

High School

COURSE OFFERINGS GUIDE 2019-2020



**FREDERICK COUNTY PUBLIC SCHOOLS
REACH • CHALLENGE • PREPARE**

HIGH SCHOOL DIRECTORY

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COURSE DESCRIPTIONS

FCPS high schools offer students the choice of more than 300 courses ranging from American Popular Music and Accounting to World History and Welding. This section organizes course descriptions into 11 broad categories. To find a specific course quickly, refer to the alphabetical index at the back of this guide.

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ACADEMIES AND SIGNATURE PROGRAMS

Academies and Signature Programs provide focused instruction together with high expectations, standards and unparalleled opportunities for academic achievement. The following programs are available to students countywide at the high schools listed. Admission is by application and enrollment may be limited. Academy structure is currently under review and is subject to change.

Academy programs are typically characterized by state or nationally recognized curricular programs that require outside program certification and specialized teacher training or certification. Students may receive college credit or state or national certification for successful completion of the program. Academy programs draw students from outside the school in which they are located. *With the exception of NJROTC at Governor Thomas Johnson High School students who are not geographically assigned to these schools are not provided transportation.

Signature programs are unique to Frederick County Public Schools, offering specialized courses at specific school locations. Signature programs may have courses that award college credit and may not carry state or national recognition for successful completion. Students who enroll in a signature program at a school other than their home school are responsible for their own transportation.

Academy	Location	Deadline for Application
Academy for the Fine Arts, page 5	Governor Thomas Johnson HS	Deadline – February 15. Late Applications – May 1 Contact school for current school year deadline.
Navy Junior ROTC (NJROTC) Academy, page 5	Governor Thomas Johnson HS	
Project Lead the Way – Biomedical Sciences, page 6	Career and Technology Center	
Teacher Academy of Maryland, page 7	Career and Technology Center	

Signature Program	Location	Deadline for Application
International Baccalaureate Academy (IB), page 5	Urbana HS	Deadline – February 15. Late Applications – May 1 Deadline for UHS I.B. only – December 15th *No Application Required
Leadership Program, page 5	Oakdale HS	
Pre-Engineering Program, page 6	Oakdale HS	
Project Lead the Way – Biomedical Sciences, page 6	Tuscarora HS	
Project Lead the Way – Pre-Engineering,* page 6	Linganore HS (Civil)	
Project Lead the Way – Pre-Engineering,* page 6	Walkersville HS (Aeronautical)	
Project Lead the Way – Pre-Engineering,* page 6	Tuscarora HS (Computer Integrated Manufacturing)	

For information regarding Out of District requests, refer to BOE Regulation #400-15 on the www.fcps.org web site.

ACADEMIES AND SIGNATURE PROGRAMS

ACADEMY FOR THE FINE ARTS

Offered at Governor Thomas Johnson High School.

Audition and/or portfolio required.

Advanced courses in dance, music, theatre, and the visual arts are taught at a college level with an intense curriculum to challenge and engage students. Participation in the Academy for the Fine Arts provides students with unique academic and artistic experiences, which build upon, enhance, and advance the skills and knowledge learned in introductory arts coursework and in performing ensembles at all high schools. They are prepared for the finest colleges and/or for a career in the arts or in a communications field of study.

Academy students in grades 10, 11 and 12 attend Gov. Thomas Johnson High School for the first two blocks of the day and still have the opportunity to participate in their home school events. Students are provided the opportunity to gain knowledge and enrichment from field trips, concerts, plays, museum visits, and interaction with professional artists, mentors and workshops. Students enrolled in the academy are assisted in portfolio development along with gathering career and college information to prepare them for higher learning. Academy for the Fine Arts graduates leave with work-readiness skills, courses, and experiences in concentrated areas of study so that they are ready to enter a post-secondary academic institution.

INTERNATIONAL BACCALAUREATE ACADEMY

Offered at Urbana High School.

This highly challenging two-year curriculum leads to a qualification that is widely recognized by the world's leading universities. The program requires study in each of six "groups." Interested students should go to www.uhsmd.org to access the IB Program booklet and application and talk with the IB coordinator and their parents/guardians before deciding whether to apply.

- Group 1 – Language A (English)
- Group 2 – Language B (Second Language)
- Group 3 – Individuals and Societies
- Group 4 – Sciences
- Group 5 – Mathematics and Computer Science
- Group 6 – Arts

Students may elect to substitute an additional course from groups 1-5 for the Arts (Group 6) requirement. Theory of Knowledge is required of all IB students. Schedules for IB diploma students are somewhat different from those of non-IB students. "Higher Level" and some "Standard Level" IB courses will be scheduled over a two-year period, meeting 90 minutes every other day for two years. IB courses are listed in Step 7 under the appropriate curricular categories.

LEADERSHIP PROGRAM

Offered at Oakdale High School.

The Oakdale High School Leadership Academy empowers tomorrow's leaders today, by equipping students with the skills and processes necessary to effectively lead in the dynamic world in which we live. Students will be actively engaged in leadership coursework that emphasizes the requisite skills for 21st century learners – technology, communication, world perspectives, problem solving and ethical decision making. Through completion of a rigorous program of academic courses, or CTE Completer Program, Student Service Learning and Civic Engagement projects, students will have opportunities to apply concepts learned through a variety of leadership activities.

The Academy is 2 years of intensive leadership studies that may begin in the spring of sophomore or junior year.

Program requirements include:

- Successfully meet all program prerequisites: courses with minimum grades.
- Completed Application.
- All state and FCPS requirements for graduation.
- Required summer reading.
- Completion of two leadership courses to be taken in consecutive years.
- Choice of academic program from approved academic coursework or CTE completer program.
- Capstone Project .
- Participation in a choice of clubs, activities and other Civic Engagement activities.

Interested students may download a copy of the Oakdale High School Leadership Academy Program Guide from the <http://ohs.sites.fcps.org/>

NAVAL JUNIOR RESERVE OFFICERS TRAINING CORPS (NJROTC)

Offered at Governor Thomas Johnson High School.

The NJROTC program encompasses strong academic course work complemented by extracurricular activities that foster the pillars of character and citizenship. Students in this program complete four courses in Naval Science in addition to their other academic course work. Completion of Naval Science 2 fulfills the state Personal Financial Literacy requirement.

NAVAL SCIENCE 1

568810

Grades 9 – 12

Prerequisite: Sports physical.

This course is the first of a series of four courses in the NJROTC program. It encompasses strong academic course work complemented by many extracurricular activities that foster the pillars of character and citizenship. Naval Science 1 includes content in: Introduction to the NJROTC Program; Introduction to Leader-

ship; Naval Ships; Mission and Organization; The Nation, Navy and the People in American Democracy; Introduction to Navigation and Time; Health Education; First Aid; and Drug, Alcohol and Tobacco Abuse Prevention. The course includes Military Drill, and wearing the NJROTC uniform is required one day each week.

Students completing this course are prepared to enroll in Naval Science 2.

NAVAL SCIENCE 2

568820 Grades 10 – 12

Prerequisite: Sports physical and completion of Naval Science 1.

This course is the second of a series of four courses in the NJROTC program. It encompasses strong academic course work complemented by many extracurricular activities that foster the pillars of character and citizenship. Naval Science 2 includes content in: Leadership Theory; Personal Financial Literacy; Naval History; and Naval Sciences including Meteorology, Oceanography, Astronomy, Electricity and Aerodynamics. This course includes Military Drill, and wearing the NJROTC uniform is required one day each week.

Students completing this course are prepared to enroll in Naval Science 3.

NAVAL SCIENCE 3

568830 Grades 11 – 12

Prerequisites: Sports physical and completion of Naval Science 2.

This course is the third in a series of four courses in the NJROTC program. It encompasses strong academic course work complemented by many extracurricular activities that foster the pillars of character and citizenship. Naval Science 3 includes content in: Application of Leadership Skills, Naval Operations, Marine Navigation, Shipboard Organization and Watches, Naval Weapons and Aircraft, Sea Power and National Security, Military Law, and International Law and the Sea. Students enrolled in NJROTC will practice drill regularly and are required to wear the uniform one day each week.

Students completing this course are prepared to enroll in Naval Science 4.

NAVAL SCIENCE 4

568840 Grade 12

Prerequisites: Sports physical and completion of Naval Science 3.

This course is the culmination of a series of four courses in the NJROTC program. It encompasses strong academic course work complemented by many extracurricular activities that foster the pillars of character and citizenship. Naval Science 4 includes content in: Naval Leadership Techniques and Principles, Theory of Human Motivation, Group Dynamics, Basics of Effective Communication, Carrying-out Orders, the Chain of Command, and practical application of leadership skills. Students enrolled in NJROTC practice drill regularly and are required to wear the uniform one day each week.

Students successfully completing Naval Science 3 and/or 4 may have enhanced opportunities to earn an NJROTC college scholarship and are eligible for early promotion if they choose to enlist in the military after high school.

PRE-ENGINEERING PROGRAM

Grades 10-12 .

Offered at Oakdale High School.

Prerequisites: Algebra 1 and ICP or ABP.

Students study a combination of science, math, and technology courses over a three-year period. In addition to traditional course work, students are introduced to practical applications in the following fields of engineering – CAD, robotics, electrical systems, mechanical systems, hydraulics, pneumatics, structures, manufacturing (CNC), residential wiring, damage control, lasers, and quality control. Hands-on experience is combined with classroom study to introduce students to the various areas of engineering. Courses in this three-year program must include:

- Pre-Engineering 1, 2, 3
- Pre-Calculus
- Physics
- Two electives chosen from upper level science, math, technology education, or information technology courses. These courses must be approved for each student by the school's Pre-Engineering Academy Advisory Board.

PROJECT LEAD THE WAY: BIOMEDICAL SCIENCES

Offered only at the Career and Technology Center and Tuscarora High School.

Student shadowing and application process required. See your counselor.

This sequence of four courses prepares students for entry into two and four-year college programs in the biomedical sciences and biotechnology. Students are encouraged to purchase a lab manual but it is not required.

Upon completion of all four courses students may receive 4 articulated credits for Bio 113 at Stevenson University.

PROJECT LEAD THE WAY: PRE-ENGINEERING ACADEMY

Offered at Linganore, Tuscarora and Walkersville High Schools.

A series of five courses emphasizing problem-solving applied logic, research, and design introduces students to the scope, rigor, and discipline of engineering prior to entering college.

TEACHER ACADEMY

Offered at the Career and Technology Center.

The Teacher Academy, located at the Career and Technology Center, is an approved MSDE program that prepares high school students for further education and careers in the education profession such as teacher, guidance counselor, school psychologist, paraprofessional, etc.

The Teacher Academy of Maryland (TAM) curriculum includes courses such as Human Growth and Development through Adolescence, Teaching as a Profession, and Foundations of Curriculum and Instruction that are designed to expose students to the world of teaching. The program culminates with an internship that offers students opportunities to extend and apply their knowledge about teaching in a classroom setting under the supervision of a mentor teacher. Students who successfully complete the Teacher Academy program have the potential to earn multiple college credits and be well prepared for a teacher preparation program.

Students must shadow and apply to the Teacher Academy; please see your school counselor.

DUAL ENROLLMENT

Under the College and Career Readiness and College Completion Act of 2013, Maryland's public high school students can take advantage of reduced tuition by enrolling in credit-bearing courses in public colleges and universities. Enrolling in a college course will provide students with the exposure to experiences and information necessary for making informed decisions when selecting a college or career. Frederick County Public School students are provided multiple opportunities to earn college credit through partnerships with local institutions of higher education. Dual enrollment options include Open Campus Dual Enrollment and High School Based Dual Enrollment.

Open Campus Dual Enrollment: High school students complete a college course on the college campus or through the college's on-line program. The course may be during or outside of the school day. Courses are taught by FCC faculty.

High School Based Dual Enrollment: Frederick County Public Schools (FCPS), in partnership with Frederick Community College (FCC), provide students the opportunity to enroll in college courses that are taught at their high school. Students gain exposure to the academic challenges of college while remaining in their supportive high school environment. The courses are taught by specially credentialed FCPS teachers under the supervision of FCC faculty.

Eligibility and Admission Requirements:

Eligible students seeking admission to courses offered through the dual enrollment program must:

- be enrolled in a Frederick County Public High School
- have a Grade Point Average of 2.0 or higher
- complete the FCPS College and Career Readiness Dual Enrollment Application;
- complete the college application for admission;
- meet the prerequisites for the course(s);
- complete diagnostic assessment or have appropriate scores on SAT, ACT or PARCC assessments that indicate readiness for college level work as determined by the Public Institution of Higher Education (PIHE); and
- provide confirmation regarding eligibility for Free and Reduced Meals

Dual enrollment is an opportunity for high school students to enroll in a college course and simultaneously earn high school and college credit. Dual Credit can only be applied when students meet eligibility requirements for Dual Enrollment. Students must enroll in a college course that meets the curriculum requirements of an approved FCPS high school course. When a student requests Dual Credit and successfully passes the college course, the grade will appear on the high school transcript, will count toward the student's high school credits necessary to earn a high school diploma and included on the high school transcript. Transcribed college credit is recorded on the transcript from the postsecondary institution and will be noted on the high school transcript. The college course taken for Dual Credit replaces the required high school course. Enrollment in a college course for Dual Credit requires approval from the high school principal and the appropriate FCPS curriculum specialist. Enrollment in a college course for college credit only required approval from the school principal but does not require approval of the curriculum specialist.

Questions about Dual Enrollment and Dual Credit should be discussed with your school counselor or the Work Based Learning coordinator at your school.

<http://apps.frederick.edu/de/>

ARTS: VISUAL AND PERFORMING

ACADEMY FOR THE FINE ARTS

Offered at Governor Thomas Johnson High School.

The Academy for the Fine Arts (AFA) at Governor Thomas Johnson High School offers Frederick County high school students in grades 10 to 12, with an interest in the arts, the opportunity to take exceptional classes in the fields of dance, music, theatre, and visual arts. AFA offers college level courses with an intense curriculum to challenge and engage students. The academic program will allow for student refinement of individual artistic styles/techniques and portfolio development. A student may enroll for a one, two, or three year option in the Advanced Dance, Music, Theatre, or Visual Arts Studies. Academy students in grades 10, 11 and 12 attend Gov. Thomas Johnson High School for the first two blocks of the day and still have the opportunity to participate in their home school events. For more information about the Academy, including recommended course sequences and planning guides, to request copies of the application materials and shadowing information, please visit the Academy website at <http://www.fcpsartsacademy.org/> or contact the Coordinator of the Academy for the Fine Arts at Gov. Thomas Johnson High School. Specific course offerings are found under the appropriate strand (Dance, Music, Theatre, or Visual Arts).

ADVANCED MUSIC STUDIES

Courses in Music Theory, piano, music technology, history, and chamber.

664121	1A	2 credits	Grades 10-12
664151	1B	2 credits	Grades 10-12
664221	2A	2 credits	Grades 11-12
664251	2B	2 credits	Grades 11-12
664261	3A	2 credits	Grade 12
664271	3B	2 credits	Grade 12

Offered only at Governor Thomas Johnson High School as part of the Academy for the Fine Arts for two entire instructional blocks daily. Students from all other Frederick County public high schools are eligible to audition for these courses.

Prerequisites:

Advanced Music Studies 1A: Fine Arts Graduation Credit, completed application, scheduled performance audition, submission of transcripts and two references, and prior permission of the instructor (interview).

Advanced Music Studies 1B, 2A, or 2B: Advanced Music Studies 1A, re-apply, re-audition (if requested), and prior permission of the instructor.

Advanced Music Studies 3A or 3B: Advanced Music Studies 1A, 1B, 2A, and 2B, re-apply, re-audition (if requested), and prior permission of the instructor.

Advanced Music Studies (AMS) is for students who have successfully completed previous music courses. AMS provides unique preparation in music for students planning to pursue the study of music after high school. Students focus on the comprehensive study of ensemble and solo performance, theory and harmony, music history, music technology, critical listening, and sight-singing/ear training. Students may elect to concentrate in either vocal or instrumental music.

Over the course of the academic year, student will earn:

- 1 credit in Music Theory (Introduction or Advanced Placement)
- .5 credit in Music Technology
- .5 credit in Class Piano
- 2 credits in Music Literature/Chamber

ADVANCED THEATRE STUDIES

Courses in Theatre Literacy, History & criticism; Scriptwriting; Acting Methods.

664311	1A	2 credits	Grades 10-12
664321	1B	2 credits	Grades 10-12
664331	2A	2 credits	Grades 11-12
664341	2B	2 credits	Grades 11-12
664342	3A	2 credits	Grade 12
664343	3B	2 credits	Grade 12

Offered only at Governor Thomas Johnson High School as part of the Academy for the Fine Arts for two entire instructional blocks daily. Students from all other Frederick County public high schools are eligible to audition for these courses after meeting admission requirements. A reasonable studio fee and other supplies are required.

Prerequisites:

Advanced Theatre Studies 1: Fine Arts Graduation Credit, completed application, scheduled performance audition, submission of transcripts and two references, and prior permission of the instructor (interview).

Advanced Theatre Studies 2: Advanced Theatre Studies 1, re-audition (if requested), and prior permission of the instructor.

Advanced Theatre Studies 3: Advanced Theatre Studies 2, re-audition (if requested), and prior permission of the instructor.

Advanced Theater Studies (ATS) program provides students with two separate tracks of focus, performance or technical. Students on the performance track continue to develop the foundations introduced in beginning theater programs. Emphasis is on theater history, character development, script analysis and voice and movement. Students will focus on the areas of scene study, scriptwriting, theater business and management, auditioning, directing, and performance styles, dialects and acting for film and television. Students in the performance track will be required to attend evening showcases and performances. Students on the technical track will continue to build upon the foundations developed in the Intro and Technical Theater 1 class. Students will serve in a variety of roles in theatrical productions, including stage manager, set designer and production manager. Students will prepare for entry-level positions in the theatrical arts industry as well as BFA level programs. Students will be equipped with skills necessary for advanced positions in theater management and stage production. Coursework will highlight such topics as lighting for the stage, technical direction, sound direction, costume and set design and stage management. The Program is divided into 4 separate courses of study. Over the academic year, students will receive:

- 2 credits in Theatrical Literacy, History and Criticism; Performance Laboratory
- .5 credit in writing for stage and film

- .5 credit in voice and movement
- .5 credit in Methods and Techniques, and
- .5 credit in Theatre Business

their own work, as well as the work of others, using design terminology. Students learn and understand the chronological development of art from early beginnings through the modern world. Course descriptions are listed on the following pages.

Areas of Concentration:

- Advanced 2-D Art (Drawing and Painting)
- Advanced 3-D Art (Ceramics)
- Advanced Computer Graphics
- Advanced Photography (Digital and Traditional Black & White)

Over the course of the academic year, student will earn:

- 1 credit in Art History (Journeys Through arts Styles or Advanced Placement)
- 1 credit in Advanced 2D, 3D, Photography or Computer Graphics
- 1 credit in AP Art Studio
- 1 Credit in Visual Art Thesis

ADVANCED VISUAL ARTS STUDIES

Courses described below by strand.

Offered only at Governor Thomas Johnson High School within the Academy for the Fine Arts, which meets for two entire instructional blocks daily. Students from all other Frederick County public high schools are eligible to audition for these courses after meeting admission requirements. A reasonable studio fee and other supplies are required.

Advanced Visual Arts Studies (AVAS) is for students who have successfully completed previous foundation art courses. AVAS provides unique preparation for students planning to pursue the study of visual art after high school. Students improve their ability to understand and to organize the elements of art and principles of design. AVAS students develop an individual portfolio, a process portfolio, and refinements in individual artistic styles and techniques. Students analyze and critique

FCPS COURSES THAT MEET THE FINE ARTS GRADUATION REQUIREMENT

Visual Arts	Music	Drama	Dance
Art 1*	American Popular Music*	Introduction to Theatre*	Beginner Dance*
Ceramics 1*	Band 1*, 2*		Intermediate Dance*
Commercial Art 1*	Class Piano 1*		
Digital Photography 1*	Concert Choir 1*		
Drawing and Painting 1*	Guitar 1*		
Computer Graphics 1*	Instrumental Chamber Ensemble 1*		
	Jazz Ensemble 1*		
	Marching Band: Band Front 1*		
	Mixed Chorus 1*		
	Music Listening and Literature*		
	Music Theory 1*		
	Show Choir 1*		
	String Orchestra 1*		
	Voice Ensemble 1*		

VISUAL ARTS

In all FCPS visual arts classes, students develop art skills, establish good work habits, and refine their ability to evaluate artwork. They learn about art and artifacts produced in many cultures of the past and present, and are challenged to think creatively and to design, draw, paint, sculpt, or craft. They produce and become practicing student artists using traditional and modern tools of design. Students who show a high interest in art are encouraged to take advanced art course work and pursue various art-related fields and careers.

To graduate, students must earn one high school credit in the Fine Arts. Asterisked () courses below satisfy that requirement.*

ADVANCED 2-D ART

291110	1	Grades 10-12
291120	2	Grades 10-12
291121	3	Grade 12

Offered only at Governor Thomas Johnson High School within the Academy for the Fine Arts, which meets for two entire instructional blocks daily. Students from all other Frederick County public high schools are eligible to audition for these courses after meeting admission requirements.

A reasonable studio fee and other supplies are required.

Prerequisites:

Advanced 2-D Art 1: Drawing and Painting 1 or Art 1 and acceptance into the Academy for the Fine Arts. (Must be taken concurrently with Journeys through Art Styles, Theories, and Applications or Art History, AP.)

Advanced 2-D Art 2: Advanced 2-D Art 1, Journeys through Art Styles, Theories, and Applications, and prior permission of the instructor. (Must be taken concurrently with Art History, AP.)

Advanced 2-D Art 3: Advanced 2-D Art 2, Art History, AP. (Must be taken concurrently with Art History 2, AP.)

Students design and produce a wide variety of advanced individual and independent artworks in all phases of drawing and painting, advancing their personal artistic vision and style. Students study various artists, the elements of art and principles of design, and apply aesthetic criteria when critiquing artwork. Assignments provide students an opportunity to develop a quality portfolio for use in pursuing college and university study or a career in the arts. There are visits by professional artists, the exploration of art careers, gallery and studio tours, and individual and group art shows. Artworks are to be maintained in a purchased portfolio. Idea sketches, handouts, notes, and written critiques and self-evaluations are organized in an artist's book, journal, or notebook.

ADVANCED COMPUTER GRAPHICS

294100	1	Grades 10-12
294110	2	Grades 10-12
294120	3	Grade 12

Offered only at Governor Thomas Johnson High School within the Academy for the Fine Arts, which meets for two entire instructional blocks daily. Students from all other Frederick County public high schools are eligible to audition for these courses after meeting admission requirements.

A sketchbook and an art portfolio to collect artworks and a reasonable lab fee are required.

Students are expected to provide their own USB flash drive (or similar device subject to teacher approval) for maintaining working files as well as final products. All such storage devices will be governed by the FCPS standard operating procedure for student use of technology storage devices.

Prerequisites:

Advanced Computer Graphics 1: Graphic Design 1 and acceptance into the Academy for the Fine Arts. (Must be taken concurrently with Journeys through Art Styles, Theories, and Applications or Art History, AP.)

Advanced Computer Graphics 2: Advanced Computer Graphics 1, Journeys through Art Styles, Theories, and Applications, and prior permission of the instructor. (Must be taken concurrently with Art History, AP.)

Advanced Computer Graphics 3: Advanced Computer Graphics 2, Art History 1, AP. (Must be taken concurrently with Art History 2, AP.)

Students draw, design, and print a variety of computer-generated color graphics using software programs based on emphasis determined by instructor and student. Students are required to experience advanced lessons/techniques to increase their knowledge, and all projects must illustrate the extra time, care of quality, and the depth of the programs. Emphases of study include: Advanced Animation/3-D Design, Advanced Photoshop, Commercial Art Studies, Artistic Creation, and Video/DVD Studies.

ADVANCED PHOTOGRAPHY

291180	1	Grades 10-12
291190	2	Grades 10-12
291191	3	Grade 12

Offered only at Governor Thomas Johnson High School within the Academy for the Fine Arts, which meets for two entire instructional blocks daily. Students from all other Frederick County public high schools are eligible to audition for these courses after meeting admission requirements.

Prerequisites:

Advanced Photography 1: acceptance into the Academy for the Fine Arts. (Must be taken concurrently with Journeys through Art Styles, Theories, and Applications or Art History, AP.)

Advanced Photography 2: Advanced Photography 1, Journeys through Art Styles, Theories, and Applications, and prior permission of the instructor. (Must be taken concurrently with Art History, AP.)

Advanced Photography 3: Advanced Photography 2, Art History 1 AP. (Must be taken concurrently with Art History 2, AP.)

A 35mm SLR camera with manual controls, a reasonable photography supplies lab fee, and other supplies are required.

Students challenge their degree of technical proficiency with the use of manual and/or digital camera, digital photography software, and/or exploration of darkroom equipment to expand and create their personal artistic vision and style. They explore technological advances in photography, as well as photograph, develop, and print a wide variety of quality photographic artworks. Students study photographic history, the elements of art and principles of design, and apply aesthetic criteria when critiquing artwork. Assignments provide students an opportunity to develop a quality professional portfolio for use in pursuing college and professional development. In addition, they work on increasingly more individual and independent projects to expand their personal and individual vision. Extending the Boundaries within Photography offers students a basis for pursuing studies in design and commercial photography, portraiture, fine art, and photojournalism.

ADVANCED 3-D ART

293200	1	Grades 10-12
293210	2	Grades 10-12
293220	3	Grade 12

Offered only at Governor Thomas Johnson High School within the Academy for the Fine Arts, which meets two entire instructional blocks daily. Students from all other Frederick County public high schools are eligible to audition for these courses after meeting admission requirements.

Prerequisites:

Advanced 3-D Art 1: Ceramics 2 and acceptance into the Academy for the Fine Arts. (Must be taken concurrently with Journeys through Art Styles, Theories, and Applications or Art History, AP.)

Advanced 3-D Art 2: Advanced 3-D Art 1, Journeys through Art Styles, Theories, and Applications, and prior permission of the instructor. (Must be taken concurrently with Art History, AP)

Advanced 3-D Art 3: Advanced 3-D Art 2, Art History 1 AP. (Must be taken concurrently with Art History 2, AP)

A reasonable studio fee and other supplies are required.

Students develop and explore the multi-faceted theories, art movements, and applications of creating 3-dimensional art. Students will build upon previous knowledge of the elements and principles of design to incorporate the components within the creation of their personal artworks. Students will explore and apply traditional and non-traditional media in their projects. They will research, develop, and create individual and group projects in relation to the artist and/or movements within the syllabus. They will study and apply safety procedures as stated in OSHA/MOSHA regulations. Assigned projects will provide an opportunity to develop personal artistic vision and style and to produce a quality professional portfolio for use in pursuing college and professional application. The course will challenge students to expand their personal and individual vision through independent study.

ART

291010	1*
292011	2
291141	3

A reasonable studio fee and other supplies are required.

Prerequisites:

Art 2: Art 1

Art 3: Art 2

Students explore and produce a wide variety of artworks in 2 and 3 dimensions in order to create a process portfolio that includes a collection of artworks, self-evaluations, idea sketches, handouts, notes, and critiques. They study many visual art focuses selected by the teacher from among: art history, art elements and principles of design, drawing and painting, printmaking, sculpture, crafts, commercial design, ceramics, fiber arts, and jewelry projects.

In Art 2 and 3, the emphasis is on applying the art skills learned in the basic course to a variety of individual projects, as well as learning and refining more advanced artistic techniques. In addition, students learn advanced techniques in aesthetics and art criticism.

ART HISTORY 1, ADVANCED PLACEMENT

293131	1	Grades 10-12
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Prerequisites:

Successful completion of a Level 2 or higher visual art course or permission of the instructor.

The student is responsible for application fees required to take the AP test in this subject.

Students pursue college-level western art history studies. Working with slides, notes, research, and a variety of college-level art history texts and supplementary materials, students are able to identify, analyze, interpret, and judge artworks from all phases of civilization. They also develop a comprehensive study guide in preparation for the AP Art History examination. The Educational Testing Service scores the test (using a 1-5 scoring rubric), and students who earn a score of 4 or higher may receive three college credits.

ART HISTORY 2, ADVANCED PLACEMENT

293132	2	Grade 12
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Prerequisites:

Successful completion of Journeys Through Art Styles and Applications, AP Art History 1, and the AP Art History 1 Exam.

This course introduces students to the concept of humanities. Students will learn and comprehend the different elements of music, art, dance, drama, and literature and how they apply within different stylistic periods. Periods that will be studied are chronological in arrangement, beginning with prehistory and working up through the modern era. Students will broaden their understanding of these topics through daily participation in lecture and discussion, group and individual projects, activities, and student presentations.

ART INDEPENDENT STUDY

294051	1
294151	2
294451	3
294551	4

Prerequisites:

Art Independent Study 1: All available course work in the student's visual arts focus area and teacher permission.

Art Independent Study 2, 3, or 4: An earlier art independent study course and teacher permission.

These courses may not be available at all high schools.

A reasonable studio fee and other supplies may be required

Students may enroll in this course after they have completed all courses available to them in their area of visual arts focus (e.g., ceramics). They work independently on the development of an individual portfolio, a process portfolio, and refinements in individual artistic style. Students contract specific course requirements with the teacher. Some projects may require long-term or intense exploration as well as the purchase of unique materials and supplies as agreed on with the teacher.

ARTS, VISUAL - IB

SL – 290101 (one year)	Grades 11 and/or 12
HL – 290201 (two year program, 1st year)	Grades 11 and/or 12
HL – 290301 (two year program, 2nd year)	Grades 11 and/or 12

Offered only at Urbana High School.

Prerequisite: One previous art course.

To earn the IB diploma, students must take one class in the IB Arts curriculum (either music or art). Students are required to produce high quality finished works of art. Students must also complete another component, the Research Workbook, which requires a high level of research in an area of art of their choice. The work is evaluated by the classroom teacher and by an IB “reader” who looks at the finished art, reviews the Research Workbook, and interviews the student. The student’s grade consists of a combination of the outside evaluation and the classroom teacher evaluation.

CERAMICS

291060	1*
292061	2
293061	3
293191	4

A reasonable studio fee and other supplies are required.

Prerequisites:

Ceramics 2: Ceramics 1

Ceramics 3: Ceramics 2

Ceramics 4: Ceramics 3

Students design and construct artworks from clay to create a process portfolio (a collection of finished artworks, self-evaluations, idea sketches, handouts, notes, and critiques). They study ceramic art history, the elements and principles of design, critiquing, and aesthetics (the appreciation of beauty). Activities using clay include hand building, throwing, decorative techniques, and special clay processes. An overview of related-health hazards is also included.

In Ceramics 2, 3, and 4, students work on increasingly more individual and independent design and construction of clay projects, as well as learning and practicing more advanced techniques for clay construction, glazing, and decorating.

COMMERCIAL ART

292040	1*
293041	2

A reasonable studio fee, a sketchbook and an art portfolio to collect artworks and other supplies are required.

Prerequisite for Commercial Art 2: Commercial Art 1.

Students design and produce a variety of commercial and advertising artworks to create a process portfolio (a collection of finished artworks, self-evaluations, idea sketches, handouts, notes, and critiques). They study advertising art history, the elements and principles of design, critiquing, and aesthetics (the appreciation of beauty). Activities include advertising design techniques, typography, illustration techniques, and possible computer graphics applications.

In Commercial Art 2, students work on increasingly more individual and independent projects in all phases of commercial art and advertising design production, resulting in a varied

and complex collection of art projects to be maintained in the art portfolio.

COMPUTER GRAPHICS

294040	1*
294041	2
294042	3
294043	4

A sketchbook and an art portfolio to collect artworks and a reasonable studio fee and other supplies are required.

Students are expected to provide their own USB flash drive (or similar device subject to teacher approval) for maintaining working files as well as final products. All such storage devices will be governed by the FCPS standard operating procedure for student use of technology storage devices.

