the Older Adult (1) NUR 1115L – Fundamentals of Nursing Lab (2) HTH 1410 – Medical Assisting: Basic Procedures (3)	Certificate: Medical Assisting Certificate: Practical Nursing Certificate: Pharmacy Technician Associate of Applied Science - Massage Therapy Associate of Science: Nursing Associate of Applied Science: Physical Therapist Assistant

HS PROGRAM	HS COURSE	CSM COURSE	CSM PROGRAM
Business Management	Business Management & Finance: Business Administration Principles of Business, Administration and Management 171110 (1) Computer Application 1 171100 (1) Business Administration 1 172550 (1) Business Administration 2 172090 (1)	ECN 1015 – Into to Business in a Market Economy (3) (to receive credit, student must complete 4 courses listed, plus required US History and World History courses)	Certificate: Accounting – Advanced Certificate: Management Development Certificate: Management Development - Marketing Associate of Applied Science: Accounting Associate of Applied Science: Computer Information Systems Associate of Applied Science: Construction Management Technology Associate of Applied Science: Electric Power Technician Associate of Applied Science: Electric Wiring Technician Associate of Applied Science: Hospitality Management Associate of Applied Science: Management Development
CADD	Computer Assisted Drafting and Design 1 178000 (2) Computer Assisted Drafting and Design 2 178130 (3)	DFT 1200 – Engineering Graphics (3) DFT 1320 – Computer Aided Drafting I (3) DFT 1340 – Computer Aided Drafting II (3)	Associate of Applied Science: Engineering Technology – Drafting
Child Care	Child Development 1 179000 (1) Child Development 2 179030 (3)	EDU 1013 – Child Growth and Development (3) EDU 1012 – Intro to Early Childhood (3)	Certificate: Early Childhood Development Associate of Applied Science: Early Childhood Development
Computer Applications	Computer Applications 1 171100 (1) Computer Applications 2 171420 (3)	OFT 1010 – Keyboarding and Document Processing (3) OFT 1302 – Beginning Excel (1) OFT 1303 – Beginning Access (1) OFT 1304 – Beginning PowerPoint (1) OFT 1305 – Beginning Word (1) OFT 1307 – Beginning Project (1) OFT 1402 – Intermediate Excel (1) OFT 1403 – Intermediate Access (1) OFT 1404 – Intermediate PowerPoint (1) OFT 1405 – Intermediate Word (1) OFT 1502 – Advanced Excel (1) OFT 1505 – Advanced Word (1)	Certificate: Office Technology
Computer Networking	Computer Networking 1 177950 (2) Computer Networking 2 177960 (3)	ITS 2510 – CISCO Networking 1 (4) ITS 2515 – CISCO Networking 2 (4) ITS 2520 – CISCO Networking 3 (4) ITS 2525 – CISCO Networking 4 (4)	Associate of Applied Science: Information Systems Security

HS PROGRAM	HS COURSE	CSM COURSE	CSM PROGRAM
Computer Programming	Computer Programming 1 172020 (1)	ITS 1110 – Program Design and Development (3)	Certificate: Information Services Technology Associate of Applied Science: Computer Information Systems Associate of Science: Computer Science Associate of Applied Science: Information Services Technology
Computer Science	Advanced Placement Computer Science A 178950 (2)	ITS 2591 – Computer Science I (4)	Associate of Applied Science: Computer Information Systems
Computer Web Design	Computer Website Development 1 178330 (1) Web Essentials 178320 (1) Computer Website Development 2 178340 (1) **Interactive Web Media	ITS 1110 – Program and Design Development (3) ITS 1205 – Internet and Web Application Essentials (3) ITS 2492 – Programming for the Web using .NET Technology (3) AND/OR ITS 2690 – Web Programming (3) ITS 2620 – Web Graphics and Multimedia (3)	Certificate: Web Developer Associate of Applied Science: Information Services Technology – Web Developer
Criminal Justice	Criminal Justice 1 172630 (2) Criminal Justice 2 172640 (3)	CJS 1015 – Introduction to Criminal Justice (3) CJS 2010 – Introduction to Criminal Investigations (3)	Certificate: Criminal Justice Associate of Applied Science: Criminal Justice
Engineering	Engineering 1 177400 (2) Engineering 2 177530 (3)	DFT 1200 – Engineering Graphics (3) EGT 1015 – Exploring Engineering Technology (3) DFT 1320 – Computer Aided Drafting (3) EGT 1300 – Basic Mechanics (3) MFT 1010 – Manufacturing Technology (3)	Associate of Applied Science: Engineering Technology
Fire/Rescue Cadet Program 177820 (4)	Firefighter 1 Firefighter 2 Hazardous Materials Operations Emergency Medical Technician – Basic Rescue Technician (Revised)	FST 1110 – Firefighter 1 (3) FST 1120 – Firefighter 2 (2) FST 1150 – Hazardous Material Operations (1) EMS 1100 w/ Lab – Emergency Medical Technician – Basic (6) FST 2020 – Rescue Technician (3)	Associate of Applied Science: Fire Science Technology
Graphic Communications	Graphic Communications 2 177930 (3)	ART 1210 – Color Theory & Practice (3) ART 1505 – Digital Photography (3)	Certificate: Graphic Design

HS PROGRAM	HS COURSE	CSM COURSE	CSM PROGRAM
Introduction to Human Anatomy and Physiology	Introduction to Anatomy & Physiology 043080 (1)	BIO 1040 Introduction to Human Anatomy & Physiology (3) BIO 1040 L Introduction to Human Anatomy & Physiology Lab (1)	Certificate: Emergency Medical Services - Intermediate Certificate: Medical Assisting Certificate: Medical Coding Specialist Certificate: Pharmacy Technician Associate of Applied Science: Emergency Medical Services Associate of Applied Science: Massage Therapy Associate of Applied Science: Medical Laboratory Technology
Production Engineering	Production Engineering 1 170300 (2) Production Engineering 2 170310 (3)	MFT 1120 – CAD/CAM: Drawing Designs in Manufacturing (3) MFT 1160 – Computer Numerical Controls (3) ELT 1015 – Basic Electronics (4)	Associate of Applied Science: Engineering Technology: Manufacturing
Natural Resources Management	Natural Resources Management 2 175200 (3)	ENV 1300 – Environmental Science ENV 1300L – Environmental Science Lab	Certificate: Environmental Technology Associate of Applied Science: Construction Management Technology Associate of Applied Science: Electric Power Technician Associate of Applied Science: Electric Wiring Technician Associate of Applied Science: Environmental Technology

JOHNSON AND WALES UNIVERSITY

HS PROGRAM	HS COURSE	COLLEGE COURSE (CREDIT)**	COLLEGE PROGRAM
Culinary Arts	Culinary Arts 1 176400 Culinary Arts 2 176500	15 credits 1 term credit	Culinary Arts Associate's Degree Stocks and Sauces Certificate Storeroom Operations Certificate American Regional Cuisine Certificate Introduction to Baking and Pastry Certificate Principles of Food Service Production Certificate

LINCOLN TECHNICAL INSTITUTE

HS PROGRAM	HS COURSE	COLLEGE COURSE (CREDIT)**	COLLEGE PROGRAM
Automotive Technology	Automotive Technology 1 175300 Automotive Technology 2 175430	Introduction to Automotive Technologies (3 credits)	Automotive Service Technology Degree Automotive Service Attendant Certificate Automotive Air Conditioning Specialist Certificate Automotive Drive Train Specialist Certificate Automotive Brake/Suspension Specialist Certificate