Prerequisites:

Computer Graphics 2: Computer Graphics 1

Computer Graphics 3: Computer Graphics 2

Computer Graphics 4: Computer Graphics 3

Computer Graphics courses are currently available at Brunswick, Frederick, Governor Thomas Johnson, Linganore, Middletown, Oakdale, Tuscarora, Urbana and Walkersville high schools.

Students draw, design, and print a variety of computer-generated color graphics using a variety of software programs. Students must have knowledge of basic computer applications, as well as advanced levels of drawing and painting skills.

In Computer Graphics 2, 3, and 4, students work on increasingly more individual and independent projects in all phases of computer graphics design and production, resulting in a varied and complex collection of art projects to be maintained in the art portfolio. Preparation for college and the world of work is highlighted.

DIGITAL PHOTOGRAPHY

292200	1*	Grades 9-12
292202	2	Grades 9-12
292203	3	Grades 9-12
292204	4	Grades 9-12
292205	5	Grades 9-12
292206	6	Grades 9-12

Students are requested to have their own 4-8 mega pixel digital camera or a 35mm SLR camera and be able to fund a reasonable studio fee for supplies for this class.

Students are expected to provide their own USB flash drive (or similar device subject to teacher approval) for maintaining working files as well as final products. All such storage devices will be governed by the FCPS standard operating procedure for student use of technology storage devices.

Prerequisites:

Digital Photo 2: Digital Photo 1 or permission of the instructor

Digital Photo 3: Digital Photo 2 or permission of the instructor

Digital Photo 4: Digital Photo 3 or permission of the instructor

Digital Photo 5: Digital Photo 4 or permission of the instructor

Digital Photo 6: Digital Photo 5 or permission of the instructor

Students photograph, manipulate, and print a wide variety of quality digital photographic artworks to create a process portfolio (a collection of finished artworks, self-evaluations, idea sketches, handouts, notes, and critiques). They study photographic history, the elements of art and principles of design,

critiquing, and aesthetics (the appreciation of beauty). Activities include an introduction to the camera, the use of Adobe Photoshop software, and experience with digital printing techniques.

In Digital Photography 2, 3, 4, 5 and 6, students work on increasingly more individual and independent projects in all phases of digital photography, resulting in a varied and complex collection of art projects to be maintained in the art portfolio.

DRAWING AND PAINTING

291020	1*
292021	2
293021	3

A reasonable studio fee, a sketchbook and an art portfolio to collect artworks and other supplies are required.

Prerequisites:

Drawing and Painting 2: Drawing and Painting 1

Drawing and Painting 3: Drawing and Painting 2

Students design and produce a wide variety of drawing and painting artworks to create a process portfolio (a collection of finished artworks, self-evaluations, idea sketches, handouts, notes, and critiques). They study art history, the elements and principles of design, critiquing, and aesthetics (the appreciation of beauty). Activities include working with pencil, pen and ink, charcoal, pastels, colored pencil, watercolor, tempera, acrylic, and mixed media.

In Drawing and Painting 2 and 3, students work on increasingly more individual and independent projects in all phases of art production, resulting in a varied and complex collection of art projects to be maintained in the art portfolio.

JEWELRY AND SMALL SCULPTURE

291171	1	Grades 10-12
291172	2	Grades 10-12
291173	3	Grades 10-12
291174	4	Grades 10-12

Available only at Linganore, Oakdale and Urbana high schools.

Prerequisites:

Jewelry and Small Sculpture 2: Jewelry and Small Sculpture 1.

Jewelry and Small Sculpture 3: Jewelry and Small Sculpture 2.

Jewelry and Small Sculpture 4: Jewelry and Small Sculpture 3.

A reasonable studio fee and other supplies and small tools are required.

Students design and produce a variety of fine art jewelry, decorative jewelry, and small sculptures using many different media (including, but not limited to, clay, plaster, metal, wood, and mixed media). They create a process portfolio (a collection of finished artworks, self-evaluations, idea sketches, handouts, notes, and critiques). They study the history of jewelry and small sculpture, the elements and principles of design, critiquing, and aesthetics (the appreciation of beauty). Students learn how to use additive, subtractive, and casting processes in creating individual works of art. Some emphasis is on business applications, such as jewelry repair.

In Jewelry and Small Sculpture 2 and 3, students work on increasingly more individual and independent projects in all phases of the design and execution of jewelry and/or small sculptural pieces, resulting in a varied and complex collection of art projects to be maintained in the art portfolio.

JOURNEYS THROUGH ART STYLES, THEORIES, AND APPLICATIONS

297100

Grades 10-12

Offered only at Governor Thomas Johnson High School within the Academy for the Fine Arts, which meets for two entire instructional blocks daily. Students from all other Frederick County public high schools are eligible to audition for these courses after meeting admission requirements.

A notebook and other materials are required.

Students pursue college-level art styles, theories, and applications. Working with slides, notes, research, and supplementary texts and materials, students will be able to identify, analyze, interpret, and evaluate artworks. Students explore the chronological development of art from early beginnings through the modern world.

PUBLICATIONS

292050	1	Grades 10-12
293050	2	Grades 10-12
294050	3	Grades 10-12
295050	4	Grades 10-12
296050	5	Grades 10-12
296060	6	Grades 10-12

Students are expected to provide their own USB flash drive (or similar device subject to teacher approval) for maintaining working files as well as final products. All such storage devices will be governed by the FCPS standard operating procedure for student use of technology storage devices.

Prerequisites:

Publications 1: Teacher permission

Publications 2-6: Prior level of Publications

Students produce the school's yearbook, including planning, layout and graphics, photography, writing and editing copy, and developing the business structure to support the printing of the yearbook. Instruction in word processing, computer graphics, and desktop publishing may be included. Emphasis is on the actual production of the yearbook. Students enrolled in Publications 2 and 3 may serve in editorial and other leadership roles.

SCULPTURE

291130	1
291151	2

A reasonable studio fee and other supplies are required.

Prerequisites:

Sculpture 1: Art 1, Drawing and Painting 1, or Ceramics 1

Sculpture 2: Sculpture 1

Students design and produce a variety of sculpture in many different media to create a process portfolio (a collection of finished artworks, self-evaluations, idea sketches, handouts, notes, and critiques). They study sculptural art history, the elements and principles of design, critiquing, and aesthetics (the appreciation of beauty). Activities include constructing relief sculptures as well as sculptures in the round using additive, subtractive, and casting processes.

STUDIO ART, ADVANCED PLACEMENT

293141	1
294141	2
295141	3
296141	4
297141	5
297151	6

A reasonable studio fee may be required to cover the costs of preparing and submitting the AP portfolio, In addition to a sketchbook and an art portfolio to collect artworks and other supplies as required by the projects selected.

Prerequisites:

Studio Art 1, AP: Drawing and Painting 2 or Art 3 and excellent scores on the evaluation of the portfolio prepared for that Level 2 class.

Studio Art 2, AP: Studio Art 1, AP.

Studio Art 3, AP: Studio Art 2, AP.

Studio Art 4, AP: Studio Art 3, AP.

Studio Art 5, AP: Studio Art 4, AP.

Studio Art 6, AP: Studio Art 5, AP.

Students pursue college-level art studio studies following a curriculum provided by the Educational Testing Service (ETS). Working independently, they develop a drawing portfolio (including slides that must be taken by the student) to be submitted to the ETS for evaluation (using a 1-5 scoring rubric) and possible college credit. Students who earn a portfolio score of 3 or higher may receive three college credits.

Students must enroll for at least two semesters of Studio Art, AP in order to complete the work required of this program. The Level 3, 4 and 5 courses are available for any students who determine, in collaboration with their art teachers and with the permission of their school administration, that they need additional time to complete the requirements or for students who may wish to submit additional AP portfolios in more than one artistic medium.

VISUAL ARTS THESIS

297120	First Year Thesis	Grades 10-12
297130	Second Year Thesis	Grades 11-12
297140	Third Year Thesis	Grade 12

Offered only at Governor Thomas Johnson High School within the Academy for the Fine Arts, which meets for two entire instructional blocks daily. Students from all other Frederick County public high schools are eligible to audition for these courses after meeting admission requirements.

Prerequisites:

First Year Thesis: Academy advanced visual art course, Journeys through Art Styles, Theories, and Applications (or Art History, AP) and acceptance in the Academy.

Second Year Thesis: Two Academy advanced visual art courses, Journeys through Art Styles, Theories, and Applications (or Art History, AP) permission of the instructor and possible re-audition in the Academy.

Third Year Thesis: Three Arts and Communications Academy advanced visual art courses, Journeys through Art Styles; Theories and Applications, Art History/AP permission of the instructor and possible re-audition in the Academy.

Students work independently with the guidance of a teacher on the development of a professional portfolio expanding their personal and artistic vision. They refine, enhance, and apply a

set of individual criteria for self-assessment to promote self-growth; contract specific course requirements with the teacher; enjoy visits by professional artists; and explore art careers, gallery and studio tours, and individual and group art shows. Some projects may require long-term or intense exploration and the purchase of materials and supplies.

WESTERN ART HISTORY

293121

Grades 10-12

Prerequisite: Drawing and Painting 2 or Art 2 and excellent scores on the evaluation of the portfolio prepared for that Level 2 class.

A notebook and other materials are required.

Working with slides, notes, research, and a variety of college-level art history texts and supplementary materials, students are able to identify, analyze, interpret, and judge artworks from all phases of western civilization. They also develop a comprehensive study guide in preparation for the final examination.

DRAMA & DANCE

Students are encouraged to consider enrolling in one or more theatre arts or dance classes. The term theatre arts is the general term used to identify all aspects of the study and practice of the theatre. It includes acting, directing, and script analysis, as well as the many aspects of what is referred to as stagecraft, including staging, lighting, set design and construction, props, costuming, and makeup. A full range of courses is offered in all aspects of theatre arts.

In the area of dance, all are welcome – from beginners who have never studied dance before to dancers with extensive experience in one or more dance forms and styles. In dance classes, students learn about the history of dance, as well as the ways in which dancers use the entire body to communicate ideas and feelings through choreographed and improvised movement. A range of dance courses is offered and teachers evaluate each student for placement in an appropriate level of instruction. *To graduate, students must earn one high school credit in the Fine Arts. Asterisk (*) courses below satisfy that requirement.*

ACTING 2

665180

Grades 9-12

Prerequisite: Introduction to Theatre (Drama 1) with a grade of C or higher and prior permission of the instructor.

A reasonable studio fee and other supplies are required.

Students are introduced to the basic elements of acting, as well as varied styles and techniques of acting, through individual performance and scene work. They begin to develop a character through analysis, interpretation, and varied techniques; identify and apply the principles of effective use of voice and speech; study the history and development of more complex dramatic forms, including monologue and soliloquy; and study ways theatre reflects the culture and beliefs of diverse places and historical time periods. They continue to develop their knowledge of theatrical terminology and vocabulary, and read, analyze, and perform diverse theatrical literature. There is also an emphasis on exploring the basic elements of technical theatre (e.g., makeup, lighting). Students also continue to develop effective methods of responding thoughtfully to theatrical performances and productions.

ADVANCED ACTING

665190 Grades 10-12

Prerequisite: Introduction to Acting (Drama 2) and prior permission of the instructor.

A reasonable studio fee and other supplies are required.

Students develop and refine acting skills through ensemble work using characterization, as well as a variety of acting methods and philosophies. They continue to explore the principles of effective use of voice and speech. The course emphasizes reading, analyzing, and performing material from a variety of theatrical eras and playwrights, as well as the study of diverse directors and actors. Students learn the skills necessary to be successful in unique performance styles (e.g., duo acting, readers' theatre), as well as the many ways in which theatrical writing and performance history have influenced, and been influenced by, cultural, social, and political events. The course also emphasizes exploring the elements of technical theatre (e.g., stage management, blocking) and developing effective methods of responding thoughtfully to theatrical performances and productions.

ADVANCED THEATER THESIS

660130 A 1 credit Grade 12

660140 B 1 credit Grade 12

Offered only at Governor Thomas Johnson High School within the Academy for the Fine Arts, which meets for two entire instructional blocks daily. Students from all other Frederick County public high schools are eligible to audition for these courses after meeting admission requirements.

Prerequisites: Offered only to third year Advanced Theatre Studies students. Audition and/or permission of the instructor

Students work independently with the guidance of a teacher on expanding their personal and artistic vision. They refine, enhance, and apply a set of individual criteria for self-assessment to promote self-growth; contract specific course requirements with the teacher; enjoy visits by professional artists; and explore careers, theatre performances, and individual and group shows. Some projects may require long-term or intense exploration and the purchase of materials and supplies.

ADVANCED METHODS AND TECHNIQUES (.5 CREDIT)

660090 1 Grades 10-12

660100 2 Grades 10-12

Offered only at Governor Thomas Johnson High School within the Academy for the Fine Arts, which meets for two entire instructional blocks daily. Students from all other Frederick County public high schools are eligible to audition for these courses after meeting admission requirements.

Methods and Techniques focus on the many different methods of actor training, including Stanislavski, Stella Adler, Meisner, Whelan and many others. The curriculum includes an extensive investigation of various techniques such as concentration, communion, emotion memory, and public solitude. Students will also ascertain a practical understanding of terms such as action, objective, tactic, obstacle, conflict, intention, motivation, and "beat." Particular emphasis will be given to ensemble-building, cultivating personal responsibility, instilling self-discipline, imaginative play, enlarging creativity, memorization techniques, building self-confidence, and strategies for collaborating successfully.

ADVANCED SCRIPTWRITING (.5 CREDIT)

660150 1 Grade 12

Offered only at Governor Thomas Johnson High School within the Academy for the Fine Arts, which meets for two entire instructional blocks daily. Students from all other Frederick County public high schools are eligible to audition for these courses after meeting admission requirements.

Students continue to explore dramatic writing using a variety of techniques and methods that expand and branch of earlier techniques. The class expands on methods learned from the previous two years.

ADVANCED THEATRE MENTORSHIP AND STUDENT THESIS

660160 1 Grade 12

Offered only at Governor Thomas Johnson High School within the Academy for the Fine Arts, which meets for two entire instructional blocks daily. Students from all other Frederick County public high schools are eligible to audition for these courses after meeting admission requirements.

Selected readings and research projects form the basis for discussion and papers involving a synthesis of previous knowledge acquired in the field of the performing arts. Students will be expected to research and present a topic of focus in collaboration with the instructor and present the findings through lecture, demonstration and workshop.

ADVANCED THEATRICAL PRODUCTION

665205 1 Grades 10-12

665161 2 Grades 10-12

665171 3 Grades 10-12

665181 4 Grades 10-12

Prerequisite: Advanced Acting (Drama 3) or Technical Theatre (Stagecraft) and prior permission of the instructor.

A reasonable studio fee and other supplies are required.

Students explore a variety of ways to combine all the elements of theatre to create an effective performance or production. There is an emphasis on reading, analyzing, and performing material from a variety of theatrical eras and playwrights. Students develop an understanding of the role of the director and other theatre personnel in developing clearly defined interpretations and points-of-view which are then implemented in effective performances and/or productions. They create and refine the subtleties of character, motivation, and behavior, making continually more effective use of speech, voice, and movement in performance(s); practice the principles of effective use of voice and speech; continuing to explore the elements of technical theatre; and develop effective methods of responding thoughtfully to theatrical performances and productions.

ADVANCED THEATRE STUDIES CAPSTONE PROJECT

660170 1

Grade 12

Offered only at Governor Thomas Johnson High School within the Academy for the Fine Arts, which meets for two entire instructional blocks daily. Students from all other Frederick County public high schools are eligible to audition for these courses after meeting admission requirements.

The creation and presentation of two senior showcases. In the fall, all third year students will present an Audition Showcase featuring monologues to be used for college and professional auditions. Following that, students will write an original one-act or full length play or musical, as a final project that will be submitted to contents and performance venues.

ADVANCED THEATRE STUDIES MARKETING AND PRODUCING

660180 1

Grade 12

Offered only at Governor Thomas Johnson High School within the Academy for the Fine Arts, which meets for two entire instructional blocks daily. Students from all other Frederick County public high schools are eligible to audition for these courses after meeting admission requirements.

Preparation for college auditions and/or entrance into the profession including an overview of the business of acting and audition preparation. The continued study of the business of theatre and theatrical organization. Students study the importance of various aspects of a viable theatrical organization including: the mission statement, incorporation and non-profit status, control boards, funding sources, and strategies. As part of the class, students will create a hypothetical theatrical organization, locate and design a venue in the U.S., identify funding sources and develop an inaugural season based on the organization's mission statement.

DANCE, ADVANCED

663341*

A reasonable studio fee and/or specific shoes or dance attire may be required.

Prerequisite: Intermediate Dance and/or instructor permission.

This course is for any student who has extensive formal dance training and is proficient in several dance forms. It builds on skills taught in Intermediate Dance. Development of technical proficiency is emphasized. The student discerns visually correct dance techniques. Works that emphasize advanced choreographic techniques are performed, and works performed by others are critiqued.

DANCE, ADVANCED, CONTINUING STUDIES IN

665200

A reasonable studio fee and/or specific shoes or dance attire may be required.

Prerequisite: Advanced Dance and/or instructor permission.

This course is for students who have not yet completely mastered the required dance skills and techniques for advancement to Advanced Dance and need additional instruction and practice in order to master those skills and techniques.

DANCE, BEGINNER

663141*

A reasonable studio fee and/or specific shoes or dance attire may be required.

This course is for any student who has little or no formal dance training. It focuses on beginning technique for a variety of dance forms. At this time, the student begins to make judgments about the value of dance. Dance history, physiology, vocabulary, and dance criticism are emphasized. The student differentiates among the forms of dance, dancers, and choreographers.

DANCE, BEGINNER, CONTINUING STUDIES IN

665000

A reasonable studio fee and/or specific shoes or dance attire may be required.

Prerequisite: Beginner Dance and/or instructor permission.

This course is for students who have not yet completely mastered the required dance skills and techniques for advancement to Intermediate Dance and need additional instruction and practice in order to master those skills and techniques.

DANCE, INTERMEDIATE

663241*

A reasonable studio fee and/or specific shoes or dance attire may be required.

Prerequisite: Beginner Dance and/or instructor permission.

This course is for any student who has some formal dance training and is proficient in at least one dance form. It builds on the skills taught in Beginner Dance. Emphasis is placed on developing proficiency in several forms of dance. The study of history, physiology, dance theory, choreography, dance vocabulary, and dance critique continues at a more advanced level as technical and creative aspects are introduced. Dance as a performing art is emphasized, and opportunities are provided to perform personal works and the works of others for various audiences.

DANCE, INTERMEDIATE, CONTINUING STUDIES IN

665100

A reasonable studio fee and/or specific shoes or dance attire may be required.

Prerequisite: Intermediate Dance and/or instructor permission.

This course is for students who have not yet completely mastered the required dance skills and techniques for advancement to Advanced Dance and need additional instruction and practice in order to master those skills and techniques.

DANCE PRODUCTION

663441

A reasonable studio fee and/or specific shoes or dance attire may be required.

Prerequisite: Advanced Dance and/or instructor permission.

This course is for the most advanced students who have mastered techniques in several dance forms. Students apply procedures used in choreographing, producing, and directing dance productions. Participation in a formal dance concert is required.

DANCE PRODUCTION, CONTINUING STUDIES IN

665300

A reasonable studio fee and/or specific shoes or dance attire may be required.

Prerequisite: Dance Production and/or instructor permission.

This course is for students who wish to continue their work in various aspects of the choreography, production, and direction of dance productions.

INTRODUCTION TO THEATRE

665170*

Grades 9-12

A reasonable studio fee and other supplies are required.

Students develop a basic knowledge of theatre through participation in learning activities with a focus on improvisation, theatre games, and performance. They study the history and development of a variety of dramatic forms, including comedy, tragedy, and farce, as well as the ways in which the theatre reflects the culture and beliefs of diverse places and historical time periods. They develop a broad base of knowledge of theatrical texts, and they practice some of the techniques required for successful playwriting. There is also emphasis on developing methods of responding thoughtfully to theatrical performances and productions.

TECHNICAL THEATRE

662150	1	Grades 9-12
662160	2	Grades 9-12
663220	3	Grades 10-12
663230	4	Grades 10-12
663240	5	Grades 11-12
663250	6	Grades 11-12
663260	7	Grade 12
663270	8	Grade 12

Prerequisites:

Technical Theatre 1: Introduction to Theatre and/or the prior permission of the instructor.

Technical Theatre 2-8: Technical Theatre 1 or prior course in Technical Theatre and/or the prior permission of the instructor.

A reasonable studio fee and other supplies are required.

Students learn the basic elements of technical theatre and apply their technical knowledge by helping to design, construct, and refine settings, stage properties and furniture, costumes, lighting, and other elements required for an effective performance or production. They learn the proper, safe use of tools and equipment, as well as the importance of planning and other organizational skills; learn to function as members of a team in developing and implementing creative designs to convey the director's interpretation of a theatrical piece; study the history and development of technical theatre within a variety of dramatic forms, including comedy, tragedy, and farce, as well as the ways in which the theatre reflects the culture and beliefs of diverse places and historical time periods; and develop a broad base of knowledge of theatrical and technical terminology and vocabulary.

THEATRE BUSINESS (.5 CREDIT)

660050 1 Grades 10-12

660060 2 Grades 10-12

Offered only at Governor Thomas Johnson High School within the Academy for the Fine Arts, which meets for two entire instructional blocks daily. Students from all other Frederick County public high schools are eligible to audition for these courses after meeting admission requirements.

The business of acting. This class concentrates on choosing contemporary and classical monologues best suited for an audition. Class will explore the audition process itself, how to find work as an actor and insights into the day to day workplace of theatre, television, film and commercials. The class will discuss cold readings, creating showcases, voice-overs, meeting agents, contacting agencies, pictures & resumes, mailings and life as an actor professionally and regionally. Senior 1st year students will spend time on the collegiate selection process. Preparation and expectations during the college audition process.

THEATRICAL LITERACY, HISTORY, AND CRITICISM

660010 1A Grades 10-12

660020 1B Grades 10-12

660030 2A Grades 11-12

660040 2B Grades 11-12

Offered only at Governor Thomas Johnson High School within the Academy for the Fine Arts, which meets for two entire instructional blocks daily. Students from all other Frederick County public high schools are eligible to audition for these courses after meeting admission requirements.

This class is a survey of Western theatrical history, drama and practices from Classical Athens through the Restoration. Students will study the social, political, musical, cultural and historical influences of each period to understand the context in which theatre was created. Likewise, they will explore the means by which theatre was produced and practiced including theatre companies, acting styles, design and architecture. They also will study the dramatic literature of each period including a critical analysis of each text. The class consists of a performance lab.

VOICE AND MOVEMENT (.5 CREDIT)

660110 1 Grades 10-12

660120 2 Grades 10-12

Offered only at Governor Thomas Johnson High School within the Academy for the Fine Arts, which meets for two entire instructional blocks daily. Students from all other Frederick County public high schools are eligible to audition for these courses after meeting admission requirements.

The focus of the Voice and Movement class is to create a greater awareness of and connection to the actor's natural voice and physical body. Further, it is to free that natural voice toward greater psychological and physical connections and improved self-awareness, imagination, expressiveness and embodiment. Students will focus on breath and vocal production, opening the physical channels of communication, exploring physical alignment, and releasing tension to begin to build vocal strength and connect the voice to creative impulses.

WRITING FOR STAGE AND FILM (.5 CREDIT)

660070	1	Grades 10-12
660080	2	Grades 10-12

Offered only at Governor Thomas Johnson High School within the Academy for the Fine Arts, which meets for two entire instructional blocks daily. Students from all other Frederick County public high schools are eligible to audition for these courses after meeting admission requirements.

Writing for stage and screen provides a chance to explore dramatic writing in a number of different ways. The class includes theatre games and improvisation activities, which illustrate narrative techniques particular to the Playwriting genre. Students read and analyze a number of plays, and apply points of craft to their own work. After experimenting with various writing exercises, students write and revise a ten to 30 minute one-act play, which is then work shopped both in class, and during individual conferences, and, finally, submitted in the young playwright's competition through CenterStage Baltimore.

MUSIC

Music education provides opportunities for students to achieve various levels of proficiency in a performance art form. Performance involves both performers and listeners; so, in addition to music making, performance can involve listening to works, as well as reflecting on the musical content of that experience.

Music courses allow students to develop the creative skills necessary to use music as a means of expression. Music is an art form ideal for expressing the otherwise inexpressible. By interacting creatively with music, students gain and use knowledge, incorporate experience and abstract thinking, and constantly assess new possibilities. Students can use music to merge diverse ideas, make unique and unusual combinations, and take intellectual risks, using a variety of resources. Music courses can help students refine problem-solving and critical thinking skills within the context of the creative process while making them better able to express themselves.

In order to graduate from a Maryland high school, students must earn one high school credit in the Fine Arts. Asterisked () courses below satisfy that requirement.*

ADVANCED MUSIC STUDIES

664121	1A	2 credits	Grades 10-12
664151	1B	2 credits	Grades 10-12
664221	2A	2 credits	Grades 11-12
664251	2B	2 credits	Grades 11-12
664261	3A	2 credits	Grade 12
664271	3B	2 credits	Grade 12

Offered only at Governor Thomas Johnson High School as part of the Academy for the Fine Arts for two entire instructional blocks daily. Students from all other Frederick County public high schools are eligible to audition for these courses.

Prerequisites:

Advanced Music Studies 1A: Fine Arts Graduation Credit, Completed application, scheduled performance audition, written recommendation from a high school music instructor, and prior permission of the instructor.

Advanced Music Studies 1B, 2A, or 2B: Advanced Music Studies 1A, re-apply, re-audition (if requested), and prior permission of the instructor. Advanced Music Studies 3A or 3B: Advanced Music Studies 1A, 1B, 2A, and 2B, re-apply, re-audition (if requested), and prior permission of the instructor.

These courses are intended for students who have successfully completed previous music courses. They provide unique preparation in music education for students planning to pursue the study of music after high school. Students focus on the comprehensive study of ensemble performance, theory and harmony, music history, listening, and sight-singing/ear training. At each level of this unique program, students participate in an extensive range of specialized music offerings: Music Theory (including Advanced Placement Music Theory); Piano (basic and advanced); Music Technology (introductory and advanced); Survey of Music; and Music Thesis (developing music portfolio). Students may elect to concentrate in either vocal or instrumental music.

Students are required to participate in a number of performances some of which may occur in the evening or on the weekend. Mandatory after-school rehearsals may be scheduled as needed. Students should be prepared to participate in all aspects of the program and should not enroll if attendance at performances is a problem.

Advanced Music Studies (AMS) is for students who have successfully completed previous music courses. AMS provides unique preparation in music for students planning to pursue the study of music after high school. Students focus on the comprehensive study of ensemble and solo performance, theory and harmony, music history, music technology, critical listening, and sight-singing/ear training. Students may elect to concentrate in either vocal or instrumental music.

Over the course of the academic year, student will earn:

- 1 credit in Music Theory (Introduction or Advanced Placement)
- .5 credit in Music Technology
- .5 credit in Class Piano
- 2 credits in Music Literature/Chamber

AMERICAN POPULAR MUSIC

431120*

Prerequisite: Prior permission of the instructor.

Students study the history and development of American music and music technology in a number of specific areas: blues, folk music, jazz, musicals, country music, rock and roll, rap/R&B and contemporary music. They develop the ability to understand, appreciate, perceive, and respond to music through balanced instruction that includes listening to and analyzing representative musical examples from historical, aesthetic, and critical perspectives.

BAND

439010	1*
439020	2*
439030	3
439040	4
439050	5
439060	6
439070	7
439080	8

Prerequisites:

First band course: Band program at the middle-school level.

Additional band courses: Previous band course(s) and prior permission of the instructor.

Students develop the basic skills and knowledge necessary to perform music alone, in small sections, and in large ensembles. Ensembles consist of the musical instruments commonly found in bands. The first semester of band courses is devoted primarily to the rehearsal and performance of marching activities, while the second semester focuses primarily on the rehearsal and performance of concert band literature. Students practice, rehearse, and perform a variety of band literature, written at appropriate performance-grade level. In addition to performing, students develop the ability to understand, appreciate, perceive, create, and respond to music through balanced instruction that includes studying works from historical, aesthetic, and critical perspectives.

Attending and performing in required school and county music programs are compulsory. Participation in these music programs may occasionally involve evening or weekend performances. Students have opportunities to participate in music auditions, adjudications, and festivals.

After-school music rehearsals are scheduled as needed. Attendance at summer band camp is recommended for successful participation in the fall marching program. Students should be prepared to participate in all aspects of the program and should not enroll if attendance at band functions is a problem. Attendance at all activities (including rehearsals) is required.

CLASS PIANO

439110	1*
439120	2
439130	3
439140	4
439150	5
439160	6
439170	7
439180	8

Prerequisites:

Class Piano 2-8: Previous Class Piano course and prior permission of the instructor.

Students in Class Piano 1 learn and practice basic piano techniques and music reading skills in group lab settings as well as individualized study. They practice, rehearse, and perform a variety of piano literature, written at appropriate performance-grade level. In addition, students develop the ability to understand, appreciate, perceive, create, and respond to music through balanced instruction that includes studying works from historical, aesthetic, and critical perspectives. Prior piano experience, while helpful, is not required.

Students in Class Piano 2 through 8 must have prior piano background. They continue to develop and refine their solo and ensemble playing ability and extend their knowledge of necessary technical skills.

Enrollment is limited based on the number of pianos available as well as the applied, individualized nature of the curriculum.

CONCERT CHOIR

439210	1*
439220	2
439230	3
439240	4
439250	5
439260	6
439270	7
439280	8

Prerequisites:

First concert choir course: Audition and prior permission of the instructor.

Additional concert choir courses: Previous concert choir course, re-audition (if requested), and prior permission of the instructor.

Students develop and refine the basic skills and knowledge necessary to sing music alone, in unison, and in parts. They practice, rehearse, and perform a variety of choral literature, written at appropriate performance-grade level. In addition, students develop the ability to understand, appreciate, perceive, create, and respond to music through balanced instruction that includes studying works from historical, aesthetic, and critical perspectives.

Attending and performing in required school and county music programs are compulsory. Participation in these music programs may occasionally involve evening or weekend performances. Students have opportunities to participate in music auditions, adjudications, and festivals. After-school music rehearsals are scheduled as needed. Students should be prepared to participate in all aspects of the program and should not enroll if attendance at concert choir functions is a problem. Attendance at all activities (including rehearsals) is required.

GUITAR

431160	1*
432160	2*
433260	3
434160	4
435160	5
436160	6
437160	7
438160	8

Prerequisites:

Guitar 2-8: Previous Guitar class and prior permission of the instructor.

Students must provide their own acoustic instruments.

Students learn and practice the elements of classical and folk performing styles through the study of note-reading, chords, basic theory, and basic strum and pick patterns. They practice, rehearse, and perform a variety of guitar literature written at appropriate performance-grade level. In addition, students develop the ability to understand, appreciate, perceive, create, and respond to music through balanced instruction that includes studying works from

historical, aesthetic, and critical perspectives. For Guitar 1, previous guitar experience, while helpful, is not required.

In Guitar 2-8 students study advanced chords, strum techniques, and melodic techniques, in addition to continuing to develop advanced playing ability.

INSTRUMENTAL CHAMBER ENSEMBLE

439310	1*
439320	2*
439330	3
439340	4
439350	5
439360	6
439370	7
439380	8

Prerequisites:

First instrumental chamber ensemble course: Instrumental program at the middle-school level or earlier high-school grade level and prior permission of the instructor.

Additional instrumental chamber ensemble courses: Previous instrumental chamber ensemble course(s) and prior permission of the instructor.

Students develop the basic skills and knowledge necessary to perform music alone, in small sections, and in larger ensembles. Ensembles consist of musical instruments commonly found in the woodwind, brass, or percussion families. Students practice, rehearse, and perform a variety of instrumental literature, written at appropriate performance grade-level. In addition, students develop the ability to understand, appreciate, perceive, create, and respond to music through balanced instruction that includes studying works from historical, aesthetic, and critical perspectives.

Attending and performing in required school and county music programs are compulsory. Participation in these music programs may occasionally involve evening or weekend performances. Students have opportunities to participate in music auditions, adjudications, and festivals.

INTEGRATED MUSIC TECHNOLOGY: CONTINUING STUDIES

434100	1
434110	2
434120	3

Available only at Governor Thomas Johnson, Linganore, Middletown, Oakdale, Frederick, and Tuscarora high schools.

Prerequisites:

Integrated Music Technology: Continuing Studies 1: Introduction to Integrated Music Technology.

Integrated Music Technology: Continuing Studies 2-3: Previous course in Integrated Music Technology: Continuing Studies.

Students are asked to provide supplies required by the teacher.

Students are expected to provide their own USB flash drive (or similar device subject to teacher approval) for maintaining working files as well as final products. All such storage devices will be governed by the FCPS standard operating procedure for student use of technology storage devices.

Students become more familiar with a variety of software programs and hardware options available in the field of music. They also continue to learn and practice techniques for manipulating music within the software programs (e.g.,

editing and arranging) and are mentored in the skills necessary to continue their studies in music theory and composition. Students design and develop independent projects/products in which they apply skills and techniques to new situations and problems at an increasingly independent level. They also continue to practice effective oral and written argumentation skills in the areas of presentation and critical analysis.

INTEGRATED MUSIC TECHNOLOGY: INTRODUCTION

431001

Grades 10-12

Available only at Governor Thomas Johnson, Linganore, Middletown, Oakdale, Frederick, and Tuscarora high schools.

Prerequisite: Must demonstrate a moderate or high degree of ability to read music (at least in the treble clef), have at least one year of successful music experience in a high school music class or private study stressing reading music notation, and have prior written permission of the designated instructor.

Students are asked to provide supplies required by the teacher.

Students are expected to provide their own USB flash drive (or similar device subject to teacher approval) for maintaining working files as well as final products. All such storage devices will be governed by the FCPS standard operating procedure for student use of technology storage devices.

Students become familiar with a variety of software programs and hardware options available in the field of music. Next, they learn and practice techniques for manipulating music within the software programs (e.g., editing and arranging). Students who demonstrate advanced prior knowledge of these areas' mastery of basic techniques and methods are mentored in the skills necessary to begin basic music theory and composition. Students design and develop independent projects/products in which they apply the basic skills and techniques to new situations and problems; and practice effective oral and written argumentation skills in the areas of presentation and critique/analysis. Students are asked to provide supplies required by the teacher.

JAZZ ENSEMBLE

439410	1*
439420	2
439430	3
439440	4
439450	5
439460	6
439470	7
439480	8

Students are admitted to this class only after a successful audition

Prerequisites:

First jazz ensemble course: Band program at the middle-school level and/or at the high-school level, audition, and prior permission of the instructor.

Additional jazz ensemble courses: Previous jazz ensemble course(s), re-audition (if requested), and prior permission of the instructor.

Students study the techniques and musical literature of the jazz field in order to develop and refine the stylistic traits and improvisational techniques needed to perform a wide variety of jazz, big band, rock, and pop music. This class is offered only to 10th-12th grade students who play saxophone, trumpet, trombone, percussion, piano, guitar, string bass, or electric bass.

Attending and performing in required school and county music programs are compulsory. Participation in these music programs may occasionally involve evening or weekend performances. Students have opportunities to participate in music auditions, adjudications, and festivals. After-school music rehearsals are scheduled as needed. Students should be prepared to participate in all aspects of the program and should not enroll if attendance at jazz ensemble functions is a problem. Attendance at all activities (including rehearsals) is required.

MARCHING BAND: BAND FRONT

432000	1*	Grades 9-12
432100	2	Grades 9-12
433100	3	Grades 9-12
435100	4	Grades 9-12

Prerequisite: *Permission of the instructor. Student MUST be a member of the band front for his/her high school's marching band.*

Offered only during the Fall semester.

Students study a variety of skills designed to make them more effective performers as part of the band front for the marching band at their high school during the fall marching band season. The composition of the band front varies from school to school and may include the color guard, flag line, dance line, or other similar ancillary performing groups that appear with, and support, the marching band. Students study and practice appropriate dance and theatrical performance skills, as well as marching and maneuvering skills; study appropriate musical terminology and concepts and their impact on their performance as members of the band front, including a variety of rhythms, tempi, and dynamics; and learn and apply a variety of choreographic skills in individual and small-group projects. Students must perform with the marching band at all required school and community activities, as well as required marching band competitions, according to the schedule established by the band director.

MIXED CHORUS

439510	1*
439520	2
439530	3
439540	4
439550	5
439560	6
439570	7
439580	8

Offered to all interested students and previous singing experience, while valuable, is not required.

Students develop the basic skills and knowledge necessary to sing music alone, in unison, and in parts. They practice, rehearse, and perform a variety of choral literature, written at appropriate performance-grade level. In addition, students develop the ability to understand, appreciate, perceive, create, and respond to music through balanced instruction that includes studying works from historical, aesthetic, and critical perspectives.

Attending and performing in required school and county music programs are compulsory. Participation in these music programs may occasionally involve evening or weekend performances. Students have opportunities to participate in music auditions, adjudications, and festivals. After-school music rehearsals are scheduled as needed. Students should be pre-

pared to participate in all aspects of the program and should not enroll if attendance at chorus functions is a problem. Attendance at all activities (including rehearsals) is required.

MUSIC - IB

SL – 660301 (one year)	Grades 11 and/or 12
Prerequisite: <i>Music Theory</i>	
HL – 660101 (two-year program, 1st year)	Grades 11 and/or 12
HL – 660201 (two-year program, 2nd year)	Grades 11 and/or 12
Offered only at Urbana High School.	

Students study a variety of music styles, broad outlines of musical history and cultural context, interrelationships of musical elements and vocabulary for listening skill. The Standard Level offers options for completion. The students can choose one of the following: composition, ensemble, or solo performance. Students at the Higher Level will focus on composition and solo performance.

MUSIC LISTENING AND LITERATURE

431141*

Prerequisite: *Prior permission of the instructor.*

Students study a variety of music styles, broad outlines of musical history and cultural context, interrelationships of musical elements, and vocabulary for describing musical events and interactions. Emphasis is given to the development of perceptive, detailed listening skills.

MUSIC THEORY

433130	1*
434131	2
433151	Advanced Placement

Prerequisites:

Music Theory 1: *Prior permission of the instructor.*

Music Theory 2: *Music Theory 1 and prior permission of the instructor.*

Music Theory, AP: *Music Theory 1 and 2 and/or prior permission of the instructor.*

Students are asked to provide supplies required by the teacher.

Students are expected to provide their own USB flash drive (or similar device subject to teacher approval) for maintaining working files as well as final products. All such storage devices will be governed by the FCPS standard operating procedure for student use of technology storage devices.

Students learn how music is composed and arranged. They gain technical knowledge about musical notation, key signatures, scales, intervals, and simple four-part harmonization; work with keyboards; and learn and practice effective sight singing and ear training skills. Previous knowledge of the keyboard, while helpful, is not required.

Music Theory 2 is for students who have successfully completed Music Theory 1 and wish to continue in advanced theoretical study in such areas as 7th, 9th, 11th, and 13th chords; modulations; figured basses with diatonic and chromatic harmony; non-harmonic tones; altered and applied chords; and simple original compositions.

AP Music Theory follows the curriculum prescribed by the Educational Testing Service. In addition to reviewing and extending basic theoretical skills learned in Music Theory 1

and 2 (e.g., ear training, sight singing, notation, and harmony), students focus on treatment of motifs, modulations, two-part contrapuntal texture, analysis of smaller forms, and appropriate levels of original composition.

These courses are strongly recommended for any student who plans to major in music. Enrollment at each high school is based on the number of available keyboards and is limited by the individualized nature of the curriculum.

SHOW CHOIR

432220	1*	Grades 9-12
432230	2	Grades 9-12
432240	3	Grades 9-12
432250	4	Grades 9-12

Prerequisites:

First show choir course: Audition and/or prior permission of the instructor.

Additional show choir courses: Previous show choir course, re-audition (if requested), and prior permission of the instructor.

Students will be responsible for providing required shoes and other costume components as required by the teacher.

Students develop the basic skills and knowledge necessary for proper vocal performance by learning to perform music alone, in unison, and in parts. They practice, rehearse, and perform a variety of solo and ensemble vocal literature, written at appropriate performance-grade level, including such varied styles as vocal jazz, Broadway, and popular music. In addition, students develop the ability to understand, appreciate, perceive, create, and respond to music through balanced instruction that includes studying works from historical, aesthetic, and critical perspectives. Students will have the opportunity to learn and perform various dance styles that coordinate with and reflect the varied styles of music they sing. Qualities such as stage presence, showmanship, and good sportsmanship will be taught and reinforced.

Attending and performing in required school programs are compulsory. Participation in these music programs may occasionally involve evening or weekend performances. After-school music rehearsals may be scheduled as needed. Students should be prepared to participate in all aspects of the program and should not enroll if attendance at show choir functions is a problem. Attendance at all activities (including rehearsals) is required.

STRING ORCHESTRA

439610	1*
439620	2
439630	3
439640	4
439650	5
439660	6
439670	7
439680	8

Prerequisites:

First orchestra course: Orchestral program at the middle-school level and prior permission of the instructor.

Additional orchestra courses: Previous orchestra course(s) and prior permission of the instructor.

Students develop the basic skills and knowledge necessary to perform music alone, in small sections, and in larger ensembles. Ensembles consist of musical instruments commonly found in an orchestra. Students practice, rehearse, and perform a variety of orchestral literature, written at appropriate performance-grade level. In addition, students develop the ability to understand, appreciate, perceive, create, and respond to music through balanced instruction that includes studying works from historical, aesthetic, and critical perspectives.

Attending and performing in required school and county music programs are compulsory. Participation in these music programs may occasionally involve evening or weekend performances. Students are provided with opportunities to participate in music auditions, adjudications, and festivals. After-school music rehearsals are scheduled as needed. Students should be prepared to participate in all aspects of the program and should not enroll if attendance at orchestra functions is a problem. Attendance at all activities (including rehearsals) is required.

VOICE ENSEMBLE

439710	1*
439720	2
439730	3
439740	4
439750	5
439760	6
439770	7
439780	8

Prerequisites:

First Voice Ensemble course: Audition and prior permission of the instructor.

Additional Voice Ensemble courses: Previous Voice Ensemble course(s), re-audition (if requested), and prior permission of the instructor.

Students develop and refine the advanced skills and knowledge necessary to sing in small, select vocal ensembles. A variety of choral literature, written at appropriate performance-grade level, are practiced, rehearsed, and performed. In addition to performing, students develop the ability to understand, appreciate, perceive, create, and respond to music through balanced instruction that includes studying works from historical, aesthetic, and critical perspectives.

Attending and performing in required school and county music programs are compulsory. Participation in these music programs may occasionally involve evening or weekend performances. Students are provided opportunities to participate in music auditions, adjudications, and festivals. After-school music rehearsals are scheduled as needed. Students should not enroll if attendance at voice ensemble functions is a problem. Attendance at all activities (including rehearsals) is required.

CAREER & TECHNOLOGY EDUCATION

Career and Technology Education (CTE) prepares students for a wide range of careers that demand varying levels of education — from high school and postsecondary certificates, to apprenticeships, to two and four-year college degrees. Students can add value to their overall education by earning industry-recognized credentials and college credit while still in high school.

AGRICULTURE

COMPLETERS:

AGRICULTURE ANIMAL SCIENCE

Introduction to Agricultural Science and Technology*
Pre Vet Small Animal Care
Pre Vet Large Animal
Capstone

AGRICULTURE MECHANICS

Wood and Metal Structures
Engines and Power 1
Engines and Power 2
Advanced Mechanics

HORTICULTURE

Introduction to Agricultural Science and Technology*
Horticulture 1, 2, 3
Horticulture 4 or Capstone

*Also meets Financial Literacy requirement

ADVANCED MECHANICS

491361 Grades 11 - 12
Offered at Catocin, Linganore, Middletown, and Walkersville high schools.

Prerequisite: Engine & Power Technology 2.

Students develop advanced skills through individual and collaborative projects with an emphasis on the planning and management skills necessary in the agricultural industry. Through emphasis on Maryland's Skills for Success and employment preparation, students will be prepared for a Supervised Agricultural Experience (SAE) that will provide the transition to full-time employment in the agricultural industry. This course satisfies one of four credits for the Agriculture Mechanics CTE Completer.

Course materials fee: \$10.

AGRICULTURAL WORK EXPERIENCE

494150 2 credits Grade 12
494153 1 credit Grade 12

Course requisite: Advanced Mechanics or Horticulture/Floriculture 2 or 3.

This program places senior agricultural and horticultural students in on-the-job training under the supervision of the agriculture teacher. The teacher works with the student, parents, and employer to develop objectives that make contributions toward a career. Records of student work are maintained as required by the instructor.

AGRICULTURE/HORTICULTURE INDEPENDENT STUDY

492150 Grades 10 - 12

Students pursue an individualized course of study in agriculture or horticulture. Each student is assigned to a teacher for one period and works with that teacher in meeting individual career preparatory goals and course objectives.

ENGINE AND POWER TECHNOLOGY 1

491050 Grades 9 - 12

This course is an intensive study of the theory, operation, maintenance, and repair of two- and four-cycle small and multi-cylinder engines. Students work on engines, applying academic skills to real practice. Other skills such as welding, tool fitting, and customer relations are part of this course. This course satisfies one of four credits for the Agriculture Mechanics Completer Program.

Course materials fee: \$10.

ENGINE AND POWER TECHNOLOGY 2

491051 Grades 10 - 12

Prerequisite: Engine and Power Technology 1.

This one-semester course provides students with skills in the operation and service of small and large engines and electric motors. It follows the Engine and Power Technology 1 course. The majority of instruction is in the agricultural mechanics laboratory. Engine troubleshooting and failure analysis, hydraulics, oxy-acetylene cutting and welding, as well as shielded metal arc welding and gas metal arc welding, are covered. This course satisfies one of four credits for the Agriculture Mechanics Completer Program.

Course materials fee: \$10.

FORESTRY/WILDLIFE MANAGEMENT

492160 Grades 9 - 12

Students develop skills in wildlife identification, wildlife management, soil and water conservation, forest ecology, forest management, aquaculture, and outdoor recreation. Students learn how to use forest products in the laboratory by building projects that teach hand- and power-tool use, wood types and wood finishing techniques. This course satisfies one of four required credits for the Agriculture Animal Science Completer Program.

HORSE CARE AND MANAGEMENT

491020

Grades 9 - 12

Areas studied include careers, anatomy, breeds and judging, reproduction, feeding, diseases and lameness, stable planning, safety and maintenance of equipment, and business management of horses. This course satisfies one of four required credits for the Agriculture Animal Science Completer Program.

HORTICULTURE/FLORICULTURE

491030 1

Grades 9 - 12

492031 2

Grades 9 - 12

493031 3

Grades 10 - 12

Prerequisite: *Courses must be taken in sequence.*

These are courses in plant science associated with the areas of horticulture and floriculture. Students raise plants for themselves and for sale in the school's greenhouse. They learn how to reproduce plants and make flower arrangements. In the greenhouse laboratory they grow poinsettias, mums, and many other common greenhouse plants. Fifty percent of class time is spent in laboratory activities. Class activities include corsage making, table arrangement, landscaping, holiday decoration making, spring flower and vegetable production.

Second level students concentrate in advanced areas including greenhouse management, production of commercial greenhouse crops, landscape maintenance, advanced floral design, and pesticide safety.

At the third level, students concentrate in laboratory experiences in the greenhouse, flower shop, and outdoors. Management skills, marketing, and landscape drawing are also stressed. This course satisfies one of four required credits for the Horticulture Completer Program.

Course materials fee: *\$15 for Horticulture 1, \$20 for Horticulture 2 and 3.*

INTRODUCTION TO AGRICULTURAL SCIENCE AND TECHNOLOGY

492351

Grades 9 - 12

Also offered at CTC as a one semester 1/2 day option with Forestry/Wildlife Management.

This course examines the impact of financial literacy and technology within the agricultural industry. Students will explore an overview of agricultural leadership, animal science, plants, agricultural engineering and environmental and natural resource management. A semester long project encompasses all areas of agricultural science with an emphasis on financial literacy as it relates to agricultural business. This course satisfies one of four required credits for the Agriculture or Horticulture Completer programs, but does not qualify as a science credit.

Meets Personal Financial Literacy requirement

PRE-VETERINARY, LARGE ANIMAL SCIENCE

493000

Grades 9 - 12

Recommended prerequisite: *Introduction to Agriculture Science and Technology.*

This semester course provides basic knowledge and skills needed to care for and work with large animals. Areas of study include developing awareness of the large animal industry and its careers, leadership, animal rights and welfare, safety, handling and restraint, animal health and diseases, nutrition and digestive systems, veterinary equipment, immunology, zoonosis and public health, anatomy and physiology of animal systems, veterinary hospital management, and clinical lab procedures. Furthermore, an in-depth look is taken into such animals as cattle, horses, pigs, sheep, and goats. The course helps to prepare students for post-secondary education or a career in the field of veterinary medicine and/or large animal science. This course satisfies one of four required credits for the Agriculture Animal Science Completer Program.

PRE-VETERINARY, SMALL ANIMAL CARE

492000

Grades 9 - 12

Recommended prerequisite: *Introduction to Agriculture Science and Technology.*

This semester course provides basic knowledge and skills needed to care for small animals. Areas of study include the history of animal domestication, an overview of the small animal industry, animal rights and welfare, careers in small animal care, nutrition and digestive systems, handling and restraining small animals, guidelines for general safety when working with small animals, and an in-depth look at a range of small animals that may include dogs, cats, rabbits, hamsters, gerbils, rats, mice, guinea pigs, chinchillas, ferrets, amphibians, fish, reptiles, and birds. The course helps prepare students for post-secondary education and/or a career in the field of veterinary medicine and/or small animal care. This course satisfies one of four required credits for the Agriculture Animal Science Completer Program.

WOOD AND METAL STRUCTURES

491210

Grades 9 - 12

This course provides experiences in the construction of wood and metal structures. Skills include planning, designing, drawing, and assembly of structures. Safety is a vital part of this course. Students develop skills in woodworking and metalworking. This course satisfies one of four required courses for the Agriculture Mechanics Option Completer.

Course materials fee: *\$10.*

BUSINESS EDUCATION

COMPLETERS:

BUSINESS ADMINISTRATIVE SERVICES

Intro to Business* or BU 103
Accounting 1
Microsoft Certification1*
Microsoft Certification 2 or CIS 101

BUSINESS MANAGEMENT

Intro to Business* or BU 103
Accounting 1
Management and Entrepreneurship* or BU 109
CIS 101 or AP Economics

FINANCE AND ACCOUNTING

Intro to Business* or BU 103
Accounting 1
Accounting 2
Management and Entrepreneurship* or BU 109 or AP Economics

*Also meets Financial Literacy requirement

Courses in this section provide students the opportunity to learn concepts for and about business and are recommended for those who plan to attend college and major in accounting, business administration, marketing or management.

ACCOUNTING 1

332040 Grades 10 - 12

Students develop the ability to analyze and record business transactions on the basis of GAAP (Generally Accepted Accounting Principles). The systematic interpretation and recording of business transactions are emphasized. The course includes basic accounting theory, the use of journals and ledgers, preparation of financial statements, taxes and payrolls, and information on careers in accounting. Selected activities give students experience with computerized accounting. Students interested in a business major in college or entering the financial arena are encouraged to take this course. This course satisfies one of the four credits for the Finance and Accounting CTE Program Completer.

ACCOUNTING 2

333041 Grades 10 - 12

Prerequisite: Accounting 1

Students receive a basic accounting review followed by an introduction to and application of the principles of partnership and corporate accounting. Emphasis is on the interpretation and managerial use of accounting records and on developing skills in adapting accounting methods to the needs of a given business. The course also includes accounting control systems, the relationship between automated and manual processing of accounting data and information on careers in accounting. Selected activities provide students experience with computerized accounting. This course satisfies one of the four credits for the Finance and Accounting CTE Program Completer.

APPLIED BUSINESS LAW

333280 Grades 11 - 12

This course provides an in-depth study of sales contracts, credit, warranties, employment contracts, and commercial paper. It provides a knowledge of the history of law, as well as an up-to-date knowledge of rights and obligations. Topics include torts, crimes, contracts, bailments, and insurance as they apply to business organizations. Selected activities, such as mock trials, may be included to enhance understanding of courtroom procedures.

INTERNATIONAL BUSINESS AND FINANCE

332010 Grades 10 - 12

This course gives students an overview of international business as it relates to their personal lives, Frederick County, Maryland, and the United States. It provides students with up-to-date information on global economic trends. Topics of discussion include an exploration of traditions and customs encountered in normal business practices of foreign countries. Students actively engage in discussing the history of international trade, relevance of international scope of business, and identifying countries with growing economies. In addition, students analyze and examine international finance and monetary systems, review current economic issues, and measure international business activities among countries.

INTRODUCTION TO BUSINESS

331010 Grades 9 - 12

This is one of the foundation courses for the Business Administrative Services and Finance and Accounting CTE program completers. Students acquire practical skills through a general study of banking services, checking accounts, budgeting, credit, insurance, investments, communications, consumer economics, computers, and technology. It familiarizes students with content included in the other business courses such as business law, management, and accounting. Students with an interest in business who are unsure of educational and career opportunities may also find this course beneficial.

Meets Personal Financial Literacy requirement

MANAGEMENT AND ENTREPRENEURSHIP

333090 Grades 11 - 12

This course, for students interested in managerial careers or in owning their own business, promotes career development that improves employment opportunities as a manager, owner, or employee. Topics include: types of business ownership, creating a business plan, management functions, manager/entrepreneur responsibilities, and career information. Activities are used to develop skills in decision making, leadership, stress management, communications, marketing, finance, and selecting and managing employees.

Meets Personal Financial Literacy requirement

MANAGING YOUR PERSONAL FINANCES

336040 0.5 credit Grades 9 - 12

This nine-week course helps students discover new ways to maximize earning potential, develop strategies for managing resources, explore skills for the wise use of credit, and gain insight to the different ways of investing money. It includes maintaining a checking account through paper and software applications, designing a personal investment strategy, and creating an electronic portfolio. This course focuses on personal finances dealing with insurance, credit, and debit cards as well as risk management.

Meets Personal Financial Literacy requirement

MICROSOFT CERTIFICATION TRAINING 1

335111 Grades 9 - 12

This is one of the foundation courses for the Business Administrative Services and Finance and Accounting CTE program completers. It develops necessary skills to utilize word processing and spreadsheet applications. The industry-standard software package used in this course is Microsoft Office (Word, Excel). Students sit for the MOS (Microsoft Office Specialist) Proficiency Word and Excel Certification exam. Students learn to successfully manage financial resources: banking, investing, borrowing, and risk management (insurance). Students gain knowledge and understanding of revenue, expenses, credit and money management, enabling them to make informed decisions in a highly technical and competitive society.

Meets Personal Financial Literacy requirement

MICROSOFT CERTIFICATION TRAINING 2

335121 Grades 10 - 12

Students develop the skills to utilize database and multimedia applications. The industry standard software package used is Microsoft Office (Access and PowerPoint). Students sit for the MOS (Microsoft Office Specialist) Proficiency Access and PowerPoint Certification exam. This course satisfies one of the four credits for the Business Administrative Services CTE Program Completer.

MICROSOFT CERTIFICATION TRAINING 3

335131 Grades 10 - 12

Prerequisite: Microsoft Certification Training 1.

Students develop the skills to utilize advanced word processing and spreadsheet applications. The industry-standard software package used is Microsoft Office (Word and Excel). Students taking this course sit for the MOS (Microsoft Office Specialist) Expert Word and Excel Certification exam. Using desktop publishing software, students develop skills to enhance business communications. Various business publications, including business cards, newsletters, and brochures, are covered. This course satisfies one of the four credits for the Business Administrative Services CTE Program Completer.

PERSONAL KEYBOARDING

331150 0.5 credit Grades 9 - 12

This nine-week course helps students develop touch-key skills by using correct finger placement and techniques. In addition, all aspects of a term paper, personal resumes, letter formats, and proofreading skills are reinforced.

COMPUTER SCIENCE**COMPLETER:****COMPUTER AND INFORMATION SCIENCES**

AP Computer Science Principles
AP Computer Science
Computer Science College course or Internship/Youth Apprenticeship

COMPUTER SCIENCE, ADVANCED PLACEMENT

343011 Grades 10 - 12

Prerequisite: Computer Science Principles, Advanced Placement

This course may count as a mathematics credit.

This is a one-credit course based on a national standardized curriculum as outlined by The College Board. It enables students to earn college credit by providing preparation for the Advanced Placement Computer Science test. Students program in JAVA.

COMPUTER SCIENCE PRINCIPLES, ADVANCED PLACEMENT

343012 Grades 10 - 12

Prerequisite: Foundations of Computer Science

This course may count as a mathematics credit.

This course advances students' understanding of the technical aspects of computing including, programming and algorithm design, computer system organization and operation, and data representation and information organization. The curriculum, outlined by The College Board, prepares students for the Advanced Placement Computer Science Principles test.

COMPUTER SCIENCE, IB

SL – 340101 (one year) Grades 11 and/or 12

HL – 340201 (two-year program, 1st year) Grades 11 and/or 12

HL – 340301 (two-year program, 2nd year) Grades 11 and/or 12

Offered only at Urbana High School.

This course may count as a mathematics credit.

In this rigorous International Baccalaureate course, students are encouraged to use a logical approach and analytical thinking in the use of computers to solve problems by using either a procedure-oriented or object-oriented environment. Student-centered activities focus on creating solutions to problems by first identifying a process with which to recognize and define problems; identifying appropriate hardware and developing algorithms to create the solutions; and testing the integration of solutions. This course further develops an understanding of the use of computers in a variety of disciplines and applications. It transfers skills to alternative and future developments. Students learn to understand the consequences of rapidly changing technology.

FOUNDATIONS OF COMPUTER SCIENCE

349910

Grades 9 - 12

Prerequisite: Algebra 1

This course satisfies the one-credit graduation requirement for Technology Education.

The Foundations of Computer Science course is designed to provide students with the breadth of computer science. Students are introduced to a broad base of computer science topics including website development, programming, processing languages, robotics, and CyberSecurity. In addition to laying the groundwork for Advanced Placement courses in computer science, students will engage in activities designed to develop problem solving skills and gain understanding of CyberSecurity principles necessary for 21st century careers.

WEB SITE DEVELOPMENT 1

344030

Grades 10 - 12

This one-credit course introduces the technologies and issues related to web site development. Students develop standards compliant HTML web pages. There is a strong focus on design elements, the web sites audience, usability and accessibility, and appropriate software tools. Students learn the basic concepts of document distribution on the World Wide Web and the basic infrastructure of the Internet and intranets. The course introduces social, ethical, and legal issues related to web site development and the World Wide Web in general.

WEB SITE DEVELOPMENT 2

344031

Grades 10 - 12

Prerequisite: Web Site Development 1.

Students create static and dynamic web pages with text and graphical content in different development environments by using various authoring tools. Using current technology students develop interactive web applications via client-side and server-side scripting and the integration of database functions into web services. Through the use of hands-on projects, code samples and real world experience, students master the skills of advanced web design.

FAMILY AND CONSUMER SCIENCES

COMPLETERS:

CHILD DEVELOPMENT

Child Development* 1, 2, 3

Independent Living, P.R.E.P or Internship/Youth Apprenticeship

COMMERCIAL FOODS (FHS)

Commerical Foods 1, 2

Commerical Foods Internship/Youth Apprenticeship (2)

*Meets Financial Literacy requirement

CHILD DEVELOPMENT

362040 1

Grades 9 - 12

363041 2

Grades 9 - 12

363061 3

Grades 10 - 12

Prerequisite for Level 2: Child Development 1

Prerequisite for Level 3: Child Development 2

Students who complete Child Development 1, 2, and 3 and meet Frederick County Public Schools requirements receive their 90-clock hour Preschool Certification. The course introduces the study of children with emphasis on the preschool child. Through classroom activities, observations of children and actual experiences with preschool children in the child development laboratory, students study the stages of growth and development, the role of play in children's learning, strategies for supporting physical, intellectual, social and emotional development, and positive guidance practices and techniques. Students become acquainted with career opportunities working with young children and the various roles and responsibilities of those who provide care.

In level 2, students begin to take greater responsibility for the administrative functions of the preschool program, communicating with parents and working cooperatively to plan instruction.

At level 3, while continuing to teach in the preschool laboratory, students learn about the administrative responsibilities of operating a child care center.

COMMERCIAL FOODS

362070 1

Grades 9 - 12

363070 2

Grades 10 - 12

364070 3

Grades 11 - 12

Offered at Frederick High School.

Prerequisite for Level 2: Commercial Foods 1

Prerequisite for Level 3: Commercial Foods 2

These courses are for students interested in a career in food service. They include exploration of the opportunities available in the food service industry, food preparation skills and management, the use of equipment, and lab experiences in operating a restaurant and catering business. Each level requires an independent food-service project during the semester.

Level 1 provides students with the basic principles of food preparation, equipment identification and usage, and career opportunities in the food service industry.

In Level 2, students apply their knowledge of basic food preparation from Level 1 to further their experiences in a student-

operated restaurant by preparing food in large quantities, operating and caring for commercial equipment and developing professional skills in the food-service industry and management. Level 3 provides accelerated management skills including food cost analysis, inventory, and scheduling. Individualized research projects and computer-generated lessons, according to the student's career goals, are implemented. Practical related hands-on experiences of food preparation and restaurant management are highlighted.

CULTURES AND CUISINE

361010 Grades 9 - 12

This course approaches food by studying the diversities and commonalities of cultures, history, geographies and people. In this course, students gain confidence in culinary skills through the selection and preparation of healthy foods from their own and other cultures. Using the USDA My Pyramid, students analyze the nutritional strengths and weaknesses of their own eating habits. Recipe conversions, basic cooking terms and kitchen skills as well as food preparation techniques are incorporated. Students will prepare and sample foods from around the world.

INDEPENDENT LIVING: REALITY 101

362020 Grades 9 - 12

Students begin preparing for a balanced and fulfilling life. Based on the theory that career and family are intrinsically related, the course utilizes hands-on experience to guide students through the decisions that will have an impact upon their future. Activities that provide relevant, practical experience include studying the value of nutritious diet and healthy lifestyle, planning and cooking nutritious meals, examining housing choices, and demonstrating the principles of interior design, financial planning, instruction in clothing care and selection and developing skills for becoming a wise consumer. The course empowers young persons with the skills and knowledge to live in a competitive and rapidly changing society.

*Meets Personal Financial Literacy requirement

PERSONAL RELATIONSHIPS AND EFFECTIVE PARENTING (P.R.E.P.)

362030 Grades 9 - 12

Because the content is sensitive, the Family Life and Human Development Bylaw stipulates that parental permission is required.

Students are given opportunities to gain knowledge, skills and attitudes needed for healthy relationships. Special emphasis is given to decision-making, setting goals, communication styles, theories of attraction and learning crisis and conflict resolution management. The decision to be a parent or not, reproduction, the birth process, birth defects, infant development, and the care of young children are included. Responsibility and reality are emphasized through the use of Baby Think It Over, a computerized life-like infant simulator that allows student to experience the demands of parenting in preparation for making informed choices about their future. Students are provided with information that will lead to a greater understanding of the challenges of marriage and parenthood in a technological society.

TECHNOLOGY EDUCATION

COMPLETERS:

AUTOMOTIVE

MECHANICS (BHS)

Automotive Mechanics 1, 2, 3

CABINETMAKING (GTJHS)

Cabinetmaking 1, 2, 3, 4

PROJECT LEAD THE WAY

Engineering (LHS, THS, WHS)

Introduction to Engineering Design

Principles of Engineering

Digital Electronics

Specialty course

Engineering Design and Development

WOODWORKING

Woodworking 1, 2, 3, 4

ARCHITECTURAL ENGINEERING AND DESIGN

392500 1 Grades 9 - 12

392510 2 Grades 10 - 12

392520 3 Grades 11 - 12

Courses must be taken in sequence.

Two credits in Architectural Engineering Design meet the Maryland graduation requirement for Advanced Technology Education.

These courses provide students with architectural engineering design content and process skills to prepare them for entry-level employment and post-secondary education in the field of architectural engineering design. Students study architectural design principles; and develop architectural hand-drawing skills, progressing to AutoCAD, Revit, and Inventor software applications across the three levels of course work. The three levels include increasingly complex experiences in the architectural engineering design and development process, the nature and impact of architectural engineering on the environment, the integration of core technologies into the design process, and the applications of architectural engineering in major business and industry enterprises.

Course materials fee: \$10.

AUTO MECHANICS

492110 1 1 credit Grades 10 - 12

492210 1 2 credits Grades 10 - 12

492340 2 1 credit Grades 10 - 12

492130 2 2 credits Grades 10 - 12

494111 3 2 credits Grades 11 - 12

Offered only at Brunswick High School.

Courses must be taken in sequence.

This program prepares students to service and maintain all types of automobiles. It includes instruction on the diagnosis of malfunctions and repair of engines, and fuel, electrical, cooling, brake, drive train and suspension systems. Upon successful completion of Auto Mechanics 1, 2, and 3, in conjunction with teacher recommendation, students can earn up to 19 credits at the Community College of Baltimore County, Catonsville.

CABINETMAKING

491920	1	1 credit	Grades 10 - 12
492040	1	2 credits	Grades 10 - 12
492940	2	1 credit	Grades 11 - 12
493040	2	2 credits	Grades 11 - 12
494241	3	1 credit	Grade 12
494041	3	2 credits	Grade 12
494281	4	1 credit	Grade 12
494291	4	2 credits	Grade 12

Offered only at Governor Thomas Johnson High School.

Students from other county high schools may enroll in this program but must provide their own transportation.

Courses must be taken in sequence.

Students are instructed in the use of the basic tools and equipment of the cabinetry trade. Basic elements of construction including framing and finish work are covered. Construction of basic bookcases and cabinets leads to more difficult projects requiring increased competency and knowledge of design, wood, and finish.

DIGITAL COMMUNICATION TECHNOLOGY 1

394090 Grades 10 - 12

This course combines digital video production, desktop publishing, web page design and animation skills in the development and creation of digital video productions that are relevant to and representative of the numerous and varied activities that take place within a high school environment. Products may include school-based broadcasts, public service announcements, and a video compilation of the year's events.

DIGITAL COMMUNICATION TECHNOLOGY 2

394092 Grades 10 - 12

Students advance their knowledge and skills in the use of post-production technology and digital video production software. Using concepts and technical skills gained in Digital Communication Technology 1, students create a daily televised show for school announcements, instruct first-level students on the use of equipment and procedures for the daily show, create video footage to be archived in the media library, create video news packages, and serve as film crew for the Digital Communication Technology 3 class.

DIGITAL COMMUNICATION TECHNOLOGY 3

394093 Grades 10 - 12

This course gives students a greater understanding of how a film is produced, as well as what it takes to be a director. Students extend their thinking beyond a news basis; they participate in the steps a film student would take in order to get a movie proposal green-lighted, using both a pre-approved script and their own original script. Students write journals, develop storyboards and directors' notebooks for each video assignment, analyze scripts for content, and work independently to choose location, actors, and costumes. They conduct principal photography and proceed to post-production at the editing machines, making creative decisions that lead to a completed final movie scene and a short, original movie.

DIGITAL COMMUNICATION TECHNOLOGY 4

394094 Grades 10 - 12

Prerequisite: instructor approval.

Students who elect to continue in this level-4 course are expected to provide greater leadership and responsibility to the students in Digital Communication Technology 1, 2, and 3 and to the general school community. Students create video projects for various departments within the school, serving as an in-house video resource professional for their high school. They also create professional portfolios for presentation to future employers to include storyboards, contact sheets and letters of recommendation from various departments in the school.

FOUNDATIONS OF TECHNOLOGY

344070 Grades 9 - 12

This course satisfies the one-credit graduation requirement for Technology Education.

This course involves a broad study of technology and how it affects every aspect of our lives. Problem solving skills are emphasized through a series of design briefs that incorporate the application of Math and Science. In lab and classroom activities students experience ways to create, use, improve, control, and assess a variety of technologies including: mechanical, structural, electrical, electronic, fluid, optical, and bio technologies.

JOHNS HOPKINS ENGINEERING INNOVATIONS

491000 Grades 11-12

Held during the summer at Hood College.

This course provides an elective Technology Education credit but no grade.

Through a partnership with Johns Hopkins University, students may earn FCPS credit for participation in the Johns Hopkins summer course held in Frederick County. There is an application process through Johns Hopkins and tuition is required, paid to JHU. For more information go to <http://engineering-innovation.jhu.edu/>.

PRE-ENGINEERING TECHNOLOGY 1

394080 Grades 10 - 12

Offered only at Oakdale High School.

This course offers the opportunity to solve mechanical, electronic, optical, thermal, structural, fluid, and materials problems through the use of modern technology tools. This is a laboratory-based course using CAD, CAM, robotics, computer modeling and simulation. The curriculum is composed of 16 modular work stations. Each work station has from 4 to 12 levels of curriculum. The Pre-Engineering Technology 1 students explore two levels at each station. Successful completion fulfills one credit of the Advanced Technology Education graduation requirement.

PRE-ENGINEERING TECHNOLOGY 2

390040

Grades 10 - 12

Offered only at Oakdale High School.

This course allows further development of content in the overview of engineering technologies introduced in Pre-Engineering Technology 1. In addition to the continuing study of computer aided design (CAD) and quality assurance, students study advanced concepts in mechanical, structural, electrical, and fluid engineering. Students focus their study by completing up to six levels at a fewer number of stations. The Level 2 course provides students with an opportunity to explore specific topics and related career pathways that may pique a career or post-high school interest. Successful completion fulfills one credit of the Advanced Technology Education graduation requirement.

PRE-ENGINEERING TECHNOLOGY 3

390050

Grades 10 - 12

Offered only at Oakdale High School.

This advanced-level course provides students with in-depth knowledge of quality assurance practices, advanced skill development in computer aided design (CAD), and mastery of advanced concepts in mechanical driver, pneumatics, electronics, and automated material handling. Project development within a team environment is emphasized. Through the use of a master project, students research, plan, and develop a prototype solution to an engineering problem. Successful completion fulfills one credit of the Advanced Technology Education graduation requirement.

**PROJECT LEAD THE WAY:
BIOMEDICAL SCIENCES***Offered at Tuscarora High School*

This sequence of four courses prepares students for entry into two and four-year college programs in the biomedical sciences and biotechnology.

BIOMEDICAL INNOVATION

391100

1 credit

Grades 11 - 12

Prerequisites: Medical Intervention.

In this capstone course, students apply their knowledge and skills to answer questions or solve problems related to the biomedical sciences. Students design innovative solutions for the health challenges of the 21st century as they work through progressively challenging open-ended problems, addressing topics such as clinical medicine, physiology, biomedical engineering, and public health. They have the opportunity to work on an independent project and may work with a mentor or advisor from a university, hospital, physician's office, or industry. Throughout the course, students are expected to present their work to an adult audience that may include representatives from local businesses and the healthcare community.

HUMAN BODY SYSTEMS

391000

1 credit

Grades 10 - 12

Prerequisite: Principles of the Biomedical Sciences.

Students examine the interactions of body systems as they explore identity, communication, power, movement, protection, and homeostasis. Students design experiments, investigate the structures and functions of the human body, and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration. Exploring science in action, students build organs and tissues on a skeletal mannequin, work through interesting real world cases and often play the role of biomedical professionals to solve medical mysteries.

MEDICAL INTERVENTION

391200

1 credit

Grades 11 - 12

Prerequisites: Human Body Systems.

Students investigate the variety of interventions involved in the prevention, diagnosis and treatment of disease as they follow the lives of a fictitious family. The course is a "How-To" manual for maintaining overall health and homeostasis in the body as students explore: how to prevent and fight infection; how to screen and evaluate the code in human DNA; how to prevent, diagnose and treat cancer; and how to prevail when the organs of the body begin to fail. Through these scenarios, students are exposed to the wide range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics. Lifestyle choices and preventive measures are emphasized throughout the course as well as the important roles scientific thinking and engineering design play in the development of interventions of the future.

PRINCIPLES OF THE BIOMEDICAL SCIENCES

395100

1 credit

Grades 10 - 12

Students investigate the human body systems and various health conditions including heart disease, diabetes, sickle-cell disease, hypercholesterolemia, and infectious diseases. They determine the factors that led to the death of a fictional person, and investigate lifestyle choices and medical treatments that might have prolonged the person's life. The activities and projects introduce students to human physiology, medicine, research processes and bioinformatics. This course is designed to provide an overview of all the courses in the Biomedical Sciences program and lay the scientific foundation for subsequent courses.

PROJECT LEAD THE WAY: ENGINEERING*Offered only at Linganore and/or Walkersville high schools.*

The following seven PLTW courses introduce students to the scope, rigor and discipline of engineering prior to entering college. Those not intending to pursue further formal education would also benefit from the knowledge and logical thought processes that result from taking some or all of the courses provided in the curriculum. PLTW engineering courses are articulated with over 15 colleges and universities in the United States.

AEROSPACE ENGINEERING (AE)

491200 Grades 11 - 12

*Offered only at Walkersville High School.**Recommended prerequisites: POE, IED, and DE.*

The major focus of the course is to acquaint students with the world of flight and space travel. As they learn about various aspects of aerospace engineering, they apply what was learned to the design and development of several simulated flight vehicles for both atmospheric and space travel and use many different types of technical software. The course covers the history of flight, aerodynamics and aerodynamics testing, flight systems, astronautics, space life sciences, aerospace materials, and systems engineering. Working in teams, students learn about documenting their work, solving problems, and communicating their solutions to other students and members of the professional community of aerospace engineering. Aerospace Engineering is a specialization course within the PLTW sequence.

CIVIL ENGINEERING AND ARCHITECTURE (CEA)

497401 Grades 11 - 12

*Offered only at Linganore High School.**Recommended prerequisites: POE, IED, and DE.*

This course provides an overview of the fields of Civil Engineering and Architecture, while emphasizing the interrelationship and dependence of both fields on each other. Students use state-of-the-art software (AutoCAD and Revit) to solve real world problems and communicate solutions, applying mathematics, science and engineering content and principles to hands-on projects and activities. This course covers the role of civil engineers and architects, project planning, site planning, building design, and project documentation and presentation.

COMPUTER INTEGRATED MANUFACTURING: (CIM)

497201 Grades 10 - 12

*Offered only at Tuscarora High School.**Recommended prerequisite: POE, IED, and DE.*

This course applies the principles of robotics and automation. This course builds on the computer solid modeling skills developed in Introduction to Engineering Design. Students use CNC equipment to produce actual models of their three-dimensional designs. Fundamental concepts of robotics used in automated manufacturing, and design analysis are included.

DIGITAL ELECTRONICS: (DE)

497301 Grades 9 - 12

Recommended prerequisite: Completion of or simultaneous enrollment in Algebra 2.

Digital Electronics is an applied logic that focuses on the application of electronic circuits and devices. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits and devices.

ENGINEERING DESIGN AND DEVELOPMENT: (EDD)

497001 Grades 11 - 12

Prerequisites: POE, IED, DE, and CEA or AE.

Students work in teams to research, design and construct a solution to an open-ended engineering problem. Students apply principles developed in the four preceding courses and are guided by a community mentor. They must present progress reports, submit a final written report, and defend their solutions to a panel of outside reviewers at the end of the school year.

INTRODUCTION TO ENGINEERING DESIGN: (IED)

497011 Grades 9 - 12

This course satisfies the one credit graduation requirement for Technology Education.

This course teaches problem-solving skills using a design development process for products. Models of product solutions are created, analyzed and communicated using solid modeling computer design software (AutoDesk Inventor).

PRINCIPLES OF ENGINEERING: (POE)

497000 Grades 9 - 12

Recommended prerequisite: Completion of or simultaneous enrollment in Geometry and Physics.

This course helps students understand the field of engineering/engineering technology. Exploring various technology systems and manufacturing processes helps students learn how engineers and technicians use math, science, and technology in an engineering problem-solving process to benefit people. It also includes concerns about social and political consequences of technological change. This course satisfies the one credit graduation requirement for Technology for students who took the course prior to the 2007-08 school year.

TECHNICAL DRAWING

391030	1	Grades 9 - 12
392030	2	Grades 10 - 12
393031	3	Grades 11 - 12
394031	4	Grade 12

*Offered only at Governor Thomas Johnson High School.**Courses must be taken in sequence.*

Students learn the basic language of drafting by completing a series of drawings and projects. They are able to visualize objects in three dimensions, read blueprints, prepare working drawings, think through problems, draw clearly and accurately, and obtain substantial practice in engineering drafting techniques. At Level 2, they apply more advanced concepts such as multi-view projection, developments, pictorials, auxiliary views, and sectioning. Levels 3 and 4 emphasize problem solving, design, and individual student interests.

WOODWORKING

496120	1	Grades 9 - 12
496220	2	Grades 10 - 12
496321	3	Grades 11 - 12
496421	4	Grade 12

Courses must be taken in sequence.

This course develops skills in the safe and proper use of virtually all types of woodworking tools. Hand tools, portable power tools, and stationary power tools are discussed in detail, giving the student the knowledge and confidence to operate each tool safely and effectively. Students are expected to be involved in project work, both assigned and personal choice. Advanced woodworking skills are introduced at levels 2, 3 and 4, and students are challenged to design and build more advanced projects.

Course materials fees are determined based on the type and amount of materials used to complete projects.

CAREER AND TECHNOLOGY CENTER

COMPLETERS:

ACADEMY OF HEALTH PROFESSIONS

AGRICULTURAL AND COMMERCIAL METALS TECHNOLOGY (WELDING)

AUTOMOTIVE BODY/COLLISION REPAIR AND REFINISHING

AUTOMOTIVE TECHNOLOGY

BIOMEDICAL SCIENCES

CAD ARCHITECTURE

CAD ENGINEERING

CARPENTRY

CISCO NETWORKING ACADEMY

COSMETOLOGY

CRIMINAL JUSTICE/HOMELAND SECURITY

CULINARY ARTS

DIGITAL DESIGN AND PRINTING METHODS (PRINT ED)

ELECTRICITY

ENVIRONMENTAL LANDSCAPE DESIGN AND MANAGEMENT

HOMELAND SECURITY/CRIMINAL JUSTICE

HVACR/PLUMBING

TEACHER ACADEMY OF MARYLAND

TELEVISION/MULTIMEDIA PRODUCTION

WEB TECHNOLOGY AND INTEGRATED MEDIA

ACADEMY OF HEALTH PROFESSIONS

A sequence of four courses over 2 years, developed to prepare students for entry-level healthcare certification and college programs.

Offered only at the Career & Technology Center.

Student shadowing and application process required. See your counselor.

Students may be required to purchase attire representative of the health care profession. Specific information regarding the uniforms and costs will be included in the summer supply letter.

ACADEMY OF HEALTH PROFESSIONS I

Grades 10 – 12

Prerequisite: Completion or concurrent enrollment in Biology

FOUNDATIONS OF MEDICINE & HEALTH SCIENCE

531210 2 credits

The Foundations of Medicine & Health Science course highlights healthcare careers and healthcare systems. It focuses on the therapeutic, diagnostic, and informatics aspects of the health care industry by using project and problem-based learning. Students will learn medical terminology and entry level clinical skills necessary to function as a health care professional. Students become certified in First Aid and CPR. (Certification fees total approximately \$40)

STRUCTURE AND FUNCTION OF THE HUMAN BODY

531220 2 credits

This course examines the structure and functions of the human body, including cellular biology and histology. It involves learning the integumentary, skeletal, muscular, circulatory, nervous systems and special senses. Students will investigate the body's responses to the external environment. They will conduct laboratory investigations and fieldwork, using scientific methods to solve problems and make informed decisions. Students will continue to learn medical terminology related to body systems and clinical skills.

ACADEMY OF HEALTH PROFESSIONS II

Grades 11 & 12

Prerequisite: Academy of Health Professions I

Students must choose one of the following options.

OPTION ONE:

Nursing Assisting & Allied Health Capstone course

NURSING ASSISTANT

531230 2 credits

Nursing Assistant builds on the knowledge base from AoHP I to develop the skills needed for Maryland Board of Nursing certification as a Certified Nursing Assistant (CNA) and Geriatric Nursing Assistant (GNA). Students develop their "soft" skills in combination with their technical skills by participating in supervised clinical experiences at the local hospital and nursing homes. This program provides an excellent pre-nursing experience for students considering a post-secondary degree in the nursing field at the Associate, Bachelor, Master or Ph.D. levels. Certified nursing assistants (CNAs) may work in hospitals, assisted living facilities, physician's offices, school health rooms and home care facilities. Upon successful completion of the program, students who qualify must register for and take the Maryland Geriatric Nursing Assistant certification test. OSHA regulations require

students to get a PPD test for tuberculosis, demonstrate proof of immunization for Measles, Mumps, and Rubella, demonstrate immunity to Hepatitis B or sign a letter of declination before participating in clinical practicum. Students must have a valid Social Security Number or Federal Tax ID Number in order to take the CNA and GNA exams. Frederick Memorial Hospital reserves the right to perform a drug test for cause on any student involved in a clinical affiliation. (Fees associated with the MD State Board of Nursing Certification Exams total approximately \$160.00)

ALLIED HEALTH CAPSTONE COURSES

In the Allied Health Capstone, students will apply knowledge and skills in clinical settings. Students enrolled in this course will confer with the instructor to select one of the following capstone courses:

ALLIED HEALTH INTERNSHIP

531260 2 credits

Students will participate in an internship or clinical work-based learning experience, organized around a training plan cooperatively developed by the school and an employer. Students are placed at local training sites that have the potential to extend and refine skills that were developed in the AoHP coursework to date.

COLLEGE ALLIED HEALTH

531270 2 credits

Students will enroll in an approved college allied health prerequisite course at Frederick Community College. (Students will be responsible for all tuition and fees for FCC coursework)

GUIDED RESEARCH IN ALLIED HEALTH

531280 2 credits

Students will complete a health care project. They will conduct research, collect data, analyze, evaluate, organize, predict trends and present their findings.

OPTION TWO:

Clinical Medical Assisting & Administrative Medical Assisting

MEDICAL ASSISTING, CLINICAL

531240 2 credits

Clinical Medical Assisting prepares students with the skills needed to demonstrate competence in exam room procedures, basic lab techniques, and infection control procedures. Topics include assisting with exams and procedures, providing eye and ear care, laboratory equipment and safety, quality control, basic microbiology, collecting and processing urine and blood specimens, performing selected tests, and OSHA/CLIA regulations. (Required inoculations and background check fees will total ~\$40)

MEDICAL ASSISTING, ADMINISTRATIVE

531250 2 credits

Administrative Medical Assisting prepares students with the administrative skills needed to demonstrate competence in medical office procedures such as appointment processing, medical records management, filing systems, billing and coding, and maintaining the office environment. Students must take the end of course assessment.

ADVANCED FLORAL DESIGN

532000 2 credits Grades 11-12

Offered at the Career and Technology Center.

Prerequisite: Ag Science and Hort 1, or Hort 1 and Hort 2, or Landscape 1.

Student shadowing and application process required. See your counselor.

Students may be required to purchase attire representative of their profession. Specific information regarding the uniforms and costs will be included in the summer supply letter.

Students will develop knowledge of the Floriculture industry and its relevance to the individual and society. Develop and apply, through horticulture experience and examples, creative thinking and problem-solving skills. Acquire and apply knowledge of the concepts, theories, principles and laws of science to interpret the world of floriculture. Utilize floriculture experiences in the planning and fulfillment of personal aspirations and career decisions. This course will satisfy the last two requirements of the Horticulture completer or can be combined with the Environmental Landscape Design and Management program for a completer.

AGRI-BUSINESS

530004 2 credits Grades 11-12

Offered only at CTC as a one semester ½ day option with Entrepreneurship & Small Business Enterprise.

This course provides students opportunities to explore higher level topics within Agriculture at a more in depth level than traditional horticulture classes. It aligns to current agricultural education curriculum (specifically the Supervised Agricultural Experience SAE) with an "Agricultural Entrepreneurship" focus and seeks to build on foundational knowledge with advanced college coursework in business disciplines and community mentorships in agricultural fields, culminating in the planning and development of an actual horticulture-centered business. Project options for students may include an apiary (honeybees), cut-flower production and a small plot agriculture vegetable operation, independent animal production projects, and other individual projects approved by the instructor, all operating under a community-supported agriculture (CSA) system.

AGRICULTURAL & COMMERCIAL METALS TECHNOLOGY (WELDING)

533144 1A 2 credits Grades 10 -12

534442 1B 2 credits Grades 10 -12

534144 2A 2 credits Grades 11-12

535142 2B 2 credits Grades 11-12

Offered only at Career and Technology Center.

Students may be required to purchase attire representative of their profession. Specific information regarding the uniforms and costs will be included in the summer supply letter.

Second-year students: personal protective clothing and work boots required at an approximate cost of \$100.

Student shadowing and application process required. See your counselor.

This program provides instruction and hands-on experience in all of the industry standard welding processes. Students develop skills in oxyacetylene cutting, brazing and welding, plasma arc cutting, shielded metal arc welding, MIG and TIG

welding. Supplemental welding skills are developed through the planning, design, and fabrication of metal projects. The goal for each student is to develop the skills necessary to become a successful entry-level welder/fabricator.

Second-year students take the industry 3G Vertical Up welding test to become certified by the American Welding Society. The cost associated with this highly desirable certification is \$90 and covers the independent laboratory testing fee of the welding test sample. Student skill competition and leadership development is available through Skills USA and FFA at the local, state and national levels.

ARCHITECTURE – CAD

533085	1A	2 credits	Grades 10 -12
533086	1B	2 credits	Grades 10 -12
534241	2A	2 credits	Grades 11-12
534251	2B	2 credits	Grades 11-12

Offered only at the Career and Technology Center.

Prerequisite: Completion or concurrent enrollment in Geometry.

Student shadowing and application process required. See your counselor.

Students may be required to purchase attire representative of their profession. Specific information regarding the uniforms and costs will be included in the summer supply letter.

This program is for students who plans to enter college, technical school, or industry in the architectural computer design/drafting technology field. It teaches specific skills needed for the production and organization of architectural drawings. Competency is developed in design, layout, site plans, architectural lettering and symbols, materials and methods of construction, construction specifications, local building codes, elevations, sectionals, detail drawings, renderings, and model building. Students develop a full set of architectural plans.

Students develop a strong operating knowledge of the Architectural uses of the industry leading Auto- CAD software packages. Competency is developed in file and disk management, computer utility programs, installation and configuration of computer hardware and software. Students operate word processing programs for the production of professional papers and specifications as well as graphic application programs for architectural specifications and drawings, 3-D modeling, video graphics, and computer animation.

Level 2 is a continuation of the concepts begun in Level 1 but concentrates on advanced skill development. Students participate as part of a design and drafting team for the production of plans for the house project built by the Career and Technology Center. Instruction is reinforced by field trips to the house project building site. Students may receive articulated college credits upon successful completion of the program.

AUTOMOTIVE TECHNOLOGY

533064	1A	2 credits	Grades 10 -12
533065	1B	2 credits	Grades 10 -12
534064	2A	2 credits	Grades 11-12
535062	2B	2 credits	Grades 11-12

Offered only at the Career and Technology Center.

Student shadowing and application process required. See your counselor.

Students are encouraged to invest approximately \$250 in a beginning tool set.

Students may be required to purchase attire representative of their profession. Specific information regarding the uniforms and costs will be included in the summer supply letter.

Students in this program develop the skills necessary to become an entry-level automotive technician. This Automotive Service Excellence certified program prepares automotive students for certification guided by the rigorous nationally recognized industry standards. Instruction focuses on laboratory safety, proper tool and equipment usage, vehicle system diagnosis and repair of brakes and suspension, engines, fuel, electrical, cooling, and drive train systems. The curriculum is taught through both theory and hands-on methods. Safety and proper work habits are emphasized throughout the course.

Students who excel have the opportunity to also participate in the Automotive Youth Education System in which they further refine their skills and knowledge by working with a mentor technician in a paid summer internship at a local automotive dealership. Students must take the NATEF sponsored National Automotive Student Skills Standards Assessment. Students may receive articulated college credits upon successful completion of the program.

ENTREPRENEURSHIP & SMALL BUSINESS ENTERPRISE

530005		2 credits	Grades 11-12
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Offered only at CTC as a one semester ½ day option with Agri-Business.

This course works in conjunction with the Agri-Business class. Participation in the development of a viable business is intended to enhance each student's Supervised Agriculture Experience (SAE). Local business leaders have committed to providing field trip opportunities to agricultural businesses within the community. Additionally, Community members will mentor students and provide help with projects that could include: apiary (honeybees), cut-flower production and a small plot agriculture vegetable operation, independent animal production projects, and other individual projects approved by the instructor, all operating under a community-supported agriculture (CSA) system.

PROJECT LEAD THE WAY: BIOMEDICAL SCIENCES

Offered at the Career and Technology Center.

Student shadowing and application process required. See your counselor.

Students may be required to purchase attire representative of their profession. Specific information regarding the uniforms and costs will be included in the summer supply letter.

This sequence of four courses prepares students for entry into two and four-year college programs in the biomedical sciences and biotechnology. Students are encouraged to purchase lab manual but not required. Students may receive articulated college credits upon successful completion of the program.

PRINCIPLES OF THE BIOMEDICAL SCIENCES

535100 2 credits Grades 10 - 12

Students investigate the human body systems and various health conditions including heart disease, diabetes, sickle-cell disease, hypercholesterolemia, and infectious diseases. They determine the factors that led to the death of a fictional person, and investigate lifestyle choices and medical treatments that might have prolonged the person's life. The activities and projects introduce students to human physiology, medicine, research processes and bioinformatics. This course is designed to provide an overview of all the courses in the Biomedical Sciences program and lay the scientific foundation for subsequent courses.

HUMAN BODY SYSTEMS

531000 2 credits Grades 10 - 12

Prerequisite: Principles of the Biomedical Sciences.

Students examine the interactions of body systems as they explore identity, communication, power, movement, protection, and homeostasis. Students design experiments, investigate the structures and functions of the human body, and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration. Exploring science in action, students build organs and tissues on a skeletal mannequin, work through interesting real world cases and often play the role of biomedical professionals to solve medical mysteries.

MEDICAL INTERVENTION

531200 2 credits Grades 11 - 12

Prerequisites: Human Body Systems.

Students investigate the variety of interventions involved in the prevention, diagnosis and treatment of disease as they follow the lives of a fictitious family. The course is a "How-To" manual for maintaining overall health and homeostasis in the body as students explore: how to prevent and fight infection; how to screen and evaluate the code in human DNA; how to prevent, diagnose and treat cancer; and how to prevail when the organs of the body begin to fail. Through these scenarios, students are exposed to the wide range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics. Lifestyle choices and preventive measures are emphasized throughout the course as well as the important roles scientific thinking and engineering design play in the development of interventions of the future.

BIOMEDICAL INNOVATION

531100 2 credits Grades 11 - 12

Prerequisites: Medical Intervention.

In this capstone course, students apply their knowledge and skills to answer questions or solve problems related to the biomedical sciences. Students design innovative solutions for the health challenges of the 21st century as they work through progressively challenging open-ended problems, addressing topics such as clinical medicine, physiology, biomedical engineering, and public health. They have the opportunity to work on an independent project and may work with a mentor or advisor from a university, hospital, physician's office, or industry. Throughout the course, students are expected to present their work to an adult audience that may include representatives from local businesses and the healthcare community.

AUTOBODY/COLLISION REPAIR

533202 1A 2 credits Grades 10 – 12

533203 1B 2 credits Grades 10 – 12

535033 2A 2 credits Grades 11 – 12

535034 2B 2 credits Grades 11 – 12

Offered only at the Career and Technology Center.

Students are encouraged to invest approximately \$150 in a beginning tool set.

Student shadowing and application process required. See your counselor.

Students may be required to purchase attire representative of their profession. Specific information regarding the uniforms and costs will be included in the summer supply letter.

This program teaches students the skills and technical knowledge needed to repair collision damage to today's passenger vehicles. Through the use of the I-CAR curriculum, students learn key technical skills including the repair and replacement of cosmetic and structural panels, MIG welding, unibody repair and straightening, refinishing, painting and striping, estimating and job costing, plastic repair, and more. As a NATEF-certified program, students are able to accumulate I-CAR Gold Class points toward their growing industry standard I-CAR Gold Class Professional designation. Career options include body and structural repair technicians, refinishing/painting technicians, body shop owner/managers, estimators/appraisers, parts technicians, manufacturers and insurance representatives. Students must take the NATEF sponsored National Automotive Student Skills Standards Assessment. Students may receive articulated college credits upon successful completion of the program.

Student skill competition and leadership development is available through Skills USA at the state and national levels.

CARPENTRY

533341 1A 2 credits Grades 10 – 12

533342 1B 2 credits Grades 10 – 12

535042 2A 2 credits Grades 11 – 12

535043 2B 2 credits Grades 11 – 12

Offered only at the Career and Technology Center.

Students are encouraged to invest approximately \$125-\$175 in hand tools and work boots to be used in the program.

Student shadowing and application process required. See your counselor.

Students may be required to purchase attire representative of their profession. Specific information regarding the uniforms and costs will be included in the summer supply letter.

The carpentry program introduces students to the exciting and diverse opportunities available in the construction industry by building a single-family home through the course of this two-year program. Students develop a range of skills in the field of carpentry, including: blueprint reading, estimating, framing, roofing, siding, drywall installation and finishing, cabinet installation, trim carpentry, and stairway construction. Students develop job-site safety and teamwork habits and explore a variety of specialization areas and career opportunities within the construction industry.

Student skill competition and leadership development are provided through participation in Skills USA student organization at the local, state and national levels. Students may receive articulated college credits upon successful completion of the program.

Students are required to complete the National Center for Construction Education and Research's (NCCER) core and level one certifications for Carpentry. Students who complete the program and their certification receive credit for one year of their NCCER apprenticeship.

CISCO NETWORKING ACADEMY

538551	1A	2 credits	Grades 11 – 12
538552	1B	2 credits	Grades 11 – 12
Security+			
538553		2 credits	Grades 11 – 12

Offered only at the Career and Technology Center

Prerequisite: Computer Technician/Analyst or A+ certification and instructor approval.

Students may be required to purchase attire representative of their profession. Specific information regarding the uniforms and costs will be included in the summer supply letter.

The CISCO Networking Academy program prepares students to sit for the networking industry standard CCENT (Cisco Certified Entry Networking Technician) and CCNA (Cisco Certified Networking Associate) and Security+ certifications. Students use online curriculum in conjunction with extensive laboratory exercises to develop their knowledge and skills in areas including: basic networking terminology through complex subnet masking rules and strategies and supporting diverse networks. Hands-on experience allows students to hone their network trouble-shooting skills while developing critical-thinking and problem-solving skills.

The Security+ course is designed to prepare students for future careers in Cybersecurity. Students are introduced to basic and advanced topics in network Cybersecurity. In addition to preparing students to achieve Security+ certification, students will engage in activities designed to develop problem solving skills and gain understanding of Cybersecurity principals necessary for 21st century careers.

Students who complete this rigorous college-level curriculum must take either the CCENT, CCNA or Security+ exams. The cost associated with the certification exams is approximately \$125 each.

Students may receive articulated or transcribed college credits for the successful completion of the program.

COMPUTER TECHNICIAN/ANALYST

538514	1A	2 credits	Grades 10 – 12
538515	1B	2 credits	Grades 10 – 12

Offered only at the Career and Technology Center.

Cost associated with the A+ certification exams is approximately \$150.

Student shadowing and application process required. See your counselor.

Students may be required to purchase attire representative of their profession. Specific information regarding the uniforms and costs will be included in the summer supply letter.

This one-year course is the first step toward preparing students to become an IT professional. Students learn computer repair and maintenance skills by building functioning computers from component parts, upgrading existing computers, and diagnosing and repairing customer units. The online curriculum includes instructional units on microcomputers, memory, operating systems, application software, diagnostic techniques, customer interaction, viruses, printers, peripheral interfacing and basic networking. Students must take the CompTIA A+ certification exams.

Students will also complete the CISCO Academy “Small & Home Networking” Discovery I curriculum.

Students may receive articulated or transcribed college credits for the successful completion of the program.

COSMETOLOGY

532024	1A	2 credits	Grades 11-12
532025	1B	2 credits	Grades 11-12
533024	2A	4 credits	Grade 12
534028	2B	4 credits	Grade 12

Offered only at the Career and Technology Center.

Student shadowing and application process required. See your counselor.

Students are required to invest approximately in uniforms (\$35 plus black pants and shoes), a cosmetology kit (\$525), and State Board exam fees (\$75).

The two-year cosmetology program prepares students to successfully pass the Maryland State Board Licensing Exam to care for hair, skin and nails by training in areas such as styling, cutting, coloring, permanent waving, facials, manicures, and pedicures. Students become familiar with principles of sanitation, chemistry of cosmetics, basic electricity, and state regulations governing beauty culture. Excellent attendance is mandatory in order to attain the 1,500 hours necessary to qualify to sit for the State Board Exam. Eligible students are required to sit for the State Board of Cosmetology exam during their senior year. Students must have a valid Social Security Number or Federal Tax ID Number in order to sit for the State Board of Cosmetology exam.

Students intending to enroll in Cosmetology must plan their class schedules carefully in order to complete all academic requirements for graduation and allow one-half day for Cosmetology during their junior year and a full day during their senior year. (English 12 is available at the Career and Technology Center.)

CULINARY ARTS

533220	1	4 credits	Grades 10 – 12
533224	1A	2 credits	Grades 10 – 12
533321	1B	2 credits	Grades 10 – 12
Baking Option			
533300	2	4 credits	Grades 11 – 12
Culinary Option			
534164	2A	2 credits	Grades 11 – 12
535162	2B	2 credits	Grades 11 – 12

Offered only at the Career and Technology Center.

Student shadowing and application process required. See your counselor.

Students may be required to purchase attire representative of their profession. Specific information regarding the uniforms and costs will be included in the summer supply letter.

In this American Culinary Federation certified program, instruction is provided in professional food preparation and related areas such as catering and hotel/restaurant management. Hands-on cooking tasks are combined with historical and theoretical aspects of culinary arts. Topics include: equipment operation, safety, and sanitation; stocks, soups, and sauces; meat, poultry, and seafood cookery; vegetable and starch cookery; cold food production; Garde Manger; menu planning; recordkeeping and service operations, including food costs, recipe conversion, and front-of-the-house management. Students are prepared for and expected to take the ServSafe Kitchen Safety and Sanitation exam. The cost of the exam is \$35 and purchasing a personal copy of the supplemental materials (~\$50) is strongly recommended as a professional reference.

The two year program prepares students for further education at culinary, business or restaurant management schools, as well as those wishing to enter apprenticeship or skilled line cooking positions in the food service industry. Students may receive articulated college credits upon successful completion of the program.

Second year students have the opportunity to focus on Culinary Arts or Baking & Pastry production.

BAKING OPTION YEAR 2

Students in this option specialize their 2nd year of the program in concepts and techniques in baking. They will be instructed in the fundamentals of baking science, terminology, equipment, ingredients, weights and measurements, formula conversion and costing of recipes while maintaining the professional standards of the foodservice industry. Students will prepare a variety of baked goods including breads, rolls, cakes, pies, and cookies. Students participate in demonstrations, group exercises and school-based enterprises to supplement the students' development of technical skills and knowledge.

CULINARY OPTION YEAR 2

In the second year of culinary arts students will build on the skills learned in the first year to create entire meals and work on menu creation and plate design. Those units include the poultry, beef, soups & sauces, seafood, desserts, college & careers, restaurant design, menu planning, recordkeeping and service operations, including food costs, recipe conversion, and front-of-the-house management.

In the spring the students will take a two part ACF certification exam which consists of a written (online) test and a practical (cooking) test. The cost for these tests are approximately \$25, and the certificate costs \$30.

DIGITAL DESIGN & PRINTING METHODS

532054	1A	2 credits	Grades 10 – 12
532055	1B	2 credits	Grades 10 – 12
534214	2A	2 credits	Grades 11 – 12
534215	2B	2 credits	Grades 11 – 12

Offered only at the Career and Technology Center.

Student shadowing and application process required. See your counselor.

Students may be required to purchase attire representative of their profession. Specific information regarding the uniforms and costs will be included in the summer supply letter.

This exciting two-year program offers a variety of career opportunities within the graphic communications industry or electronic art careers by providing necessary knowledge about the printing industry. Students learn to take an image they have designed on MAC computers and create a banner on wide format printers or transfer the image to make a four color t-shirt on a screen printing press. Students also learn to operate an industry preferred offset printing press or a high-resolution digital press with variable data capabilities to produce brochures, flyers, posters and other printed paper products. This program provides opportunities for students who already have electronic art skills as well as those who wish to work with Adobe InDesign/Illustrator/Photoshop and Acrobat. Students may receive articulated college credits upon the successful completion of the program. Students also have the opportunity to receive national PrintED certifications and compete at the regional, state, and national levels through the SkillsUSA student organization.

ELECTRICITY

533054	1A	2 credits	Grades 10 – 12
533152	1B	2 credits	Grades 10 – 12
534054	2A	2 credits	Grades 11 – 12
535052	2B	2 credits	Grades 11 – 12

Offered only at the Career and Technology Center.

Students are encouraged to invest approximately \$220 in specialized personal electrical tools.

Student shadowing and application process required. See your counselor.

Students may be required to purchase attire representative of their profession. Specific information regarding the uniforms and costs will be included in the summer supply letter.

This course introduces students to the basic technical knowledge and skills required to enter the field of residential and light commercial wiring. Basic electrical skills covered include: blueprint reading, estimating, circuit planning, electrical panels, rough wiring and finish work. Students are also introduced to the rapidly expanding field of "smart" wiring. Students build their skills by planning and actually wiring an actual house in the community. Emphasis is placed on completing the first year of the nationally recognized apprenticeship training and understanding the National Electrical Code requirements.

Program completers are prepared to pursue entry-level employment as electrical apprentices and to continue their training in the four-year apprenticeship program. Students may receive articulated college credits upon successful completion of the program. Students are required to complete the National Center for Construction Education and Research's (NCCER) core and level one certifications for Electricity. Students who complete the program and their certification receive credit for one year of

their NCCER apprenticeship. Local, state and national student skill competition is available through Skills USA.

ENGINEERING CAD

533072	1A	2 credits	Grades 11 – 12
533073	1B	2 credits	Grades 11 – 12
534261	2A	2 credits	Grades 11 – 12
534271	2B	2 credits	Grades 11 – 12

Offered only at the Career and Technology Center.

Prerequisite: Completion or concurrent enrollment in Geometry.

Student shadowing and application process required. See your counselor.

Students may be required to purchase attire representative of their profession. Specific information regarding the uniforms and costs will be included in the summer supply letter.

This program is for students who plan to enter college, technical school, or industry in the engineering computer design/drafting technology field.

Students are taught to plan and execute basic engineering drafting techniques, basic technical illustrating, and 3-D drawings. Competency is developed in sketching, drawing, dimensioning, linear and geometric tolerancing, and the reproduction of assembly and production drawings.

Students develop a strong operating knowledge of the Engineering uses of the industry leading Auto CAD software packages. Competency is developed in file and disk management, computer utility programs, installation and configuration of computer hardware and software. Students operate word processing programs for the production for the production of professional papers and specifications, as well as graphic application programs for engineering drawings, 3-D modeling, video graphics, and computer animation.

Level 2 is a continuation of the concepts begun in Level 1 but concentrates on advanced skill development. Students participate as part of a design and drafting team for the production of plans for manufacturing processes. Students may receive articulated college credits upon the successful completion of the program.

ENVIRONMENTAL LANDSCAPE DESIGN & MANAGEMENT

533111	1A	2 credits	Grades 10 – 12
533112	1B	2 credits	Grades 10 – 12
534113	2A	2 credits	Grades 11 – 12
533114	2B	2 credits	Grades 11 – 12

Offered only at the Career and Technology Center.

Student shadowing and application process required. See your counselor.

Students may be required to purchase attire representative of their profession. Specific information regarding the uniforms and costs will be included in the summer supply letter.

Join a Growing Industry! The Environmental Landscape Design & Management Program offers students a combination of academic and hands-on experiences in the management and production of a fully operational greenhouse that produces a variety of crops including; poinsettias, Easter lilies, spring/summer annuals and perennials, pansies and fall chrysanthemums. Students will use landscape design principles to design, install, and maintain landscape features in school and community projects. Students will also design and construct irrigation systems and hardscapes. Through all of these activities, participants will learn how to safely operate most equipment that is used in the outdoor landscape industry.

Students will also be able to properly identify and classify more than 200 plants, insects, weeds, diseases and tools. In addition, students will be able to analyze plant environmental needs, including; light, water and soil amendment. These skills will prepare them for the Certified Professional Horticulturist Certification and the Certified Pesticide Applicator. There is a cost associated with each of these industry certifications will be included in the summer supply letter.

Students enrolled in the program will also have the opportunity to become members of the Career and Technology Center's FFA chapter and the SkillsUSA Organization. These organizations provide students with the opportunity to enhance their leadership and public speaking skills while improving their overall knowledge of their technical area.

EXTENDED TECHNICAL STUDIES

538110	A	2 credits	Grade 12
538120	B	2 credits	Grade 12

Offered only at the Career and Technology Center.

Prerequisite: Instructor's permission — seniors who have completed the required levels of a program at the Career and Technology Center.

This program allows students to gain more advanced skills and experiences prior to entering the work force and/or post-secondary education. Before enrolling, students must meet with the instructor to discuss career goals and plan their advanced study objectives. Only students who have demonstrated excellent motivation and focus on learning and work well independently will be approved, providing class space is available.

HOMELAND SECURITY/CRIMINAL JUSTICE

539114	1A	2 credits	Grades 10 – 12
539115	1B	2 credits	Grades 10 - 12
539134	2A	2 credits	Grades 11 – 12
539121	2B	2 credits	Grades 11 – 12
539110	1	4 credits	Grades 10 - 12
539130	2	4 credits	Grades 11 - 12

Offered only at the Career and Technology Center. Student shadowing and application process required. See your counselor.

Students may be required to purchase attire representative of their profession. Specific information regarding the uniforms and costs will be included in the summer supply letter.

The Homeland Security / Criminal Justice program is a two-year program, offered at the Career and Technology Center, as an introduction to Homeland Security as well as the three components of the US Criminal Justice system: law enforcement, courts, and corrections. The HS/CJ program is responsive to concerns over crime, security, terrorist threat, natural and man-made disasters, and emergency response. Occupational trends indicate that employment activity in these areas will continue to be robust. Students in the program receive similar training given to police recruits at a training academy. Training includes physical fitness, defensive tactics, oral and written communications, police procedures, crime scene investigation, correctional operations and emergency planning/response. Students completing the program and satisfying the academic requirement will receive six articulated college credits at Frederick Community College.

HVACR/PLUMBING

533104	1A	2 credits	Grades 10 – 12
533102	1B	2 credits	Grades 10 – 12
534104	2A	2 credits	Grades 11 – 12
534105	2B	2 credits	Grades 11 – 12

Offered only at the Career and Technology Center.

Students are encouraged to invest approximately \$100 in personal basic hand tools.

Student shadowing and application process required. See your counselor.

Students may be required to purchase attire representative of their profession. Specific information regarding the uniforms and costs will be included in the summer supply letter.

This course utilizes the National Center for Construction Education and Research (NCCER) curriculum, a nationally developed competency-based, task-oriented curriculum that prepares students to begin a formal apprenticeship program. Instruction consists of an integrated approach of theory and hands-on experiences to prepare students to repair, install service, and maintain the operating condition of heating, ventilation, air conditioning (HVAC) and refrigeration systems. It includes instruction in diagnostic techniques, the use of testing equipment, and the principles of mechanics, electricity and electronics as they relate to these systems. Students develop basic skills in plumbing copper and plastic supply systems, waste and vent piping systems as well as the installation of plumbing fixtures. Experiences are also provided in metal duct fabrication/installation, blueprint reading, establishing system layouts, and interpreting manufacturers' specifications.

Students may receive articulated college credits upon the successful completion of the program. Student skill competition is available through Skills USA at the local, state and national levels.

Students are required to complete the National Center for Construction Education and Research's (NCCER) core and level one certification for HVACR. Students who complete the program and their certification receive credit for one year of their NCCER apprenticeship.

INTRODUCTION TO CONSTRUCTION MANAGEMENT

539061 1 credit

Prerequisite: Students must successfully complete Level 1 of their CTC construction program and have an instructor recommendation.

This is an optional Frederick Community College (FCC) course for advanced students enrolled in a construction program at the CTC including Carpentry, Masonry, Construction Electricity, HVACR, Environmental Landscape Design & Management, Architectural CAD and Engineering CAD. This dual enrollment course provides students the opportunity to earn college credit during the school day. The course covers advanced technical and upper level skills in Construction Management. Students study project scheduling, advanced blueprint interpretation, building specifications and codes, estimating and analysis of competitive product quotations, and construction contract language.

TEACHER ACADEMY

Offered at the Career and Technology Center. Student shadowing and application process required. See your counselor.

TEACHING AS A PROFESSION

562001

Grades 10-12

This course focuses on the profession of teaching – its history, purposes, issues, ethics, laws and regulations, roles, and qualifications. Emphasis is placed on identifying the current, historical, philosophical and social perspectives of American education, including trends and issues. Students will explore major approaches to human learning. Students will participate in guided observations and field experiences in multiple settings to help them assess their personal interest in pursuing careers in this field and to identify effective learning environments. Students will continue to develop the components of a working portfolio to be assembled upon completion of the internship.

HUMAN GROWTH AND DEVELOPMENT THROUGH ADOLESCENCE

363400

Grades 10-12

This course focuses on human development from birth through adolescence. Emphasis is placed on theories of physical, cognitive, and psychosocial development, the effect of heredity and the environment, the role of caregivers and the family, health and safety concerns, and contemporary issues. Students explore special challenges to growth and development. Students will have opportunities for guided observation of children from birth through adolescence in a variety of settings to help students further understand theories of human development. Students will begin to develop the components of a working portfolio to be assembled upon completion of the internship.

FOUNDATIONS OF CURRICULUM AND INSTRUCTION

361160

Grades 10-12

Prerequisites: Human Growth and Development and Teaching as a Profession

This course explores curriculum delivery models in response to the developmental needs of all children. Emphasis is placed on the development of varied instructional materials and activities to promote learning, classroom management strategies, and a supportive classroom environment. Students will explore basic theories of motivation that increase learning. Students will participate in guided observations and field experiences to critique classroom lessons in preparation for developing and implementing their own. Students will continue to develop the components of a working portfolio to be assembled upon completion of the internship. This is the third course in the sequence.

INTERNSHIP/FIELD EXPERIENCE (LEARNING THEORY)

532111	A	2 credit	Grades 11-12
532112	B	2 credit	Grades 11-12

Prerequisites: Human Growth and Development and Teaching as a Profession and Foundations of Curriculum and instruction. This course may be taken concurrently with Foundations of Curriculum and Instruction.

The internship is the culminating course of the Education Academy Program. Students will have an opportunity to integrate content and pedagogical knowledge in an educational area of interest. They will have an opportunity to extend and apply their knowledge about teaching in a classroom setting under the supervision of a mentor teacher. The students will complete their working portfolio and present it for critique.

TELEVISION/MULTIMEDIA PRODUCTION

531024	1A	2 credits	Grades 10 – 12
531025	1B	2 credits	Grades 10 – 12
531044	2A	2 credits	Grades 10 – 12
531051	2B	2credits	Grades 10 – 12

Offered only at the Career and Technology Center.

Student shadowing and application process required. See your counselor.

Students may be required to purchase attire representative of their profession. Specific information regarding the uniforms and costs will be included in the summer supply letter.

This program is an exciting trip into the technical and creative field of digital video production. Starting with digital video cameras, students take assignments from basic concepts through to completed video products for broadcast and web posting. Students develop skills in videography, editing, lighting, audio productions, scriptwriting, on-air talent and learn how to operate state-of-the-art digital video production equipment in the filming and production of a television broadcast. They also gain experience in computer graphics, animation, special effects, and other techniques related to enhancing the video production process. Second-year students produce original programming that is broadcast in-house and on channels 10 and 18 and further hone their experiences. Students may receive articulated or transcribed college credits for the successful completion of the program.

WEB TECHNOLOGY AND INTEGRATED MEDIA

538511A	2 credits	Grades 10 -12
538521B	2 credits	Grades 10 -12

Offered at the Career and Technology Center.

Student shadowing and application process required. See your counselor.

Students may be required to purchase attire representative of their profession. Specific information regarding the uniforms and costs will be included in the summer supply letter.

Advanced Web Design and Animation students, use Adobe CS6 software to develop the basic skills necessary to design and maintain a web site. Course content focuses on the overall web design process with emphasis on web site architecture, workflow and production processes, navigation schemes, implementation and hosting. Students develop animation skills as they pertain to enhancing a web site, with additional emphasis on customer service as they deal with real customers and learn the intricacies of becoming a “webmaster.” Students may also receive articulated college credits upon the successful completion of the program.

ENGLISH

Through English courses, students develop the reading, writing and critical thinking skills they will need to be successful in the 21st century. Classes emphasize:

- Reading fluently and improving comprehension by connecting life experiences to the text, predicting, summarizing, visualizing, questioning, using clarifying and corrective strategies and applying meaning.
- Reading and analyzing a wide and increasingly challenging range of poems, newspapers, short stories, nonfiction, essays, excerpts and novels.
- Learning grammar and language usage for speaking and writing, and studying prefixes, suffixes and word roots from Greek, Latin and other languages to learn the basic building blocks of the English language.
- Writing to express personal feelings and thoughts, inform, argue and respond to fiction and non-fiction literature.
- Researching and documenting both print and electronic sources.

All courses are one credit unless otherwise indicated.

HIGH SCHOOL ENGLISH COURSE SEQUENCING				
GRADE	9	10	11	12
REQUIRED COURSES	English 9	English 10*	English 11 or Advanced Placement English Language and Composition or International Baccalaureate English (Urbana High only) or English 101 Dual Enrollment	English 12 or Advanced Placement English Language and Composition or Advanced Placement English Literature and Composition or English 101 Dual Enrollment or English 102 Dual Enrollment or International Baccalaureate English (Urbana High only)
ENGLISH ELECTIVES	Journalism Forensics & Debate	Journalism Forensics & Debate Modern Issues	Creative Writing Film Study Forensics & Debate Humanities Journalism Modern Issues	Creative Writing Film Study Forensics & Debate Humanities Journalism Modern Issues
*Courses that are asterisked culminate with a state-mandated assessment.				

CREATIVE WRITING

134250

Grades 11 - 12

This is an elective course for students who wish to apply composition skills in fiction, poetry, autobiographical essays, and other forms of creative writing. Students monitor their improvement through portfolios. The class produces an annual literary magazine.

ENGLISH 9

131211

131111 Honors

131313 English 9 YL Comprehension A (elective credit)

131314 English 9 YL Comprehension B (English 9 credit)

131317 English 9 YL Foundational A (elective credit)

131318 English 9 YL Foundational B (English 9 credit)

Emphasis in this College and Career Ready Standards based course is on development of critical reading and thinking skills and on composition, including the use of descriptive, narrative, and argumentative techniques. Thematic units that incorporate world literature are organized to help students increase fluency in reading critically and in crafting well-written compositions. Word study, language usage, research, and speaking and listening skills are incorporated into course lessons.

English 9 YL Comprehension A and Comprehensions B are designed for students needing extra support in reading. A primary reading comprehension intervention is infused into this course that spans the entire year. Successful completion of this course results in 2 credits: 1 credit for English 9 and 1 English elective credit.*

Students must pass both semesters to earn English 9 credit.

English 9 YL Foundational A and Foundational B are designed for students needing intensive support in reading. A foundational reading intervention is infused into this course that spans the entire year. Successful completion of this course results in 2 credits: 1 credit for English 9 and 1 English elective credit.*

Students must pass both semesters to earn English 9 credit.

ENGLISH 10

13P211*

13P111* Honors

131315 English 10 YL Comprehension A (elective credit)

131316* English 10 YL Comprehension B (English 10 credit)

131319 English 10 YL Foundational A (elective credit)

131320* English 10 YL Foundational B (English 10 credit)

Emphasis in this College and Career Ready Standards based course is on the further development of critical reading and thinking skills and on composition, including the use of descriptive, narrative, and argumentative techniques. Thematic units that incorporate world literature are organized to help students increase fluency in reading critically and in crafting well-written compositions. Word study, language usage, research, and speaking and listening skills are incorporated into course lessons.

English 10 YL Comprehension A and B are designed for students needing extra support in reading. A primary reading comprehension intervention is infused into this course that spans the entire year. Successful completion of this course results in 2 credits: 1 credit for English 10 and 1 English elective credit.

Students must pass both semesters to earn English 10 credit.

English 10 YL Foundational A and Foundational B are designed for students needing intensive support in reading. A foundational reading intervention is infused into this course that spans the entire year. Successful completion of this course results in 2 credits: 1 credit for English 10 and 1 English elective credit.

Students must pass both semesters to earn English 10 credit.

*Course culminates with a state-mandated assessment.

ENGLISH 11

133211

133111 Honors

Emphasis in this College and Career Ready Standards based course is on the further development of critical reading and thinking skills and on composition, including the use of descriptive, narrative, and argumentative techniques. Thematic units that incorporate American literature are organized to help students increase fluency in reading critically and in crafting well-written compositions. Word study, language usage, research, and speaking and listening skills are incorporated into course lessons.

ENGLISH 12

134121

134281

(CTC Only)

Grade 12

Emphasis is on the refinement of writing skills and techniques. Literary works and excerpts are used as models and sources for writing based on student needs and backgrounds. Students learn how to develop ideas thoroughly, to organize complex concepts at the essay, paragraph, and sentence levels, to make effective tone and other stylistic choices, and to use language fluently.

NOTE: AP English courses are the equivalent of honors-level English for 12th grade students.

ENGLISH, IB

HL - 130101

HL - 130201

Recommended prerequisites: English 9 and 10, Honors.

Available only at Urbana High School.

In this two-year course of study, students work to achieve advanced proficiency in English in order to pass the exams required by the IB Programme. Students conduct written and oral literary analysis and formulate and express clear, personal responses to literature. Critical analysis and writing focus on works of distinction from various cultures and genres.

ENGLISH LANGUAGE AND COMPOSITION, ADVANCED PLACEMENT

This course may be taken by juniors in lieu of English 11 with permission of instructor.

134181

Grades 11 - 12

134381 CTC Only

Grade 12

This college-level course prepares students for the AP examination in English Language and Composition. Emphasis is on the analysis of rhetorical devices employed in non-fiction, including essays, articles, and speeches. Students continually write timed and untimed essays on a variety of topics. *Whereas four English credits meet the requirement for graduation, students are strongly encouraged to take an English course during their senior year.*

**ENGLISH LITERATURE AND COMPOSITION,
ADVANCED PLACEMENT**

This course may be taken by juniors upon completion of English 11 with permission of instructor.

134371 Grade 12

This course prepares students for the AP examination in English Literature and Composition through a college-level class. Emphasis is on the refinement of individual writing styles and the critical analysis of literature. Students analyze representative literary works from several genres and periods. This seminar requires intensive class preparation, timed writing, analytical thinking, and independent assignments. *Whereas four English credits meet the requirement for graduation, students are strongly encouraged to take an English course during their senior year.*

FILM STUDY

663310		1 credit	Grades 11 - 12
663320	A	0.5 credit	Grades 11 - 12
663330	B	0.5 credit	Grades 11 - 12

This course is an analytical and interpretive study of film masterworks. The course covers the artistic, technological, social, and economic impact of film on viewers in our society. Critical writing skills and extensive reading are also emphasized.

FORENSICS AND DEBATE

135051	1
135251	2
135351	3
135451	4

Emphasis is on improving thinking and speaking skills through competition. Activities include declamation, extemporaneous speaking, oratory, and prose and poetry reading. In debate, students must present arguments and evidence in a highly structured format that emphasizes research and critical thinking.

HUMANITIES

134211	1 credit	Grades 11 - 12
134221	0.5 credit	Grades 11 - 12

Emphasis is on the relationship of literature to social and political developments from the Classical Period through the Renaissance and Reformation. Materials are taken from Language Arts, Fine Arts, and Social Sciences. Writing includes the critical essay. Students successfully completing this course receive elective credit.

JOURNALISM

Prerequisite: Permission of the instructor.

134220	1
134230	2
134330	3
134430	4

This course helps students learn and apply skills related to news writing, editing, financing, and presentation.

MODERN ISSUES

136110 Grades 10 - 12

This course revisits the most critical literacy skills taught in English 9 and English 10, with an emphasis on the study of contemporary issues as they are represented in modern fiction and non-fiction. The course allows students who failed English 9 or English 10 an opportunity for credit recovery. In addition, it allows those wishing to accelerate critical reading, composition, and language usage skills an opportunity to earn an English elective credit.

SAT PREPARATION – ENGLISH AND MATH

561100 0.5 credit Grades 11-12

This course, offered at all high schools, prepares the student with the analytical problem solving and integrative thinking skills assessed on the SAT test, a test many students take as part of the college application process. Included are vocabulary comprehension strategies, written communication skills and processes, critical reading skills, and Algebra, Geometry, and Algebra 2 problem solving.

INTERVENTIONS FOR READING

ENGLISH 9

131313	English 9 YL Comprehension A (elective credit)
131314	English 9 YL Comprehension B (English 9 credit)

Emphasis in this College and Career Ready Standards based course is on development of critical reading and thinking skills and on composition, including the use of descriptive, narrative, and argumentative techniques. Thematic units that incorporate world literature are organized to help students increase fluency in reading critically and in crafting well-written compositions. Word study, language usage, research, and speaking and listening skills are incorporated into course lessons. This course is designed for students needing extra support in reading comprehension. A primary reading comprehension intervention is infused into this course that spans the entire year. Successful completion of this course results in 2 credits: 1 credit for English 9 and 1 English elective credit.

Students must pass both semesters to earn English 9 credit.

131317	English 9 YL Foundational A (elective credit)
131318	English 9 YL Foundational B (English credit)

Emphasis in this College and Career Ready Standards based course is on the further development of critical reading and thinking skills and on composition, including the use of descriptive, narrative, and argumentative techniques. Thematic units that incorporate world literature are organized to help students increase fluency in reading critically and in crafting well-written compositions. Word study, language usage, research, and speaking and listening skills are incorporated into course lessons. This course designed for students needing intensive support in reading. A foundational reading intervention is infused into this course that spans the entire year. Successful completion of this course results in 2 credits: 1 credit for English 9 and 1 English elective credit.

Students must pass both semesters to earn English 9 credit.

ENGLISH 10

131315 English 10 YL Comprehension A (elective credit)

131316* English 10 YL Comprehension B (English credit)

Emphasis in this College and Career Ready Standards based course is on the further development of critical reading and thinking skills and on composition, including the use of descriptive, narrative, and argumentative techniques. Thematic units that incorporate world literature are organized to help students increase fluency in reading critically and in crafting well-written compositions. Word study, language usage, research, and speaking and listening skills are incorporated into course lessons. This course is designed for students needing extra support in reading. A foundational reading intervention is infused into this course that spans the entire year. Successful completion of this course results in 2 credits: 1 credit for English 10 and 1 English elective credit. ** Students will take the English 10 PARCC assessment second semester.

Students must pass both semesters to earn English 10 credit.

*Course culminates with a state-mandated assessment.

131319 English 10 YL Foundational A (elective credit)

131320* English 10 YL Foundational B (English credit)

Emphasis in this College and Career Ready Standards based course is on the further development of critical reading and thinking skills and on composition, including the use of descriptive, narrative, and argumentative techniques. Thematic units that incorporate world literature are organized to help students increase fluency in reading critically and in crafting well-written compositions. Word study, language usage, research, and speaking and listening skills are incorporated into course lessons. This course is designed for students needing intensive support in reading. A foundational reading intervention is infused into this course that spans the entire year. Successful completion of this course results in 2 credits: 1 credit for English 10 and 1 English elective credit. ** Students will take the English 10 PARCC assessment second semester.

Students must pass both semesters to earn English 10 credit.

*Course culminates with a state-mandated assessment.

READING AND WRITING WORKSHOP

137200 1 1 credit

137210 2 1 credit

137220 3 0.5 credit

137230 4 0.5 credit

This course is for students needing reading intervention who are not taking English 9 YL or English 10 YL. Students work individually and in small groups accessing a primary reading comprehension intervention, which incorporates small group instruction, computer-adaptive instructional software, and independent reading with a focus on improving reading comprehension of complex texts. Upon successful completion of this course, students receive English elective credit.

SKILLS ENRICHMENT - READING

562002 1 credit

Students enrolled in this course would participate in reading interventions in consultation with FCPS intervention specialists.

ENGLISH LEARNER PROGRAM (EL)

The EL program provides English language instruction that assists students with acquiring the basic interpersonal communication skills and essential academic language proficiency to function successfully in a mainstream classroom over time. The program enrolls linguistically and culturally diverse students who require intensive instruction in English, at varying proficiency levels, as a new language. EL classes provide instruction in the acquisition of Academic English with special emphasis on the listening, speaking, reading, and writing skills needed for success in a rigorous academic environment. Students develop competency in understanding spoken English, using grammatically correct English to express social and academic needs, and in organizing and clearly expressing their ideas in written English. Valuing and promoting the home language and culture of English Learners fosters the understanding that literacy in one's native language is essential to the transfer of skills across languages. Ultimately, all educators in our schools collaborate to provide an effective education for EL students. Please note that all placements for EL classes will be made by the appropriate EL counselor(s) and EL teachers in conjunction with the EL registrar at the International Office. The EL proficiency assessment, required by MSDE, and a math placement assessment are important tools used during the placement process.

SAMPLE EL COURSE SEQUENCE FOR BEGINNING EL STUDENTS

Semester 1	Semester 2	Semester 3	Semester 4
EL Literacy for Emergent Students A	EL Read/Write 2 EL Literacy for Emergent Students B	EL Read/Write 3 Not all English Learners will need the additional support provided in this course.	EL Read/Write 4 Not all English Learners will need the additional support provided in this course.
EL Emergent Read/Write 1	EL English as a World Language Beginner 2	EL English 9A	EL English 9B
EL English as a World Language Beginner 1	Health <i>and</i> Fitness for Life	Foundations of Technology	Physics of Earth and Space (PES)
EL CCR Math Foundations 1, or 2, or 3	EL CCR Math Foundations 1, 2, or 3, or other math course as appropriate.	Algebra 1, Algebra 1A, or Algebra Acquisitions	Algebra 1B* or Fine Arts Class
<p><i>Sample course sequence above designed for EL students with no English skills and/or little or no previous schooling. Beginning EL students enrolling in second semester require a different course sequence than beginning EL students who enrolled in the fall semester.</i></p> <p><i>*Courses that are asterisked culminate with a state-mandated assessment.</i></p>			

BEGINNING EL PROGRAM

The beginning EL program is offered to high school students with little or no proficiency in English. The EL classes offer intensive instruction in oral and written English language, reading skills, and the culture of the United States. Initially, emphasis is given to basic interpersonal communication skills; cognitive academic language skills are addressed as soon as possible. Students will be assigned to these classes by counselor(s) in cooperation with EL teachers. Students with interrupted education or little formal schooling will need more time to make progress learning English.

EL LITERACY FOR EMERGENT STUDENTS A

563400 Grades 9-12

System 44 Next Generation is the cornerstone for this course. It is designed for daily use with students rotating between the instructional technology, small-group differentiated instruction, and independent reading. System 44 NG is a foundational reading program that helps students master the fundamental reading skills required for success with the new standards, and college, and career readiness standards through explicit instruction in phonics, comprehension, and writing. This is the first part of the reading program that will cover Modules 1-4.

EL LITERACY FOR EMERGENT STUDENTS B

563500 Grades 9-12

System 44 Next Generation is the cornerstone for this course. It is designed for daily use with students rotating between the instructional technology, small-group differentiated instruction, and independent reading. System 44 NG is a foundational reading program that helps students master the fundamental reading skills required for success with the new standards, and college, and career readiness standards through explicit instruction in phonics, comprehension, and writing. This is the second part of the reading program that will cover Modules 5-8.

EL EMERGENT READ/WRITE 1

563510 Grades 9-12

This course focuses on all four language domains (reading, writing, listening, speaking), but there is more emphasis on improving beginner students' reading and writing skills. English Learners begin to communicate information, ideas, and concepts necessary for academic success.

EL ENGLISH AS A WORLD LANGUAGE BEGINNER 1

262080

Grades 9-12

This course addresses all four language domains; the importance of social language in student interaction with peers and teachers in school and the language that students encounter across instructional settings are primary focuses. This course satisfies one credit towards a world language completer.

EL READ/WRITE 2

563520

Grades 9-12

EL Read/Write 2 focuses on all four domains (reading, writing, listening, speaking), but more emphasis is placed on improving beginner students' reading and writing skills. EL students continue working on the multi-layer communication skills necessary for academic success.

EL ENGLISH AS A WORLD LANGUAGE BEGINNER 2

262090

Grades 9-12

Increasingly higher-level reading, writing, listening, and speaking skills are taught and assessed in this course. Increased emphasis is placed on assisting beginner students acquire oral language proficiency and language usage skills. This course satisfies one credit towards a world language completer.

EL READ/WRITE 3

563530

Grades 9-12

This is the third course in the Read/Write series; not all English Learners will need the additional support provided in this course. This course provides an additional opportunity to students who still may need more language acquisition support as they transition to the intermediate proficiency level. Curricular areas of technology, English language arts, social studies, and science will be the focus in the course to develop students' English language development and academic language development necessary for students' success in content classes.

EL ENGLISH AS A WORLD LANGUAGE BEGINNER 3

262100

Grades 9-12

This is the third course in the World Language Beginner sequence. This course provides additional scaffolding and support to students who need even more language acquisition support as they transition to the next proficiency level. This course satisfies one credit towards a world language completer.

EL READ/WRITE 4

563540

Grades 9-12

This is the final course in the Read/Write series; not all English Learners will need the additional support provided in this course. It was designed for students who may have experienced limited formal schooling and who need more language acquisition support to increase language in each of the four domains with a strong emphasis on reading and writing skills. Curricular areas of technology, English language arts, social studies, and science will be the focus in the course to develop students' English language development and academic language development necessary for students' success in content classes.

EL ENGLISH AS A WORLD LANGUAGE BEGINNER 4

262110

Grades 9-12

World Language Beginner 4 will provide additional support in all language domains along with a strong focus on the academic vocabulary necessary to be successful in other courses. This course satisfies one credit towards a world language completer.

Students whose limited English proficiency requires that they remain in the beginning EL program for a second year should register for the four classes listed *immediately* above. Not all English Learners will need the additional support provided in these courses.

INTERMEDIATE EL PROGRAM

EL INTERMEDIATE 1

563550

Grades 9-12

EL Intermediate 1 is designed for English Learners moving into WIDA Level 3. Students at this level are developing and expanding their skills in listening, speaking, reading, and writing. Oral and written responses, within this course, require more explicit elaboration.

EL INTERMEDIATE 2

563560

Grades 9-12

EL Intermediate 2 prepares students for entrance into WIDA level 4-5 where they will continue expanding their language skills in each domain. There is an increased emphasis on composing narrative and expository pieces to prepare them for success in mainstream courses.

EL ENGLISH 9A

563820

Grades 9-12

9A earns an elective, but not an English credit.

Upon completion of 9A, students must complete 9B to receive English credit. Placement in 9B is reserved for students who have completed English 9A.

EL ENGLISH 9B

563880

Grades 9-12

Emphasis in this College and Career Ready Standards-based course is on development of critical reading and thinking skills and on composition, including the use of descriptive, narrative, and argumentative techniques. Thematic units that incorporate world literature are organized to help students increase fluency in reading critically and in crafting well-written compositions. Word study, language usage, research, and speaking and listening skills are incorporated into course lessons.

ADVANCED EL PROGRAM

The advanced EL classes help students complete their transition into mainstream academic classes that require higher level English academic proficiency.

**Courses that are asterisked culminate with a state-mandated assessment.*

EL ENGLISH 1 (1 SEMESTER)

563800 Grades 9-12

Upon completion of EL English 1, students must complete 56P810 to receive English credit.

Course 563800 earns an elective credit. Placement in this course signifies that a student has not yet met identified readiness standards.

EL ENGLISH 10 PARCC

56P810* Grades 9-12

Emphasis in this College and Career Ready Standards-based course is on the further development of critical reading and thinking skills and on composition, including the use of descriptive, narrative, and argumentative techniques. Thematic units that incorporate world literature are organized to help students increase fluency in reading critically and in crafting well-written compositions. Word study, language usage, research, and speaking and listening skills are incorporated into course lessons.

**Course culminates with a state-mandated assessment.*

EL GOVERNMENT

563890* Grades 9-12

The course objectives are centered on the importance of civic education which is necessary to be an informed, involved citizen who understands and supports democratic principles, institutions, and processes. Political science classes are not taught in isolation but rather integrate examples from American history with concepts of government power and purpose, and examine the influence on today's world. Topics studied include: the foundations of government, the Constitution, federalism, civil rights, civil liberties, political parties, policy making, and some comparison with other nations.

**Course culminates with a state-mandated assessment.*

EL AMERICAN STUDIES 2

169141 Grades 9-12

American Studies 2 continues the time line from American Studies 1, from the early post-Civil War industrial era to the present. The social, economic, and political issues that shaped 20th century America are analyzed and their implication for the future is examined so individuals can make considered choices and take appropriate action as active citizens. Students develop and test generalizations about relevant social science concepts after acquiring a factual knowledge of our society's common culture. Topics include the United States as a world leader, civil rights and equity, protest and reform, criminal justice, government and the individual, environmental issues, war and peace, the issues of the 20th century, and contemporary issues that have defined the 21st century.

EL MODERN WORLD HISTORY

169131 Grades 9-12

Students begin with an overview on the foundations of world history through an examination of the state of world affairs and their origins in 1300 C.E. This course is a survey of peoples throughout the world and their progress in many areas of knowledge, including science, technology, art, music, government, religion and culture. Units of study include how trade and travel changed the world, revolutions and reactions, industrial revolution, imperialism and nationalism, crisis and change, and the modern world. This course leads students in pursuit of historical knowledge from a global, thematic perspective.

EL CCR MATH FOUNDATIONS 1

239200 Grades 9-12

This course is offered to all EL students that have significant skill gaps in mathematics. The course will focus on developing students' mathematical and language proficiencies through research based and evidenced based instructional strategies. Instruction will strengthen conceptual and procedural knowledge to close an existing gap so that students can easily transition to grade level experiences in future mathematical coursework. Students will focus on content within the CCSS domains of Operations and Algebraic Thinking, Number and Operations in Base Ten, Number and Operations-Fractions, Measurement and Data, and Geometry.

EL CCR MATH FOUNDATIONS 2

239201 Grades 9-12

This course is offered to all EL students that have significant skill gaps in mathematics. The course will focus on developing students' mathematical and language proficiencies through research based and evidenced based instructional strategies. Instruction will strengthen conceptual and procedural knowledge to close an existing gap so that students can easily transition to grade level experiences in future mathematical coursework. Students will focus on content within the CCSS domains of Ratios and Proportional Relationships, The Number System, Expressions and Equations, Geometry, and Statistics and Probability.

EL CCR MATH FOUNDATIONS 3

239202 Grades 9-12

This course is offered to all EL students that have significant skill gaps in mathematics. The course will focus on developing students' mathematical and language proficiencies through research based and evidenced based instructional strategies. Instruction will strengthen conceptual and procedural knowledge to close an existing gap so that students can easily transition to grade level experiences in future mathematical coursework. The standards covered within the EL CCR Math Foundations 3 course are aligned to the first five units of the FCPS Grade 8 Common Core Math Course. The unit sequence for the EL CCR Math Foundations 3 will be Unit 2, Unit 1, Unit 3, Unit 4, and Unit 5.

**High school students can earn three math elective credits with these three EL Math courses listed above.*

HEALTH EDUCATION/PHYSICAL EDUCATION

Instruction emphasizes health concepts and skills and learning to apply them in making decisions to improve, sustain and promote personal, family and community health.

Physical education enables students to evaluate their personal fitness levels and improve their fitness, sport and activity levels for a lifetime of well being. Available courses include athletic coaching, aquatics, individual and dual sports, personal fitness, sports medicine, strength training, team sports, and unified physical activity.

Health education provides factual, sequential, age appropriate information to assist students in gaining knowledge and skills that will lead to lifelong healthy attitudes and behaviors. It includes mental and emotional health, substance abuse prevention, family life and human development, nutrition, safety and injury prevention, and disease prevention, all with an emphasis on health literacy. A Family Life Advisory Committee reviews curricular materials related to family life and HIV & AIDS. Parental permission is required before a student takes family life, HIV& AIDS prevention, suicide prevention, and the Escalation Workshop on dating violence in high school.

All courses are one credit unless otherwise indicated.

AQUATIC SPORTS/FITNESS

463050			Grades 10 - 12
463250	1A	0.5 credit	Grades 10 - 12
463350	1B	0.5 credit	Grades 10 - 12

In this course students get the opportunity to participate in a variety of lifetime fitness activities and sporting games in an aquatic environment. This course also consists of the American Red Cross Learn to Swim program that teaches aquatic and safety skills in a logical progression. Students are introduced to the flexibility, strength, endurance and cardiorespiratory conditioning relating to swimming fitness. Students are also introduced to a variety of aquatic team sports. Students receive certification for the Learn to Swim levels they achieve up to level 7. Enrollment is limited to 25 students. When available students will get the opportunity to pursue activities such as snorkeling, scuba activities, and/or underwater photography.

AQUATICS 1 LIFEGUARD TRAINING

463030			Grades 10 - 12
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Prerequisite: 15 years of age by the end of the course.

Course materials cost approximately \$50.

This course consists of four major components: Basic Water Rescue, CPR/AED for the Professional Rescuer, Standard First Aid, and Lifeguard Training. Upon certification students will possess the skills and qualifications necessary to apply for lifeguard occupations. This course also serves as a pathway to a career in Health Services.

Students who pass written tests with 80% mastery and successfully pass all water-skill tests involving swimming speed, leg strength, and lifesaving techniques, will receive American Red Cross Certificates in Lifeguard Training, CPR-PR, and First Aid.

AQUATICS 2 WATER SAFETY INSTRUCTOR TRAINING (WSI)

463040			Grades 11 - 12
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Prerequisite: must be 16 before the end of the course and have a Current Lifeguard Training Certificate.

Course materials cost approximately \$50.

Aquatics 2 is designed for students interested in teaching the American Red Cross progressive swim levels. This course certifies the student to teach Longfellow's Whale Tales, Parent and Child Aquatics, Basic Water Rescue, and the six levels of the Learn to Swim program. It will re-certify basic level Lifeguard Training, First Aid, and CPR-PR. The swimming components conform to the American Red Cross standards. Upon certification students will be able to teach American Red Cross swimming lessons to adults and children. If possible, schools provide the students with practice teaching experiences.

AQUATICS 3 WSI/LIFEGUARD MANAGEMENT TRAINING

463080			Grades 11 - 12
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Prerequisite: Current Lifeguard certificate, WSI certificate, or Aquatics 2.

Course materials cost approximately \$50.

This course will recertify all Lifeguard certifications and CPR/AED. One goal of this course is to provide swimming instruction for feeder elementary and middle school students, while enhancing hands-on experience for high school instructors. During the course students will get the opportunity to apply WSI instructor skills to a variety of swimmers such as pre-school children, elementary students, students with learning disabilities, and other classmates. As a result of successful completion of the course the students will be certified in Lifeguard Management.

This course counts as Student Service Learning.

AQUATICS 4 INDEPENDENT STUDY

463090 Grades 11 - 12
Prerequisite: Current Lifeguard certificate, WSI certificate, or Aquatics 2.

The Aquatics 4 course provides students an opportunity to design and participate in an individualized program. This course will recertify all Lifeguard certificates and CPR/AED. Students will get hands on experience in Lifeguarding. Students will also assist in the training of new Lifeguard candidates enrolled in other Aquatic courses.

This course counts as Student Service Learning.

ATHLETIC COACHING, INTRODUCTION TO

461000 Grades 10 - 12

This course explores the profession of athletic coaching. The course focuses on leadership skills, coaching philosophy and theories, the care and treatment of sports injuries, the dangers of performance-enhancing drugs and the benefits of healthy nutrition. The course may also include field trips to local colleges, interviews with successful high school and college coaches, along with opportunities to volunteer with local youth sports leagues.

ATHLETIC COACHING 2

461001 Grades 10 - 12
Prerequisite: ATHLETIC COACHING, INTRODUCTION TO

This course allows students to practice and apply knowledge and skills learned from Introduction to Athletic Coaching. Students will have an increased opportunity to develop leadership skills and coaching philosophy while working with peers or student groups. The course may also include field trips to local colleges, interviews with successful high school and college coaches, along with opportunities to volunteer with local youth sports leagues.

FITNESS FOR LIFE

461030 0.5 credit Grade 9

Fitness for Life must be successfully completed as a one-half credit Maryland State Department of Education graduation requirement for all 9th-grade students. Fitness for Life is designed to provide concepts, principles, and values for healthy life-style decision making. Students apply this information to personal physical fitness and the development of lifelong fitness pursuits. Students evaluate their physical fitness levels, as well as develop and engage in a personal fitness program.

HEALTH

461020 0.5 credit Grade 9

This course must be successfully completed as a one-half credit graduation requirement and is required for all 9th grade students. The Health Education curriculum complies with Maryland Public School law and the Maryland Health Education curricular framework. It includes units in drug education, mental health, nutrition and fitness, and consumer education. In addition, units in family life and human sexuality, as well as HIV/AIDS education, are taught. These units require parental permission. Alternative units are provided for students who do not have parental permission.

INDIVIDUAL AND DUAL SPORTS

463110	1	
463120	1A	0.5 credit
463210	1B	0.5 credit
465110	2	
465140	3	
465400	4	
465500	5	
465600	6	

Prerequisite: Prior level of Individual and Dual Sports or permission of instructor.

This course provides the opportunity to refine, expand, and improve specific sports skills, game strategies, and personal fitness plans. Students organize and develop round-robin, single and double elimination tournaments; learn game rules as they relate to game officiating and management; officiate games and be evaluated as athletic game officials on both written and practical tests; investigate the costs, logistics, and feasibility of pursuing lifelong fitness through individual and dual sports. Students select from the following activities: tennis, badminton, table tennis, golf, two-person volleyball, and archery, and engage in selected activities for nine weeks.

PERSONAL FITNESS

463330	1	
463430	1A	0.5 credit
463530	1B	0.5 credit
464230	2	
464240	3	Independent Study

Recommended prerequisite for levels 2 and 3: Prior level of Personal Fitness or permission of instructor.

This course provides the opportunity to improve and maintain healthy levels of fitness through individualized activities that include: fitness walking, jogging, cycling, aerobic dancing, slimnastics exercises, fitness swimming (with available facilities), exergaming, and exercise room training (stationary bikes, treadmills, ellipticals, rowing machines, step-up trainers, and weight equipment). Students focus on weight management and stress reduction programs as they relate to physical activity and incorporation into personal fitness plans and lifelong fitness.

SPORTS MEDICINE

467010 Grades 10 - 12

This course provides students with the opportunity to study the evaluation, care and treatment of athletic injuries. The course integrates science and physical education, with a focus on potential career considerations.

STRENGTH TRAINING/FITNESS

462100	1	
462400	1A	0.5 credit
462500	1B	0.5 credit
463130	2	
464130	3	
464140	4	Independent Study
464450	5	Independent Study
464460	6	Independent Study

Prerequisite: Prior level of Strength Training and Fitness or permission of instructor.

A fee may be charged to help cover the cost of materials and equipment.

This course provides an opportunity to further engage in activities designed to develop strength, muscular endurance, cardiovascular efficiency, flexibility, and speed and agility. Students are exposed to more advanced training programs that include competitive aspects of strength training and learn to develop individualized training programs and evaluate fitness according to the Frederick County Strength Training and Fitness Tests. Students may be charged a fee to help cover the cost of materials and equipment.

TEAM SPORTS (GENERAL)

462110	1	
462210	1A	0.5 credit
462310	1B	0.5 credit
462220	2	
462250	3	
462280	4	Independent Study
462290	5	
462360	6	
462370	7	

Prerequisite: Prior level of Team Sports or permission of instructor.

Courses provide the opportunity to refine, expand, and improve specific sports skills, game strategies, and personal fitness plans. Students organize and develop round-robin, single and double-elimination tournaments. Students learn game rules as they relate to officiating and management. Students officiate games and are evaluated as athletic game officials on both written and practical tests. They investigate the costs, logistics, and feasibility of pursuing lifelong fitness through team sports. Activities may include: football, soccer, volleyball, basketball, softball, lacrosse, floor hockey, field hockey, and baseball.

TEAM SPORTS (SPECIALIZED)

466110	Team Sports Baseball/Softball 1
466120	Team Sports Baseball/Softball 2
466130	Team Sports Baseball/Softball 3
466131	Team Sports Baseball/Softball 4
466132	Team Sports Baseball/Softball 5
466133	Team Sports Baseball/Softball 6
466140	Team Sports Basketball 1
466150	Team Sports Basketball 2
466160	Team Sports Basketball 3
466161	Team Sports Basketball 4
466162	Team Sports Basketball 5
466163	Team Sports Basketball 6

466170	Team Sports Field Hockey 1
466180	Team Sports Field Hockey 2
466190	Team Sports Field Hockey 3
466191	Team Sports Field Hockey 4
466192	Team Sports Field Hockey 5
466193	Team Sports Field Hockey 6
466200	Team Sports Football 1
466210	Team Sports Football 2
466220	Team Sports Football 3
466221	Team Sports Football 4
466222	Team Sports Football 5
466223	Team Sports Football 6
466230	Team Sports Lacrosse 1
466240	Team Sports Lacrosse 2
466250	Team Sports Lacrosse 3
466251	Team Sports Lacrosse 4
466252	Team Sports Lacrosse 5
466253	Team Sports Lacrosse 6
466260	Team Sports Soccer 1
466270	Team Sports Soccer 2
466280	Team Sports Soccer 3
466281	Team Sports Soccer 4
466282	Team Sports Soccer 5
466283	Team Sports Soccer 6
466290	Team Sports Volleyball 1
466300	Team Sports Volleyball 2
466310	Team Sports Volleyball 3
466311	Team Sports Volleyball 4
466312	Team Sports Volleyball 5
466313	Team Sports Volleyball 6

Prerequisite: Prior level of Team Sports or permission of instructor.

Courses provide all students the opportunity to focus, refine, and improve specific sports skills, fundamentals and game strategies, as well as develop strength and fitness programs as they relate to a healthy lifestyle and athletic performance.

UNIFIED PHYSICAL ACTIVITY

461040	1	Grades 9-12
461042	2	
461043	3	
461044	4	

This course is designed to provide students with and without disabilities the opportunity to experience all forms of sports activities in a modified, recreational, and less competitive environment. Students are instructed in specific modified sports and games activities that lead to the improved development of peer relationships, and transition to lifetime recreational activities for maintaining a healthy and physically active lifestyle.

MATHEMATICS

The study of mathematics helps develop the skills, knowledge, and abstract reasoning needed in a wide range of academic and career choices. Algebra and Geometry build the foundation needed for further study or careers. Colleges recommend that students study mathematics all four years of high school; many colleges require students to take a placement test requiring knowledge of Algebra 2.

Many selective colleges across the United States have begun to require more rigorous preparation in high school mathematics for admission. For example, students applying to colleges and universities in the University System of Maryland are required to take a mathematics course in their senior year of high school and to have completed Algebra I, Geometry, Algebra II, and one additional course in rigorous mathematics beyond Algebra II.

All courses are one credit unless otherwise indicated.

MATH COURSE SEQUENCE SAMPLES

Grade 8	Grade 9	Grade 10	Grade 11	Grade 12
Algebra 1*	Geometry	Algebra 2	Pre-Calculus with Trigonometry	AP Calculus I AP Calculus II <i>Dual Enrollment Options</i>
Algebra 1*	Geometry	Algebra 2	Statistics & Probability	Pre-Calculus with Trigonometry, and AP Statistics <i>Dual Enrollment Options</i>
Algebra 1*	Geometry Algebra 2	Pre-Calculus with Trigonometry	AP Calculus I AP Calculus II	Statistics & Probability AP Statistics <i>Dual Enrollment Options</i>
Grade 8 Math	Algebra 1*	Geometry	Algebra 2	Pre-Calculus with Trigonometry <i>Dual Enrollment Options</i>
Grade 8 Math	Algebra 1* Geometry	Algebra 2	Pre-Calculus with Trigonometry	AP Calculus I AP Calculus II <i>Dual Enrollment Options</i>

In addition to the mathematics course listed in this chart, the following courses would also count as a mathematics credit: AP Computer Science Principles, AP Computer Science, and Computer Science IB.

WAIVER FROM FREDERICK COMMUNITY COLLEGE PLACEMENT TESTING (SEE STEP 6 OF THE PLANNING GUIDE)

**Courses that are asterisked culminate with a state-mandated assessment.*

ADVANCED ALGEBRA WITH TRIGONOMETRY

233221

Prerequisite: Algebra 2.

This course is recommended for students who need additional preparation before enrolling in Pre-Calculus with Trigonometry. Topics include mathematical modeling with functions (linear, polynomial, exponential, logarithmic, and periodic), discrete mathematics (matrices, paths, circuits, and probability), and data analysis with prediction. Trigonometric topics include relationships, formulas, and identities.

ALGEBRA 1 ACQUISITION (TWO SEMESTERS)

23130C*

Algebra 1 Acquisition is a course that is designed to help students who need academic supports in mathematics to succeed in Algebra 1. The Algebra 1 Acquisition course provides a combination of a challenging curriculum, with cohesive, targeted supports, and interventions. This course formalizes and extends the mathematics that students learned in the middle grades. Students will focus on content within the domains of Quantities, The Real Number System, Seeing Structure in Expressions, Arithmetic with Polynomials & Rational

Expressions, Creating Equations, Reasoning with Equations & Inequalities, Building Functions, Interpreting Functions, Linear/Quadratic & Exponential Functions, and Interpreting Categorical & Quantitative Data.

*Course culminates with a state-mandated assessment.

ALGEBRA 1 – HONORS (SINGLE SEMESTER)

23120C*

This course formalizes and extends the mathematics that students learned in the middle grades. Each critical area deepens and extends understanding of linear and exponential relationships by contrasting them with each other and by applying linear models to data that exhibit a linear trend, and students engage in methods for analyzing, solving, and using quadratic functions. These critical areas include: analyze and explain the process of solving an equation; develop fluency writing, interpreting, and translating between various forms of linear equations and inequalities; using the laws of exponents to create and solve simple exponential equations; learn function notation; explore many examples of functions, including sequences; interpret functions given graphically, numerically, symbolically, and verbally, and translate between representations; build on previous understanding of integer exponents to consider exponential functions; interpret arithmetic sequences as linear functions and geometric sequences as exponential functions; use graphical representations and knowledge of the context to make judgments about the appropriateness of linear models; create and solve equations, inequalities, and systems of equations involving quadratic expressions; compare the key characteristics of quadratic functions to those of linear and exponential functions; identify the real solutions of a quadratic equation as the zeros of a related quadratic function.

*Course culminates with a state-mandated assessment.

ALGEBRA 1 (A AND B) (TWO SEMESTERS)

23127C A

23128C* B

This Algebra 1 course has two required parts: Part A and Part B. Students must register for both courses to be taken consecutively during the fall and spring semesters of the school year to complete all of the objectives for Algebra 1.

See Algebra 1 (above) for course description.

*Course culminates with a state-mandated assessment.

ALGEBRA 2

23320C

23211C Honors

Prerequisite: Algebra 1 and Geometry

Prerequisite for Honors: Algebra 1 Honors and Geometry or recommendation from teacher.

Building on their work with linear, quadratic, and exponential functions, students extend their repertoire of functions to include polynomial, rational, and radical functions. Students work to model situations and to solve equations, including solving quadratic equations over the set of complex numbers and exponential equations using the properties of logarithms. Students develop the structural similarities between the system

of polynomials and the system of integers. Students connect multiplication and division of polynomials with multiplication of multi-digit integers and with long division of integers. Students identify zeros of polynomials; including complex zeros of quadratic polynomials. A central theme of this unit is that the arithmetic of rational expressions is governed by the same rules as the arithmetic of rational numbers. Students will use the coordinate plane to extend trigonometry to model periodic phenomena. Students will work with exponential functions to include solving exponential equations with logarithms. Students will identify different ways of collecting data—including sample surveys, experiments, and simulations—and the role that randomness and careful design play in the conclusions that can be drawn.

CALCULUS I, A & B

234181 Advanced Placement A

234191 Advanced Placement B

Prerequisite: Pre-Calculus with Trigonometry.

This intensive calculus study has two parts: AP Calculus I (A) and AP Calculus I (B). Students must register for both courses to be taken consecutively during the fall and spring semesters of the school year to complete all of the AP objectives by May. Completion of both parts (A and B) will adequately prepare students for the AP Calculus AB test. Topics in part A include: the Cartesian plane and functions, limits and continuity, and differentiation with curve sketching. Topics in part B include: integration and transcendental functions (logarithmic, exponential, and trigonometric).

CALCULUS, I & II

234101 I Advanced Placement (AB)

234121 II Advanced Placement (BC)

Prerequisite: Pre-Calculus with Trigonometry.

AP Calculus I (AB) with AP Calculus II (BC) is a yearlong study that has two parts, AB taken in the fall and BC taken in the spring. It prepares students for either the AP Calculus AB test or the more challenging AP Calculus BC test that is taken in May.

Topics in AP Calculus I (AB) include the Cartesian plane and functions, limits and continuity, differentiation with curve sketching, integration, transcendental functions (logarithmic, exponential, and trigonometric), and techniques of integration. Completion of this course will adequately prepares students for the AP Calculus AB test.

Topics in AP Calculus II (BC) continues the study of limits, derivatives, and integration with additional study in functions, polar coordinates, parametric equations and vectors in the plane, infinite series, and differential equations. With careful review of calculus topics from the first course, completion of this course will adequately prepares students for the AP Calculus BC test.

CALCULUS III

234131

Prerequisite: AP Calculus II (BC).

This course is a third year of calculus that continues the study of limits, derivatives, and integration with additional study in differential equations.

CONTEMPORARY MATHEMATICS

233230

Prerequisite: Both Algebra 1 and Geometry.

Contemporary Mathematics is an elective for 11th and 12th grade students. The course focuses on money management skills for individuals and families, the basics of investing money, how to use technology to manage finances and to make projections.

CONTEMPORARY MATHEMATICS WITH MATH MODULES

233231

Prerequisite: Both Algebra 1 and Geometry.

Contemporary Mathematics with Math Modules is a transitional mathematics course for students who not College and Career Ready for mathematics by the end of 11th grade. The first half of the course provides instruction in algebraic skills necessary for successful completion of mathematics college entrance exams. The second half of the course focuses on money management skills for individuals and families, the basics of investing money, how to use technology to manage finances and to make projections.

GEOMETRY

23220C

23111C Honors

Prerequisite: Algebra 1

Prerequisite for Honors: Algebra 1 or recommendation from teacher

Geometry with Reasoning teaches basic geometric concepts as well as logic and reasoning skills through the use of deductive and inductive reasoning. Topics include deductive/inductive reasoning, lines and angles, basic postulates and theorems, congruent triangles, transformations, inequalities, parallel lines, coordinate geometry, quadrilaterals, area, similarity, right triangles, circles, regular polygons and the circle, and geometric solids. In addition, Geometry with Reasoning (Honors) includes advanced topics such as transformational geometry.

INTERMEDIATE TRANSITIONAL ALGEBRA

231500

Prerequisite: Both Algebra 1 and Geometry

This course is intended for students who wish to continue their study of higher-level mathematics and it is intended to prepare students to take the Algebra 2 course. Topics include the learning and use of function notation including sequences; interpret functions given graphically, numerically, symbolically, and verbally; build on previous understanding of integer exponents to consider exponential functions; create and solve equations, inequalities, and systems of equations involving quadratic expressions; compare the key characteristics of quadratic functions to those of linear and exponential functions; identify the real solutions of a quadratic equation as the zeros of a related quadratic function. Students may extend their repertoire of functions to include polynomial, rational, and radical functions.

MATH METHODS, IB

230101 SL (one year)

Grades 11 and/or 12

Available only at Urbana High School.

Prerequisite: Honors Algebra 2.

Recommended prerequisite: Probability and Statistics.

This course is appropriate for students who plan to study subjects with mathematical content in fields as diverse as the sciences, social sciences, humanities, or in programs, such as business administration. It covers a broad range of topics typical of those required in the HL-IB Mathematics course but without the depth of that program. Students are expected to have knowledge of basic concepts and the ability to apply mathematical techniques correctly. Topics include: finite and infinite series, exponents and logarithms, transformation of functions, circular and trigonometric functions, vector geometry, statistics and probability, and calculus topics of limits, application of derivatives, kinematical problems, integration and area under curves.

MATHEMATICAL STUDIES, IB

230501 SL

Grades 11 and/or 12

Available only at Urbana High School.

This course is offered only at the standard level. It is designed to provide a realistic mathematics course for students with varied backgrounds and abilities who may not study mathematics in college. The course develops skills needed to cope with the mathematical demands of a technological society with an emphasis on the application of mathematics to real life, everyday situations. Before entering the course, students should have a good understanding of basic arithmetic, algebra, geometry, and trigonometry. The Mathematical Studies core consists of study in six topics: number and algebra, sets and logic, geometry and trigonometry, statistics and probability, functions, and financial mathematics. Students must also study one of the three optional topics: matrices and graph theory, further statistics and probability, introductory differential calculus. Two written examination papers, externally assessed, and a project consisting of an individual piece of work involving the collection and/or generation of data, and the analysis and evaluation of that data, internally assessed and externally moderated by IBO, make up the evaluation for the course.

MATHEMATICS, APPLICATIONS AND INTERPRETATIONS, IB

230701 SL

Available only at Urbana High School.

Prerequisites: Algebra 2H required

This course is designed for students who enjoy describing the real world and solving practical problems using mathematics, those who are interested in harnessing the power of technology alongside exploring mathematical models and enjoy the more practical side of mathematics. It is intended to compliment future studies in the humanities and has a greater focus on topics in probability and statistics.

MATHEMATICS, APPLICATIONS AND INTERPRETATIONS, IB

230702 HL

*Available only at Urbana High School.**Prerequisites: Precalculus required, Statistics and Probability strongly recommended*

This HL course includes all the topics of the SL, but with more depth across all areas including calculus. It is recommended for students who wish to pursue studies in areas such as economics or biology.

MATHEMATICS, ANALYSIS AND APPROACHES, IB

230801 HL

*Available only at Urbana High School.**Prerequisites: Precalculus required, AP calculus preferred, teacher recommendation*

This course is intended for students who wish to pursue studies in mathematics at university or subjects that have a large mathematical content such as engineering and physics. It is for students who enjoy developing mathematical arguments, problem solving and exploring real and abstract applications, with and without technology.

MATHEMATICS, IB

230201 HL (two year program, 1st year) Grades 11 and/or 12

230301 HL (two year program, 2nd year) Grades 11 and/or 12

*Available only at Urbana High School.**Prerequisite: Pre-calculus with Trigonometry Honors.**Recommended prerequisite: Probability and Statistics.*

Students who love math and have a good foundation and competent range of technical and analytical skills, who expect to include mathematics as part of their college studies, should sign up for this class. Topics include finite functions, circular and trigonometric functions, cumulative frequency curves, measures of central tendency, measures of dispersion, binomial distributions, normal distributions, two and three-dimensional vectors, and matrices and transformations. In addition, some calculus topics include limits, differentiation for analysis and approximation, application of derivatives, implicit differentiation, derivatives of inverse trigonometric functions, kinematical problems, integration by parts and substitution, area under curves, separation of variables, and convergence and divergence of sequences and series.

PRE-CALCULUS WITH TRIGONOMETRY

233111 Honors

Prerequisite: Algebra 2 (Honors) or Advanced Algebra with Trigonometry.

This course encompasses trigonometry and advanced algebra. Topics include sequences and series, coordinate geometry of points, lines, and conic sections, inequalities and their graphs, functions, trigonometry circle and triangle, exponents and logarithms, graphs of functions, techniques of equation solving, trigonometric formulas, complex numbers, advanced topics in curve sketching, polar graphing, and limits.

SAT PREPARATION – ENGLISH AND MATH

561100 0.5 credit

Grades 11-12

This course, offered at comprehensive high schools and the Frederick County Virtual School, prepares the student with the analytical problem solving and integrative thinking skills assessed on the SAT test, a test many students take as part of the college application process. Included are vocabulary comprehension strategies, written communication skills and processes, critical reading skills, and Algebra, Geometry, and Algebra 2 problem solving.

SKILLS ENRICHMENT – MATH

562003 Experience 1 1 credit

562007 Experience 2 1 credit

Skills Enrichment High School - Math: is an intervention course that provides instruction to students who require additional preparation prior to enrollment in Algebra 1. Students enrolled in this course would participate in mathematics interventions in consultation with FCPS intervention specialists.

STATISTICS AND PROBABILITY

232211 Honors

Prerequisite: Algebra 2.

Statistics and Probability teaches statistical decision making using real data and experiments. The course includes descriptive and inferential statistics. Completion of this course prepares students for further study in AP Statistics.

STATISTICS, ADVANCED PLACEMENT

232281

Prerequisite: Statistics and Probability.

AP Statistics further develops important statistical concepts and skills in four main areas: exploring data, planning a study, probability as it relates to distribution of data, and inferential reasoning. The use of a statistical graphing calculator is required. Completion of this course prepares students for the AP Statistics test.

SCIENCE

The goal for a quality science education (*Taking Science to School*, National Research Council, 2007) is to develop student proficiency in:

- Knowing, using, and interpreting scientific explanations of the natural world (disciplinary core ideas and crosscutting concepts)
- Generating and evaluating scientific evidence and explanations (practices)
- Participating productively in scientific practices and discourse (practices)
- Understanding the nature and development of scientific knowledge (practices and crosscutting concepts)

High school science classes actively involve students in learning science concepts using the processes and tools of science to explore their scientific interests. To obtain a Maryland state diploma, 3 credits in laboratory science are required. Science instruction must include instruction in Physical and Earth Space Science, Life Science, and Chemical Science curricula aligned to the Maryland State Science Standards and prepare students for the Maryland Integrated Science Assessment (MISA) which is a state mandated graduation assessment. Students should take one course from each of the following content areas:

Content Area (must take 1 course in each area)	Course Choices		
Physical & Earth Space Sciences	Physics of Earth and Space	Algebra Based Physics	
Life Science	Biology		
Chemical Sciences	Chemistry	Fundamentals of Chemistry	Environmental Science

All courses are one credit unless otherwise noted. The MISA will be administered after the completion of Biology or by the end of the 10th grade, whichever comes first.

It is recommended that all ninth-grade students take either Physics of Earth and Space or Algebra-Based Physics as their first high school science course. Biology and Chemistry/Fundamentals of Chemistry or Environmental Science are recommended as second and third science courses.

SCIENCE COURSE SEQUENCE SAMPLES			
Grade 9	Grade 10	Grade 11	Grade 12
Algebra-Based Physics*	Biology Honors* and Chemistry 1*	AP/IB electives	AP/IB electives <i>Dual Enrollment Options</i>
Algebra-Based Physics*	Biology Honors*	Chemistry 1*	AP/IB electives <i>Dual Enrollment Options</i>
Physics of Earth and Space Honors*	Biology Honors*	Chemistry 1*	AP/IB electives <i>Dual Enrollment Options</i>
Physics of Earth and Space*	Biology*	Fundamentals of Chemistry*	Science electives <i>Dual Enrollment Options</i>
Physics of Earth and Space*	Biology*	Environmental Science*	Science electives <i>Dual Enrollment Options</i>

**Courses that are asterisked contain standards that will be assessed with a culminating state-mandated assessment.*

ANATOMY AND PHYSIOLOGY

190312

Grades 11 - 12

Prerequisites: completion of 3 MSSS aligned laboratory courses

Anatomy & Physiology is an elective course that integrates classwork, dissections and other laboratory experiences to provide students an opportunity to explore the relationship between structure and function in the human body. The course covers basic concepts of anatomy, physiology, genetics, diseases, disorders, immunology, aging, and/or related topics. It incorporates case studies, group work, dissections, labs and technology applications.

BIOLOGY

192211*

Grade 10

191111* Honors

Grade 10

Prerequisite: *Physics of Earth and Space or Algebra-Based Physics.*

Biology is a required science course. The essential curriculum is aligned with the Maryland State Core Learning Goals for biology and state mandates for environmental education and drug education. Service Learning requirements for graduation are also integrated into this course.

Units of study include: structure and function of biological molecules, structure and function of cells, inheritance of traits, mechanisms of evolutionary change, and interdependence in the biosphere. Laboratory experiences are an integral part of the curriculum and integrate skills and processes into the units of study. All students are expected to complete formal laboratory reports to facilitate understandings of experimental design and scientific problem solving.

Biology Honors includes an in-depth investigation of biological topics emphasizing abstract content that enriches the essential curriculum. Extensive independent work, self-discipline and commitment to meet rigorous expectations and timelines are required.

*Course contains standards assessed by state-mandated assessment.

BIOLOGY, ADVANCED PLACEMENT

193111 AP Biology 1

Grades 11 - 12

194111 AP Biology 2

Grades 11 - 12

Prerequisites for AP Biology 1: *Biology, Chemistry 1.***Prerequisites for AP Biology 2:** *AP Biology 1.*

Designed to be the equivalent of introductory college biology, students may earn college credit by examination. This course provides students with the conceptual framework, knowledge, and analytical skills necessary to deal critically with the science of biology. Both short and long-term laboratory investigations are an integral part of the curriculum.

AP Biology topics center around four big ideas: evolution, cellular processes, genetics and information transfer, and interactions of biological systems.

Although both AP Biology 1 and AP Biology 2 must be taken to complete the course content necessary to prepare for the AP examination, AP Biology 1 may be taken without continuing through AP Biology 2.

BIOLOGY, IB-HL

190201 (two-year program, 1st year)

Grades 11 and/or 12

190301 (two-year program, 2nd year)

Grades 11 and/or 12

Available only at Urbana High School.**Prerequisites:** *Chemistry 1, Honors Biology.*

This is a two-year, advanced higher-level IB Biology course in which students can take a comprehensive exam for college credit. Biologists attempt to understand the living world at all levels from the micro to the macro using many different approaches and techniques. While the scientific method may take on a wide variety of forms, it is the emphasis on a practical approach through experimental work that characterizes the sciences. Teachers provide students with opportunities to design investigations, collect data, develop manipulative skills, analyse results, collaborate with peers and evaluate and communicate their findings. Core topics within the IB Biology course include: Cell biology, Molecular biology, Genetics, Ecology, Evolution and biodiversity, Human physiology, as well as Nucleic acids, Metabolism/cell respiration/photosynthesis, Plant biology, Genetics and evolution and Animal physiology. One additional topic is selected for study each year from the following list: Neurobiology and behavior, Biotechnology and bioinformatics, Ecology and conservation, and Human physiology. An additional 45 hours of instruction supports in-depth investigations based on students' interests and abilities.

<https://www.ibo.org/globalassets/publications/recognition/biologyhl2016englishw.pdf>

BIOLOGY, IB-SL

190101 (one year)*

Grades 11 and/or 12

Available only at Urbana High School.**Prerequisite:** *Chemistry 1.*

The standard-level course is taught as the introductory Biology experience for college-bound, non-science majors. Biologists attempt to understand the living world at all levels from the micro to the macro using many different approaches and techniques. While the scientific method may take on a wide variety of forms, it is the emphasis on a practical approach through experimental work that characterizes the sciences. Teachers provide students with opportunities to design investigations, collect data, develop manipulative skills, analyse results, collaborate with peers and evaluate and communicate their findings. Core topics within the IB Biology course include: Cell biology, Molecular biology, Genetics, Ecology, Evolution and biodiversity, Human physiology, as well as Nucleic acids, Metabolism/cell respiration/photosynthesis, Plant biology, Genetics and evolution and Animal physiology. One additional topic is selected for study each year from the following list: Neurobiology and behavior, Biotechnology and bioinformatics, Ecology and conservation, and Human physiology. An additional 30 hours of instruction supports in-depth investigations based on student interests and abilities.

*Course contains standards assessed by state-mandated assessment.

<https://www.ibo.org/globalassets/publications/recognition/biologysl2016englishw.pdf>

CHEMISTRY 1 HONORS

193001* Grades 10 - 12

Prerequisites: Algebra 1 and Introduction to Chemistry/Physics, Algebra-Based Physics or Physics of Earth and Space.

Chemistry 1 meets the Maryland State Content Standards for Chemistry and is for college-bound students. The essential curriculum includes principal chemistry concepts such as physical and chemical properties of matter, energy, chemical nomenclature, mole relationships, chemical equations, stoichiometry, gas laws, atomic theory, nuclear chemistry, periodicity, bonding, solutions, and acid-base theory. Students are expected to use algebra and graphing techniques in problem-solving applications. Critical thinking and communication skills are utilized in student-directed laboratory and classroom experiences. Laboratory experiences are an integral part of this curriculum. Students prepare formal laboratory reports in order to promote a deeper understanding of concepts.

Chemistry 1 includes in-depth investigations of topics with an emphasis on abstract material. Extensive independent work, self-discipline and commitment to meet rigorous expectations and time lines are required.

*Course contains standards assessed by state-mandated assessment.

CHEMISTRY 2

193101 Grades 11 - 12

Prerequisites: Chemistry 1, Algebra 2 (or permission of the science department).

This second-year laboratory-oriented course surveys advanced inorganic and fundamental organic chemistry. Topics may include solutions and solution stoichiometry, acid-base reactions, qualitative analysis, quantitative analysis, metathesis reactions, physical and chemical equilibria, oxidation-reduction chemistry, kinetics, gas laws and gas law stoichiometry, and organic chemistry. Students are expected to use mathematical problem solving, critical thinking, and communication skills in laboratory and classroom experiences.

CHEMISTRY, ADVANCED PLACEMENT

196051 AP Chemistry 1 Grades 11 - 12

196061 AP Chemistry 2 Grades 11 - 12

Prerequisites for AP Chemistry 1: Chemistry 1, Algebra 2.

Prerequisite for AP Chemistry 2: AP Chemistry 1.

Designed to be the equivalent of introductory college chemistry, students may earn college credit by examination. This course provides students with the conceptual framework, knowledge, and analytical skills necessary to deal critically with the science of chemistry. Both short- and long-term laboratory investigations are an integral part of the curriculum.

The AP Chemistry topic outline includes: atomic theory, quantum mechanics, atomic and molecular structures, chemical bonding, kinetics, thermodynamics, equilibrium, solution chemistry, periodicity, and the laws for phases of matter.

Although both AP Chemistry 1 and AP Chemistry 2 must be taken to complete the course content necessary to properly prepare for the AP examination, AP Chemistry 1 may be taken without continuing through AP Chemistry 2.

CHEMISTRY, FUNDAMENTALS OF

193211* Grades 10 - 12

Prerequisite: Physics of Earth and Space.

This course meets the Maryland State Content Standards for Chemistry. The essential curriculum includes physical and chemical properties of matter, energy, chemical nomenclature, chemical equations, basic gas laws, atomic theory, periodicity, bonding, solutions and acid-base theory. Students are expected to use critical thinking and communication skills in student-directed laboratory and classroom experiences. Laboratory experiences are an integral part of this curriculum. Students prepare laboratory reports in order to promote a deeper understanding of chemistry concepts.

*Course contains standards assessed by state-mandated assessment.

CHEMISTRY, IB

SL - 190401 (one year) Grades 11 and/or 12

HL - 190501 (two-year program, 1st year) Grades 11 and/or 12

HL - 190601 (two-year program, 2nd year) Grades 11 and/or 12

Available only at Urbana High School.

The core of the chemistry program consists of study in 11 topics: stoichiometry, atomic theory, periodicity, bonding, states of matter, energetics, kinetics, equilibrium, acids and bases, oxidation, organic chemistry, and analytical chemistry. Optional topics for both levels include materials, biochemistry, energy and medicinal chemistry.

<https://www.ibo.org/globalassets/publications/recognition/chemistrysl2016englishw.pdf>

<https://www.ibo.org/globalassets/publications/recognition/chemistryhl2016englishw.pdf>

CLIMATE OCEAN WEATHER SPACE SCIENCE

191243 Grades 11 - 12

Prerequisites: Completion of 3 laboratory courses.

Climate Ocean Weather Space Science is an upper level, project based elective in earth and space science. The course is designed to answer four guiding questions in earth and space science: 1) How do we know the age of the universe? 2) How do we know the earth is changing? 3) How do we know the age of the earth? 4) How do we determine the past, present and future climates of the earth? Students will answer these questions through a variety of projects, presentations and laboratory experiences.

EARTH SYSTEM SCIENCE RESEARCH HONORS

193901 Grades 11 - 12

Prerequisites: Completion of 3 laboratory courses.

Earth System Science (atmosphere, biosphere, cryosphere, geosphere, and hydrosphere) uses the latest information developed through current technologies in this research-based course. The system approach to this course helps students understand the complexity and interrelatedness of the Earth system.

Students utilize skills and processes from previous science courses to study the physical, chemical, and biological aspects

of the Earth system. Students spend over 50% of the course conducting independent research, producing a scientific presentation to communicate results. This course culminates with the presentation of research findings in a scientific poster session.

ENVIRONMENTAL SCIENCE, ADVANCED PLACEMENT

193511 Grades 11 - 12
Prerequisites: Biology, Chemistry 1 (or permission of the instructor).

Designed to be the equivalent of introductory college environmental science, students may earn college credit by examination. This course provides students with the conceptual framework, knowledge, and analytical skills necessary to deal critically with the sciences of the environment. Both short-and long-term laboratory investigations are an integral part of the curriculum.

AP Environmental Science provides a comprehensive study of ecological concepts and environmental issues and includes topics on scientific analysis, interdependence of Earth's systems, human population dynamics, renewable and nonrenewable resources, environmental air/water/soil quality, global changes and their consequences, environmental tradeoffs, and societal decision making.

This course is designed to be taken in place of the Environmental Science/Science and Societal Issues course (#192401).

ENVIRONMENTAL SCIENCE/ SCIENCE AND SOCIETAL ISSUES

192401* Grades 10 - 12
Prerequisites: Physics of Earth and Space/Algebra-Based Physics and Biology.

This laboratory course provides a comprehensive study of ecological concepts and environmental issues that extend the Maryland Environmental Education Bylaw. This course creates knowledgeable and environmentally active citizens. Instruction may include lecture, discussion, cooperative study, guest speakers, labs, field trips, and individual/group research. Major topics include ecological principles/ecosystems, water resources and quality, land management, air quality, natural resources and resource management, population dynamics, and Chesapeake Bay ecology along with key chemistry concepts.

*Course contains standards assessed by state-mandated assessment.

FORENSIC SCIENCE

195110 Grades 11-12
Prerequisite: Completion of 3 laboratory courses.

This Forensics Science course provides students with a laboratory based elective which unifies many science contents around the principles of preserving and examining evidence and developing leads in the context of civil or criminal proceedings. Forensics methodologies, identification of human as well as non-human evidence along with the proper collection and handling of evidence at the crime scene will be explored. This course is a transdisciplinary, STEM- focused science that pulls from content in biology, chemistry, physics and earth science in a real world setting in order to understand the science behind crime solving.

PHYSICS OF EARTH AND SPACE

191242* Grade 9
191241* Honors Grade 9

Prerequisite for Honors: Math Grade 8 Honors

This laboratory course is a foundational course integrating Physics and Earth/Space Science concepts as aligned to the Maryland State Science Standards. PES is a required course that will be assessed through the Maryland Integrated States Assessment. Course topics will span formation of the universe, formation of stars, momentum, conservation of energy, speed, motion, gravity, waves, electromagnetic spectrum, plate tectonics, Earth's interior, Newton's laws, magnetism, thermodynamics, human impact/biodiversity, water and carbon, as well as weather and climate. The course will integrate the science and engineering practices, disciplinary core ideas as well as cross-cutting concepts in a laboratory setting.

*Course contains standards assessed by state-mandated assessment.

PHYSICS 1 HONORS

194301 Grades 10 - 12
Prerequisite: Algebra 2.

Co-requisite: Pre-Calculus.

Physics 1 meets the Maryland State Content Standards for Physics. The essential curriculum mirrors the Algebra-Based Physics (191901) course and includes the study of: Kinematics, Dynamics, Conservation Laws, Thermodynamics, Waves, Electricity, Magnetism, Modern Physics, as well as Circular Motion. Unit topics are explored using both conceptual and mathematical analysis that require the use of graphing techniques, algebra, and trigonometry in problem-solving laboratory experiences integral to this course.

Successful completion of this course meets the science prerequisite for AP Physics enrollment.

Algebra Based Physics (194161) and Physics 1 Honors (194301) are equivalent courses; credit may not be awarded for both.

PHYSICS 2

194121 Grades 10 - 12
Prerequisite: Physics 1 or Algebra-Based Physics.

Co-requisite: Pre-Calculus.

This course is a single-semester, second-year course in physics, designed to extend the concepts of motion, force and energy covered in Physics 1, stressing mathematical analysis. This course is designed for college-bound students and parallels AP Physics 1. Laboratory experiences are an integral part of this curriculum and are required to promote deeper understanding of physics concepts.

PHYSICS, ALGEBRA-BASED HONORS

191901* Honors

Grade 9

Prerequisite: Math Grade 8 Honors (Algebra 1 recommended).

Algebra-Based Physics meets the Maryland State Content Standards for Physics. It is designed to meet the needs of 9th grade students demonstrating high achievement at the Honors level. The essential curriculum mirrors the Physics 1 (194301) course and includes the study of: Kinematics, Dynamics, Conservation Laws, Thermodynamics, Electromagnetism, Modern Physics, as well as Atomic Theory. Unit topics are explored using both conceptual and mathematical analysis that require the use of graphing techniques and algebra in problem-solving laboratory experiences integral to this course.

The course provides excellent preparation for students entering either Chemistry 1 or Biology. Successful completion of this course meets the science prerequisite for AP Physics enrollment.

*Course contains standards assessed by state-mandated assessment.

Algebra Based Physics (194161) and Physics 1 Honors (194301) are equivalent courses; credit may not be awarded for both.

PHYSICS 1: ALGEBRA-BASED, ADVANCED PLACEMENT

194161

Grades 11 - 12

Prerequisite: Physics 1 or Algebra-Based Physics.

Co-requisite: Pre-Calculus.

Designed to be the equivalent to a first-semester college course in algebra-based physics, students may earn college credit by examination. AP Physics 1 covers Newtonian mechanics (including rotational dynamics and angular momentum); work, energy, and power; mechanical waves and sound. It will also introduce electric circuits.

PHYSICS 2: ALGEBRA-BASED, ADVANCED PLACEMENT

194171

Grades 11 - 12

Prerequisite: Physics 1: Algebra-Based.

Co-requisite: Pre-Calculus.

Designated to be the equivalent to a second-semester college course in algebra-based physics, students may earn college credit by examination. The course covers fluid mechanics; thermodynamics; electricity and magnetism; optics, atomic and nuclear physics.

PHYSICS C, ADVANCED PLACEMENT 1: MECHANICS

194181

Grades 11 - 12

Prerequisite: Physics 1 or Algebra-Based Physics.

Co-requisite: Calculus.

This course is the equivalent of introductory college physics and students may earn college credit by examination. It provides the conceptual framework, knowledge, and analytical skills necessary to deal critically with the science of physics. Laboratory investigations are an integral part of the curriculum. Emphasis is given to developing complex and abstract problem-solving skills. Students are expected to use graphing calculators and computer software. Laboratory experiments employ more specialized and technical equipment than is used in basic Physics.

AP Physics C 1: Mechanics incorporates the first half of the calculus-based AP Physics C outline. The concepts of motion, force, and energy covered in Physics 1 are expanded to include rotational mechanics and calculus-based mathematical analysis. This course prepares students for the mechanics portion of the AP examination.

PHYSICS C, ADVANCED PLACEMENT 2: ELECTRICITY AND MAGNETISM

194191

Grades 11 - 12

Prerequisite: AP Physics C 1.

Co-requisite: Calculus.

This course incorporates the second half of the calculus-based AP Physics "C" outline. The concepts of electricity and magnetism covered in Physics 1 is extended to include analysis of alternating current circuits and semiconductor devices. Students prepare for the electricity and magnetism portion of the AP examination.

PHYSICS, IB

SL - 190701

HL - 190801

Available only at Urbana High School.

STANDARD LEVEL

The standard-level course is taught as the introductory Physics experience for college-bound students. Physics is the most fundamental of the experimental sciences as it seeks to explain the universe itself, from the very smallest particles to the vast distances between galaxies. Core topics in IB Physics include: Measurements and uncertainties, Mechanics, Thermal physics, Waves, Electricity and magnetism, Circular motion and gravitation, Atomic/nuclear/particle physics and Energy production. As well as one topic from the following list: Relativity, Engineering physics, Imaging, and Astrophysics. Within each of the topics students also explore impact of physics on society, the moral and ethical dilemmas, and the social, economic and environmental implications of the work of physicists.

HIGHER LEVEL

The higher level course is taught as the introductory Physics experience for college-bound students interested in a science major. Physics is the most fundamental of the experimental sciences as it seeks to explain the universe itself, from the very smallest particles to the vast distances between galaxies. Core topics in IB Physics include: Measurements and uncertainties, Mechanics, Thermal physics, Waves, Electricity and magnetism, Circular motion and gravitation, Atomic/nuclear/particle physics and Energy production. As well as one topic from the following list: Relativity, Engineering physics, Imaging, and Astrophysics. Within each of the topics students also explore impact of physics on society, the moral and ethical dilemmas, and the social, economic and environmental implications of the work of physicists.

<https://www.ibo.org/globalassets/publications/recognition/physicssl2016englishw.pdf>

PHYSICS WITH APPLICATIONS

194211

Grades 10 - 12

Co-requisite: Algebra 2.

Physics with Applications meets the Maryland State Core Learning Goals and Content Standards for Physics. This course covers the essential curriculum of Physics 1 (#194301) with an emphasis on application to everyday life and technology. The topics covered include hydrology, surveying, machines, model rockets, engines, oceanography, musical instruments, optical instruments, motors, electronics and computer circuits. Mathematical analysis is supplemented by descriptive explanation. This course is designed to complement, not replace Physics 1, or Algebra-Based Physics. A student may enroll in Physics with Applications before, concurrently, or after any other physics course.

SCIENCE MENTOR INTERN PROGRAM

197100	1	1 credit	Grade 12
197110	2	1 credit	Grade 12
197120	3	1 credit	Grade 12
197130	4	1 credit	Grade 12
197051	5	2 credits	Grade 12
197061	6	2 credits	Grade 12
197071	7	2 credits	Grade 12
197081	8	2 credits	Grade 12

Prerequisite: Approval of the science department as part of the application process.

This optional course involves students in specific, competitively awarded placements in actual scientific laboratory settings under the direction of private sector, university or government scientists. Students participate in real-life laboratory science with the opportunity to design and implement their own scientific research. Among participants in the course is the Werner H. Kirsten Student Intern Program coordinated through the facilities of the National Cancer Institute — Frederick, and USAMRIID, Ft. Detrick. Students earn one credit each term for a two-block experience, or two credits each term for a four-block experience. Students generally are granted an Administrative Attendance Waiver releasing them from classroom time for a portion of the school day.

SCIENCE RESEARCH

195011

Grades 11 - 12

This course provides students an opportunity to participate in a structured research experience at their home schools. Students pursue interdisciplinary, semester-long research projects under the direction of a teacher for guidance, mentoring, resources, and instruction.

Professional mentors from the local scientific, higher education, and industrial communities are sought to provide additional expertise and resources for specific student projects. Some aspects of the project research may be performed at local scientific labs where specialized equipment is available or at field sites in the surrounding communities.

Students initially receive training in scientific research skills including print and electronic research sources, statistical analysis and data interpretation, technology, experimental design and problem solving, and scientific writing.

SCIENCE RESEARCH A

195000

0.5 credit

Grades 11 - 12

Prerequisite: Junior or senior standing.

Science Research A is a nine-week course that provides students an opportunity to analyze how scientists communicate findings through professional writings and investigate the details of research design. Students receive training in scientific research skills including print and electronic research sources, statistical analysis and data interpretation, technology, experimental design, problem solving and scientific writing. Professionals from the local scientific, higher education, and industrial communities are sought as guest speakers to share real-world expertise about experimental design and communication of findings.

SCIENCE RESEARCH B

195100

0.5 credit

Grades 11 - 12

Prerequisite: Junior or senior standing.

This nine-week course provides students an opportunity to participate in a structured research experience at school. Students pursue research projects under the direction of a teacher for guidance, mentoring, resources, and instruction.

Professional mentors from the local scientific, higher education, and industrial communities may be sought to provide additional expertise and resources for specific student projects. Some aspects of the project research may be performed at local scientific laboratories where specialized equipment is available or at field sites in the surrounding communities.

SOCIAL STUDIES

Social studies courses draw upon the wealth of information and insight to be found in anthropology, history, psychology, economics, geography, political science, and sociology. The curriculum encourages students to apply the lessons of the past to the problems of the present, and to utilize investigation and problem-solving techniques to become vital participants in shaping and directing the future of our local, national, and world communities. To meet graduation requirements, all students must pass a course in United States history, government and world history.

In the 2019-2020 school year the high school sequence of courses will undergo a change. All incoming 9th grade students will follow a sequence example from the first chart below. All other students will follow the sequence in the second chart below. All courses are 1 credit unless otherwise noted.

SOCIAL STUDIES COURSE SEQUENCE SAMPLES For 9th and 10th Grade Students 2019-2020

Grade 9	Grade 10	Grade 11	Grade 12
American Studies 2 163011 or 163012 Honors	Government* 161201 or 161101 Honors	Modern World History 161211 or 161111 Honors	Any social studies elective including AP courses <i>Dual Enrollment Options</i>
AP United States History & AP United States History Seminar 164140 & 164141	AP US Government & Politics* 164052	AP World History: Modern & AP World History: Modern, Seminar (Semester 1 and 2) 165141 & 165140 AP World History 165151 (1 Semester)	Any social studies elective including AP courses <i>Dual Enrollment Options</i>

**Courses that are asterisked culminate with a state-mandated assessment.*

SOCIAL STUDIES COURSE SEQUENCE SAMPLES For 11th and 12th Grade Students 2019-2020

Grade 9 (SY 17/18)	Grade 10	Grade 11	Grade 12
Government*	Modern World History	American Studies 2	Any social studies elective including AP courses <i>Dual Enrollment Options</i>
Government* AP US Government & Politics*	AP World History AP World History Seminar	AP United States History 164101 (1 semester)	Any social studies elective including AP courses <i>Dual Enrollment Options</i>
Government*	AP World History 1 Semester	AP United States History & AP United States History Seminar 164140 & 164141	Any social studies elective including AP courses <i>Dual Enrollment Options</i>

**Courses that are asterisked culminate with a state-mandated assessment.*

9-11 TO PRESENT

168020

Grades 11 - 12

This course includes an examination of the history, religions, politics and cultures of the nations involved as well as an analysis of the event itself. Students will examine a broad cross section of time and events from the Russian invasion of Afghanistan in 1979 through to the current use of drones and the actions of the National Intelligence Agency. Students will have an opportunity to study the responses of nations around the globe to the changes that occurred before and after the September 11, 2001 attacks on the United States. Through an examination of these events and cultures, students will gain a deeper understanding of this pivotal event and develop recognition of the role it continues to play in contemporary political discourse and current events.

AMERICAN STUDIES 2

163011

Grade 9

163012 Honors

Grade 9

163211

Grade 11

163111 Honors

Grade 11

American Studies 2 continues the time line from American Studies 1, from the early post-Civil War industrial era to the present. The social, economic, and political issues that shaped 20th-century America are analyzed and their implication for the future is examined so individuals can make considered choices and take appropriate action as active citizens. Students develop and test generalizations about relevant social science concepts after acquiring a factual knowledge of our society's common culture. Topics include the United States as a world leader; civil rights and equity, protest and reform, criminal justice, government and the individual, environmental issues, war and peace, the issues of the 20th century, and contemporary issues that have defined the 21st century.

ANCIENT AND MEDIEVAL HISTORY

164190

Grades 10 - 12

This course includes the history of the world before 1450, exposes students to the rise and fall of ancient civilizations and helps them understand costs and benefits of empires. While examining the ancient and medieval worlds, students have the opportunity to explore why civilizations grow strong and then weaken. Lessons address the roles of technology in the military, the impact of religion and trade, the origins of the large religions in the modern world, how systems of law have developed, and how the roles of men, women, and children have changed over the years.

ANTEBELLUM AMERICA, THE CIVIL WAR AND RECONSTRUCTION

163261

Grades 11 - 12

This course offers students an opportunity to participate in an in-depth study of the Civil War and Reconstruction. While exploring the causes of this conflict, students examine social, political, and economic events that led to the increase of industrialization, the expansion of the republic, and the irreparable sectionalism driven by the presence of slavery. Lessons on the war years address major campaigns, political battles, technological developments, civilian involvement, and the changes experienced by African-Americans. The course concludes with a discussion of the successes and failures of the Reconstruction period.

DISCOVERING YOUR HISTORY: MARYLAND AND FREDERICK COUNTY

160100 Grades 10-12

This course is a survey of local history specifically focusing on Frederick County. The course traces the historical development of the Maryland Colony, State of Maryland and Frederick County from their founding through current times. The course addresses a variety of themes examined across time including: Agriculture, Industry/Business/Transportation, War, African Americans, Immigrants, and Education & Leisure. Students will explore the social economic and political factors that have contributed to the Frederick County they live in today.

ECONOMICS

164170 (0.5 credit)

Grades 11 - 12

This one-term course introduces the student to basic concepts and themes from the social science discipline of economics. The program includes introductory content related to the behavior of the national economy, the individual firm or enterprise, and the consumer. The objective is to provide a basic understanding of the subject while demonstrating practical applications.

ECONOMICS AND GEOGRAPHY

164070

Grades 11 - 12

This course introduces the student to basic concepts and themes from the social science disciplines of economics and geography. One term is dedicated to each discipline. The economics program includes introductory-level content related to the behavior of the national economy, the individual firm or enterprise, economic systems, and the consumer. This course also has Personal Financial Literacy content integrated throughout to meet the PFL graduation requirement. The geography content is organized around the five basic themes that are the foundation of most geographic studies: location, place, human/environment interactions, movement, and regions. Students demonstrate practical applications of the content of this course. The objective of the economics and geography course is to provide students with a basic understanding of these two subjects that are so important in shaping the modern world during this age of the global economy and cultural conflict.

*Meets Personal Financial Literacy requirement

EUROPEAN HISTORY, ADVANCED PLACEMENT

164111

Grades 11- 12

Prerequisite: Modern World History.

In AP European History students investigate significant events, individuals, developments, and processes in four historical periods from approximately 1450 to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing historical evidence; contextualization; comparison; causation; change and continuity over time; and argument development. The course also provides six themes that students explore throughout the course in order to make connections among historical developments in different times and places: interaction of Europe and the world; poverty and prosperity; objective knowledge and subjective visions; states and other institutions of power; individual and society; and national and European identity.

EUROPEAN HISTORY, ADVANCED PLACEMENT AND SEMINAR

164121	AP European History	Grades 11 - 12
164100	AP European History Seminar	Grades 11 - 12

These course numbers are used in schools that offer AP European History in conjunction with the Seminar course for two consecutive semesters.

EUROPEAN HISTORY, IB

SL - 160301 (one year)	Grades 11 and/or 12
HL - 160401 (two-year program, 1st year)	Grades 11 and/or 12
HL - 160501 (two-year program, 2nd year)	Grades 11 and/or 12

Offered only at Urbana High School.

Comparable to a college-level course in contemporary European history, this course provides students an opportunity for students to master and demonstrate “knowledge of the basic chronology, major events, and trends” in European history from 1900 to 2000. Students generalize and interpret, analyze and weigh evidence from diverse sources of information, discern broad trends, and master relevant details. Through an intensive study of specific topics, a deeper understanding of the global, political, social, economic, religious, military, artistic and intellectual forces in the historical process is obtained.

This course will substitute for the state graduation requirement of Modern World History. Work with your school counseling office to determine appropriate course sequence.

GEOGRAPHY

164180	(0.5 credit)	Grades 11 - 12
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This one-term course introduces the student to the basic concepts and themes from the social science discipline of geography. The content is organized around the five basic themes that are the foundation of most geographic studies: location, place, human/environment interactions, movement, and regions. The objective of the geography course is to provide students with a basic understanding of the subject while demonstrating practical applications of the content.

GOVERNMENT

161201*		Grade 9
161101*	Honors	Grade 9
563590	EL Government A (first semester)	
563890*	EL Government B (second semester)	

The course objectives are centered on the importance of civic education which is necessary to be an informed, involved citizen who understands and supports democratic principles, institutions, and processes. Political science classes are not taught in isolation but rather integrate examples from American history with concepts of government power and purpose, and examine the influence on today’s world. Topics studied include: the foundations of government, the Constitution, federalism, civil rights, civil liberties, political parties, policy making, and some comparison with other nations.

*Course culminates with a state-mandated assessment.

GOVERNMENT AND POLITICS: COMPARATIVE, ADVANCED PLACEMENT

164191	Grades 10 - 12
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This course introduces students to the rich diversity of political life outside the United States. The course uses a comparative approach to examine the political structures, policies, and political, economic, and social challenges among six selected countries: Great Britain, Mexico, Russia, Iran, China, and Nigeria. Additionally, students examine how different governments solve similar problems by comparing the effectiveness of approaches to many global issues.

GOVERNMENT AND POLITICS: UNITED STATES, ADVANCED PLACEMENT

164052*	Government with HSA (students who are taking the course to fulfill the required Government credit)	Grades 10 - 12
164051	Non-HSA Takers (students who are taking the course as an elective)	Grades 10 - 12

This course introduces students to key political ideas, institutions, policies, interactions, roles, and behaviors that characterize the political culture of the United States. The course examines politically significant concepts and themes, through which students learn to apply disciplinary reasoning, assess causes and consequences of political events, and interpret data to develop evidence-based arguments.

*Course culminates with a state-mandated assessment.

IB ECONOMICS

160902

IB Economics emphasizes the economic theories of micro-economics, which deal with economic variables affecting individuals, firms and markets, and the economic theories of macroeconomics, which deal with economic variables affecting countries, governments and societies. These economic theories are not to be studied in a vacuum—rather, they are to be applied to real-world issues. Prominent among these issues are fluctuations in economic activity, international trade, economic development and environmental sustainability. The aims of the DP economics course are to enable students to develop an understanding of microeconomic and macroeconomic theories and concepts and their real-world application, an appreciation of the impact on individuals and societies of economic interactions between nations, and an awareness of development issues facing nations as they undergo the process of change.

IB HISTORY

160301 and 160701	IB History 11
160901	IB History 12 - Americas
160501	IB History 12 – Europe

Offered only at Urbana High School

This college level course emphasizes the importance of encouraging students to think historically and to develop historical skills as well as gaining factual knowledge. It puts a premium on developing the skills of critical thinking, and on developing an understanding of multiple interpretations of history. In this

way, the course involves a challenging and demanding critical exploration of the past.

The junior year will substitute for the state graduation requirement of Modern World History covering world history topics from 1400 to the present. Students will study topics including, but not limited to, early modern states, development of industrialization, independence movements and the move to global war.

The senior year higher level course allows students to study the history of a specific geographic region in greater depth. Students may choose either from the study of the Americas or Europe.

HUMAN GEOGRAPHY, ADVANCED PLACEMENT

164161 Grades 10 - 12

The AP Human Geography course is equivalent to an introductory college-level course in human geography. The course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine socioeconomic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications. The curriculum reflects the goals of the National Geography Standards (2012).

LAW AND SOCIETY

164060 Grades 11 - 12

This course explores and examines controversial issues that affect our society. Students have an opportunity to express their viewpoints on all issues that influence their daily lives, and extensive student participation and involvement are expected.

Guest speakers from the legal community visit the classroom to give students a realistic look at the function of our judicial system. Involvement in role-playing activities provides students the chance to make decisions, problem solve, and think critically about their world.

LEADERSHIP

161010 (0.5 credit) Grades 10 - 12

This course will provide students an opportunity to develop a fundamental understanding of a variety of skills and processes that are part of establishing personal leadership qualities and recognizing the styles and paradigms that make effective leaders. Principles of leadership, parliamentary procedure, effective communication, including public speaking and the study of basic group dynamics, will be studied. This course culminates in the design and implementation of a group or individual community service project.

LEADERSHIP 1

161040 (1.0 credit) Grades 10 - 12
Currently offered at Oakdale High School.

This course provides a foundation for the study of Leadership based on five content units to include Principles of Leadership, Servant Leadership, Group Dynamics, Setting Goals, and Vision Development. In addition to the content units, two skills units will be integrated throughout the course: Effective Communication and Program Research, Planning and Imple-

mentation. The course culminates in the research, design and implementation of an individual community service project.

This is one of two courses required for the Oakdale High School Leadership Academy and consequent Phi Theta Kappa certification.

LEADERSHIP 2

161020 (1.0 credit) Grades 11 - 12
Currently offered at Oakdale High School.

Students will use a humanities case-based approach to explore the historical evolution of leadership styles and philosophies, investigate issues of ethical decision making and conflict resolution. Students will engage in goal setting and vision development activities and will explore the necessary structures involved in team building. The course will culminate in a project meant to empower others to be leaders. Completion of the Phi Theta Kappa program (Leadership 1 and 2) will meet the Personal Financial Literacy requirement.

MACROECONOMICS, ADVANCED PLACEMENT

164411 Grades 11 - 12

AP Macroeconomics is an introductory college-level course that focuses on the principles that apply to an economic system as a whole. The course places particular emphasis on the study of national income and price-level determination; it also develops students' familiarity with economic performance measures, the financial sector, stabilization policies, economic growth, and international economics. Students learn to use graphs, charts, and data to analyze, describe, and explain economic concepts.

MEDIA LITERACY: UNDERSTANDING THE INFORMATION AGE

164500 Grades 11 - 12

Students have access to information from television, videos, newspapers, books, magazines, radio, computer software, the Internet, and more. This course assists students in analyzing and using that information in order to be active consumers of media. Students examine the important role the media plays in their lives and in today's world by creating and evaluating media messages.

MICROECONOMICS, ADVANCED PLACEMENT

164311 Grades 11 - 12

AP Microeconomics is an introductory college-level course that focuses on the principles of economics that apply to the functions of individual economic decision-makers. The course also develops students' familiarity with the operation of product and factor markets, distributions of income, market failure, and the role of government in promoting greater efficiency and equity in the economy. Students learn to use graphs, charts, and data to analyze, describe, and explain economic concepts.

MODERN WORLD HISTORY

161211		Grade 11
161111	Honors	Grade 11
169131	EL	

Students begin with an overview on the foundations of world history through an examination of the state of world affairs and their origins in 1300 C.E. This course is a survey of peoples throughout the world and their progress in many areas of knowledge, including science, technology, art, music, government, religion and culture. Units of study include how trade and travel changed the world, revolutions and reactions, industrial revolution, imperialism and nationalism, crisis and change, and the modern world. This course leads students in pursuit of historical knowledge from a global, thematic perspective.

MONEY, FINANCE AND ECONOMICS

164370		Grades 10 - 12
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This course combines an introduction to basic economic concepts and themes with personal financial literacy skills. While the students will examine the national economy, individual business enterprises, the market structure and concepts, there will also be application to the individual. There is a focus on the role of the individual as a citizen, consumer and active participant in the business world. Students will demonstrate the ability to identify personal financial literacy skills and apply them to life management. Economic decision making through choices including long term goals, analysis of decision making related to planning, saving and investing.

*Meets Personal Financial Literacy requirement

NATIONAL AND GLOBAL ISSUES

164010		Grades 11 - 12
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This course provides students the opportunity to study and discuss current national and global issues – such as the global economy and national and international conflicts – in an organized and scholarly manner. Participation may involve reading newspapers and news magazines, researching and writing about specific world problems, class discussions, and debating on various topics. Topics may be political or social and therefore controversial. Students should be able to consider divergent opinions with the expectation of developing skills to support opinion with fact. As the way in which technology affects the collection and dissemination of news, students may be using technology to analyze its impact on the spread of information worldwide.

PHILOSOPHY OF KNOWLEDGE

164520		Grades 11 - 12
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This course challenges students to examine the nature of knowledge. It provides students an opportunity to assess what constitutes knowledge and the different ways of knowing through a genuine exploration of the subject. This is achieved through a Socratic Method in the classroom, an examination of various primary and secondary sources, and expository writing. Students analyze the difference between belief and knowledge, and examine the scope, nature, and limitations of knowledge. They also learn to apply basic principles of logic and reasoning to the study of cultures, beliefs, world religions, etc. and will have the opportunity to find commonalities across disciplines

of learning. They also learn how to determine and examine ideological biases and individual and cultural perspectives.

PSYCHOLOGY

164030		Grades 11 - 12
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This class examines the scientific study of behavior and mental processes including the study of behavior, sensation, perception, primary human development, learning, motivation, personality, abnormal psychology, therapy, and change. The human mind and the nervous system is also examined. Family Life and Human Development Bylaw (Focus Areas II and III) requires parental permission for enrollment in this course in which some topics deal with adolescence and personality.

PSYCHOLOGY, ADVANCED PLACEMENT

165031		Grades 11 - 12
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This course introduces students to the systematic and scientific study of human behavior and mental processes. While considering the psychologists and studies that have shaped the field, students explore and apply psychological theories, key concepts, and phenomena associated with such topics as the biological bases of behavior, sensation and perception, learning and cognition, motivation, developmental psychology, testing and individual differences, treatment of abnormal behavior, and social psychology. Throughout the course, students employ psychological research methods, including ethical considerations, as they use the scientific method, analyze bias, evaluate claims and evidence, and effectively communicate ideas.

PSYCHOLOGY, ADVANCED PLACEMENT AND SEMINAR

165131	AP Psychology	Grades 11 - 12
165130	AP Seminar Psychology	Grades 11 - 12

This course is available in schools that offer AP Psychology in conjunction with the Seminar course for two consecutive semesters.

SOCIOLOGY

164020		Grades 11 - 12
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The study of humankind in group activities is the focus of the sociologist. Among the areas covered in the course are social structure, cultural and social change, and social problems. The Family Life and Human Development Bylaw (Focus Areas II and III) requires parental permission for enrollment in this course, which addresses the social development of children and adolescents and the role of the family.

THEORY OF KNOWLEDGE - IB

160601		Grades 11 and/or 12
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Offered only at Urbana High School – two year/semester course.

Students examine the nature of knowledge, analyze the difference between beliefs and knowledge, and examine the scope, nature, and limitations of knowledge. They learn to apply basic principles of logic and reasoning to the study of such topics as cultures, beliefs, and religions; they search for commonalities across disciplines, seeking to determine and examine ideological biases as well as individual and cultural perspectives. Students assess what constitutes knowledge and the different ways of knowing. Instruction includes the Socratic Method and the study of assorted primary and secondary sources.

UNITED STATES, 1945 TO THE PRESENT

167020

Grades 11 - 12

This course may NOT be substituted for American Studies 2.

This course examines the history (political, geographic, and economic) of the United States since World War II. For students interested in exploring the many significant events, trends, and developments in American domestic and foreign policy, as well as the U.S. role in a dramatically changing world, this course allows in-depth study and analysis, as well as the opportunity to look to the future and predict directions the nation is likely to take based upon a study of current practices and policies. Readings are taken from a variety of primary and secondary sources; non-print resources will be used extensively.

UNITED STATES HISTORY, ADVANCED PLACEMENT

164101

Grades 11 - 12

This course may be substituted for American Studies 2 with teacher permission.

AP U.S. History is designed to be the equivalent of a two-semester introductory college or university U.S. history course. In AP U.S. History students investigate significant events, individuals, developments, and processes in nine historical periods from approximately 1491 to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; making historical comparisons; utilizing reasoning about contextualization, causation, and continuity and change over time; and developing historical arguments. The course also provides seven themes that students explore throughout the course in order to make connections among historical developments in different times and places: American and national identity; migration and settlement; politics and power; work, exchange, and technology; America in the world; geography and the environment; and culture and society.

UNITED STATES HISTORY, ADVANCED PLACEMENT AND SEMINAR

164141 AP US

Grades 9 - 12

164140 AP US Seminar

Grades 9 - 12

This course is available in schools that offer AP United States History in conjunction with the Seminar course for two consecutive semesters. 9th Grade students taking AP United States History for the American Studies II credit must enroll in and complete both the AP US and AP US Seminar courses.

WORLD HISTORY: MODERN, ADVANCED PLACEMENT

165151

Grades 11-12

This is the single-semester World History course for 11th and 12th grade students only.

WORLD HISTORY: MODERN, ADVANCED PLACEMENT AND SEMINAR

165141 AP World History: Modern

Grade 10

165140 AP World History: Modern, Seminar

Grade 10

The AP World History: Modern course will begin in 1200 CE, rather than 1450 CE, starting in the 2019-20 school year the course will study civilizations in Africa, the Americas, and

Asia that are foundational to the modern era. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; making historical comparisons; utilizing reasoning about contextualization, causation, and continuity and change over time; and developing historical arguments. The course provides five themes that students explore throughout the course in order to make connections among historical developments in different times and places: interaction between humans and the environment; development and interaction of cultures; state building, expansion, and conflict; creation, expansion, and interaction of economic systems; and development and transformation of social structures.

As this course does not correlate directly with Modern World History, any student who drops the class after ten school days may NOT transfer into a Modern World History class. Modern World History needs to be scheduled for another semester. Should students wish to remove the first semester AP World History grade on their transcript, ONLY HONORS - Modern World History will be an acceptable replacement. AP designation may remain on the transcript if the MWH grade is NOT a replacement but an addition.

WORLD RELIGIONS

169220

Grades 11-12

This course aids students in developing a greater understanding of the panorama of beliefs, belief systems, customs and rituals of different faiths occurring in human societies globally and throughout history. The post-Cold War link between religion and the three factors of fundamentalism, nationalism, and imperialism is examined in order to aid students in better understanding the world in which they live. Students also examine the theoretical, sociological, and practical forms of religious expression in order to understand and place in historical reference the world faiths that affect their lives in the increasingly global society in which they live.

WORLD WAR 2

164510

Grade 12

This course offers students an opportunity to study the international conflict that led to the atomic age, the emergence of the global economy, the creation of the United Nations, and the power struggles that shape the world. While exploring this conflict, students examine social, political, and economic events that led to increased hostilities and the expansion of the United States as a world power. Lessons address major campaigns, political battles, technological developments, civilian involvement, and the changes experienced by women, African-Americans, and other minorities as well as general mass discrimination during the period. Students approach this course from a world view, not just an American perspective, thus creating multiple vantage points from which to study the global conflict.

WORK BASED LEARNING

Work Based Learning program and courses allow juniors and seniors to experience a hands-on career placement (within their preferred career pathway) during the conventional school day. Students can combine two or more career experiences.

- The **Career Research and Development program** is a CTE completer program that includes two in-school courses (Introduction to Career Research and Development and Advanced Career Development, Preparation and Transition), as well as a minimum of 2 credits in Cooperative Work Study.
- The **Mentor-Internship, Student Service Learning, and Transition Skills** programs are work-based learning experiences but are not CTE completer programs.
- Youth Apprenticeship is a completer offered in conjunction with Department of Labor, Licensing and Regulation approved employers. Students work alongside a mentor for a minimum of 450 hours to earn the DLLR Apprenticeship certificate.

All courses are one credit unless otherwise indicated.

ADVANCED CAREER DEVELOPMENT, PREPARATION AND TRANSITION

494510 Grade 12
Concurrent enrollment in Cooperative Work Study.

Requirement for completer and preferred prerequisite: Introduction to Career Research and Development

This course is required for all students enrolled in Cooperative Work Study. It is a transition to the world of work and provides supportive experiences for young employees. Content includes job-seeking skills; job-holding skills, including skills needed for a broad range of jobs; and topics designed to prepare the student to be a wise consumer. Students use financial management information to plan future purchases, prepare and adjust budgets, assess living costs, and plan for saving, retirement, and stock market investments.

Meets Personal Financial Literacy requirement

APPRENTICESHIP

Offered at all high schools.

Students considering this option should schedule a conference with their Work Based Learning Coordinator in the spring of their sophomore or junior year.

495701	A	1 credit	Grades 11 -12
495702	B	1 credit	Grades 11 -12
495703	A	2 credits	Grades 11 -12
495704	B	2 credits	Grades 11 -12

The MD Youth Apprenticeship program for 11th and 12th graders. An ideal apprenticeship candidate is a student who wants to gain experience in the workplace with plans to continue in that industry after graduation. Employers are approved through the Maryland Department of Labor, Licensing and Regulation. A listing of available apprenticeship positions and employers is included on the FCPS Apprenticeship web page. Interested students must apply using the student application also on the FCPS web page or from their High School Work Based Learning Coordinator. Student applications are sent to the employer and

employers select applicants to interview. If a student is hired, they are employed in paid part-time positions under the cooperative supervision of the employer/mentor and the Work Based Learning Coordinator. Most students are scheduled for Apprenticeships for two ninety minute periods of a school day. Apprentices are responsible for arranging their own transportation.

COOPERATIVE WORK STUDY

494470	A	0.5 credit	Grade 12
494480	B	0.5 credit	Grade 12
494410	A	1 credit	Grade 12
494420	B	1 credit	Grade 12
494490	A	1.5 credits	Grade 12
494400	B	1.5 credits	Grade 12
494500	A	2 credits	Grade 12
494520	B	2 credits	Grade 12
494430	A	3 credits	Grade 12
494440	B	3 credits	Grade 12
494450	A	4 credits	Grade 12
494460	B	4 credits	Grade 12
495560	1	1 credit	Grade 12
495570	2	2 credits	Grade 12
495580	3	3 credits	Grade 12

Prerequisite: Concurrent enrollment in Advanced Career Development, Preparation and Transition.

Prerequisite: Introduction to Career Research and Development.

Offered at all high schools.

Students considering this option should schedule a conference with their Work Based Learning Coordinator in the spring of their junior year.

Cooperative Work Study A — Fall Semester.

Cooperative Work Study B — Spring Semester.

Students are employed in paid part-time positions under the cooperative supervision of the employer and the Work Based Learning Coordinator. Training stations are approved by the school to assure that the employment activities have educational significance, are related to the student's career goal, and/or are a continuation of previous training. Most students are

scheduled for work study for two ninety minute periods of a school day. Work study students are responsible for arranging their own transportation.

CTE COMPLETER WORK STUDY AND INTERNSHIPS

360001	Child Dev Mentor Int 1A	1 credit	Grade 12
360005	Child Dev Mentor Int 1B	1 credit	Grade 12
360002	Child Dev Mentor Int 2A	2 credits	Grade 12
360006	Child Dev Mentor Int 2B	2 credits	Grade 12
360003	Child Dev Mentor Int 3A	3 credits	Grade 12
360007	Child Dev Mentor Int 3B	3 credits	Grade 12
360004	Child Dev Mentor Int 4A	4 credits	Grade 12
360008	Child Dev Mentor Int 4B	4 credits	Grade 12
360010	Child Dev Work Study 1A	1 credit	Grade 12
360011	Child Dev Work Study 1B	1 credit	Grade 12
360020	Child Dev Work Study 2A	2 credits	Grade 12
360021	Child Dev Work Study 2B	2 credits	Grade 12
490001	Ag Mentor Int 1A	1 credit	Grade 12
490005	Ag Mentor Int 1B	1 credit	Grade 12
490002	Ag Mentor Int 2A	2 credits	Grade 12
490006	Ag Mentor Int 2B	2 credits	Grade 12
490003	Ag Mentor Int 3A	3 credits	Grade 12
490007	Ag Mentor Int 3B	3 credits	Grade 12
490004	Ag Mentor Int 4A	4 credits	Grade 12
490008	Ag Mentor Int 4B	4 credits	Grade 12
490010	Ag Work Study 1A	1 credit	Grade 12
490013	Ag Work Study 1B	1 credit	Grade 12
490020	Ag Work Study 2A	2 credits	Grade 12
490023	Ag Work Study 2B	2 credits	Grade 12
360031	Comm Food Mentor Int 1A	1 credit	Grade 12
360035	Comm Food Mentor Int 1B	1 credit	Grade 12
360032	Comm Food Mentor Int 2A	2 credits	Grade 12
360036	Comm Food Mentor Int 2B	2 credits	Grade 12
360033	Comm Food Mentor Int 3A	3 credits	Grade 12
360037	Comm Food Mentor Int 3B	3 credits	Grade 12
360034	Comm Food Mentor Int 4A	4 credits	Grade 12
360038	Comm Food Mentor Int 4B	4 credits	Grade 12
360040	Comm Food Work Study 1A	1 credit	Grade 12
360041	Comm Food Work Study 1B	1 credit	Grade 12
360050	Comm Food Work Study 2A	2 credits	Grade 12
360051	Comm Food Work Study 2B	2 credits	Grade 12
340001	Comp SC Mentor Int 1A	1 credit	Grade 12
340005	Comp SC Mentor Int 1B	1 credit	Grade 12
340002	Comp SC Mentor Int 2A	2 credits	Grade 12
340006	Comp SC Mentor Int 2B	2 credits	Grade 12
340003	Comp SC Mentor Int 3A	3 credits	Grade 12
340007	Comp SC Mentor Int 3B	3 credits	Grade 12
340004	Comp SC Mentor Int 4A	4 credits	Grade 12
340008	Comp SC Mentor Int 4B	4 credits	Grade 12
340010	Comp SC Work Study 1A	1 credit	Grade 12
340011	Comp SC Work Study 1B	1 credit	Grade 12
340020	Comp SC Work Study 2A	2 credits	Grade 12
340021	Comp SC Work Study 2B	2 credits	Grade 12

Prerequisite: *These courses are for students participating in a capstone experience for the following CTE completer programs:*

Agriculture: *Animal Science or Horticulture, Child Development, Commercial Foods or Computer Science.*

Students work or volunteer in a career setting within their chosen career pathway to expand career based knowledge, and

develop additional skills needed in that profession. Students are cooperatively supervised by their employer or mentor and their Work Based Learning Coordinator to ensure that the placement has educational significance related to the students CTE completer and their career goals.

INTRODUCTION TO CAREER RESEARCH AND DEVELOPMENT

498000 Grades 10 - 12

This course teaches students the process of career development and financial literacy. Students develop self and career awareness, explore careers, and set academic and career-related goals through a series of activities using Maryland's Career Development Framework. Students explore and assess their interests and abilities and use information from state and national labor market data to make future career plans. This course is open to all students in grades 10-12 and is required for all students who plan to be a Career Research and Development completer.

Meets Personal Financial Literacy requirement

MENTOR/INTERN PROGRAM

566800	A	0.5 credit	Grades 11 - 12
566810	B	0.5 credit	Grades 11 - 12
566710	A	1 credit	Grades 11 - 12
566720	B	1 credit	Grades 11 - 12
566820	A	1.5 credits	Grades 11 - 12
566830	B	1.5 credits	Grades 11 - 12
566730	A	2 credits	Grades 11 - 12
566740	B	2 credits	Grades 11 - 12
566750	A	3 credits	Grades 11 - 12
566760	B	3 credits	Grades 11 - 12
566770	A	4 credits	Grades 11 - 12
566780	B	4 credits	Grades 11 - 12

Non-CTE completer program.

Students explore career opportunities that they may consider studying in a post-secondary setting. Students are placed for one or two semesters with adult mentors to explore the responsibilities, benefits, advantages, and disadvantages of a career choice. Each mentor is primarily responsible for the daily tasks and/or learning activities of the intern. Each school's Work Based Learning Coordinator serves as a conduit between the school and internship site. An approved project is completed during the internship and requires the demonstration of both oral and written communication skills.

OPEN CAMPUS

561000

Must comply with the Temporary Administrative Attendance Waiver policy. A waiver application must be completed prior to implementation, and must be provided along with a receipt showing proof of enrollment at a local institution.

Students must enroll in courses in an off-campus setting that will contribute to advanced standing. Enrollments at local institutions such as Frederick Community College, Hood College, or Mount St. Mary's are included in this program.

STUDENT SERVICE LEARNING

561170	A	0.5 credit	Grade 11
561260	B	0.5 credit	Grade 11
561160	A	1 credit	Grade 11
561180	B	1 credit	Grade 11
561190	A	2 credits	Grade 11
561200	B	2 credits	Grade 11
561470	A	0.5 credit	Grade 12
561560	B	0.5 credit	Grade 12
561460	A	1 credit	Grade 12
561480	B	1 credit	Grade 12
561360	A	2 credits	Grade 12
561370	B	2 credits	Grade 12

Non-CTE Completer program.

Through the Student Service Learning program, juniors and seniors interested in helping community agencies and/or in serving as tutors to elementary, middle and high school students in need of academic support can earn high school credit and/or work toward a Meritorious Service Certificate.

Students must describe their intended service program on an application form. The Service Learning Coordinator reviews and approves applications. (Also, see Step 5 for details about the infused Student Service Learning program.)

Two program options are available:

OPTION 1**GRADE 12**

Requirements include appropriate preparation prior to agency placement, under the supervision of the Service Learning Coordinator. Students must provide their own transportation.

This option provides students an opportunity to: investigate ways in which people in a community help each other (e.g., bloodmobiles, nursing homes, and volunteer services provide essential community services); define an area of interest and make a commitment to an agency serving the community (developing a good match between a student and an agency will be part of the course); and develop skills necessary to fulfill commitments. Volunteer service offers students an opportunity to use a variety of skills such as communication, recordkeeping, problem solving, planning, synthesis of data, and observation and reporting. It also offers an opportunity to assess personal career interests.

OPTION 2**GRADES 11 - 12**

Students interested in tutoring peers within their high school or tutoring younger students may receive service learning credit.

TEMPORARY ADMINISTRATIVE ATTENDANCE WAIVER

562030 Grade 12

Students must comply with the Temporary Administrative Attendance Waiver policy, which requires a completed waiver application, formal written application from the student and his/her parent or guardian, and meeting all graduation requirements. A faculty committee (appointed by the principal) reviews each application to ensure that the requested placement is in the best educational interest of the student. A conference must be held involving the parent/guardian, the student, and the faculty committee. Please see your school counselor for an application and further information.

Students participate in activities in an off-campus setting that will contribute to career development.

TRANSITION SKILLS PROGRAM

539810

Offered only at the Career and Technology Center. Student shadowing and application process required. See your counselor.

Non-CTE completer program.

This one-year program, available during the senior year, provides students with disabilities the opportunity to experience a variety of work-related activities in a comprehensive, hands-on setting. Students must be recommended by the IEP team, in conjunction with a transition plan, and must be working toward a Maryland Certificate of Completion. Students observe and participate in simulated work experiences at CTC. These activities enhance their employability skills, increase their career awareness, and provide a comprehensive vocational assessment.

WORLD LANGUAGES

The goal of world language study in FCPS is to equip students to become linguistically and culturally competitive in a pluralistic society. The approach to this objective is threefold: a comprehensive approach to develop reading, writing, listening, and speaking in a target language while honing those skills in English as well; infusion of the core content as well as elective areas—mathematical concepts, world history, literature, ecology, and visual and performing arts; a substantial focus on oral proficiency to provide graduates with the practical ability needed to function within and outside the United States.

Students are strongly encouraged to become proficient in at least one language other than English not only to satisfy requirements for collegiate admission, but also to be on the cutting edge of a society which is increasingly becoming more multilingual.

All courses are one credit unless otherwise indicated. *A number of four-year colleges and universities now require that additional study of world language (beyond those courses in middle school) take place at the high school level.*

AMERICAN SIGN LANGUAGE (ASL)

265000	American Sign Language 1
265100	American Sign Language 2
265200	American Sign Language 3
265210	American Sign Language 4

ASL students start by acquiring the basic skills of American Sign Language, which include comprehending and communicating with signs and fingerspelling in conjunction with the essential, expressive grammatical patterns. Starting in the first level, ASL is the primary means of communication in a silent classroom. As the levels advance, students become more capable of functioning effectively in ASL, obtaining increasingly more information from signed communications and communicating by means of an expanded range of signs with improved use of the expressive gestures. Deaf culture is imbedded in all language instruction, and students are encouraged to make connections with members of the Deaf community.

ANCIENT GREEK

261200

Prerequisite: Successful completion of Latin 3 or permission of the instructor.

This course is offered at Catoclin High School or where a qualified teacher of Greek is located.

Ancient Greek familiarizes students with the Greek alphabet, vocabulary and grammar. This approach helps students develop the ability to read and translate short edited passages in the target language. There is also an emphasis on Greek culture and prominent figures of civilization. The class seeks to draw correlations between students' prior knowledge and study in Latin III.

FRENCH

261000	French 1
262000	French 2
263001	French 3
264001	French 4
265001	French Advanced Placement Language

265002	French Advanced Placement Literature
266031	French Advanced Studies 1
266032	French Advanced Studies 2

Students start by acquiring the basic skills of listening, speaking, reading, and writing, while increasing their knowledge of French vocabulary, structure, and pronunciation. From the first year, French is the principal means of communication between teacher and students. As the levels advance, students function more effectively in French obtaining increasingly more detailed information from spoken and written messages, communicating more effectively when speaking and writing, and using more advanced structural concepts and vocabulary. At all levels, the culture of the Francophone world is a major part of language instruction, and students are encouraged to make connections to the French-speaking world. As students learn French, they gain a better understanding of the structure and vocabulary of their own language.

FRENCH, APEX

269200	French 1
269210	French 2
269220	AP French Language

These distance learning courses, which are available only under certain conditions, meet the objectives of the equivalent courses taught in one or more of the Frederick County high schools. They meet the requirements of the Maryland State Department of Education for high school credit.

FRENCH, IB

260401	Standard Level	Grades 11 and/or 12
260501	IB/High Level	(1st year of 2-year program) Grades 11 and/or 12
260601	IB/High Level	(2nd year of 2-year program) Grades 11 and/or 12

Offered only at Urbana High School.

Prerequisite for Standard Level: Level 4.

Prerequisite for High Level: Standard Level.

IB French prepares students to use the language appropriately in a wide range of situations and contexts. The skills of listening, speaking, reading, and writing are deepened and developed through the study of oral and written texts of different styles and registers. Grammatical structures and new vocabulary are integrated through the application of skills in the four areas referenced above.

GERMAN

261010	German 1
262010	German 2
263011	German 3
264011	German 4
265011	German Advanced Placement Language
265012	German Advanced Placement Literature
266041	German Advanced Studies 1
266042	German Advanced Studies 2

Students start by acquiring the basic skills of listening, speaking, reading, and writing, while increasing their knowledge of German vocabulary, structure, and pronunciation. From the first year, German is the principal means of communication between teacher and students. As the levels advance, students function more effectively in German obtaining increasingly more detailed information from spoken and written messages, communicating more effectively when speaking and writing, and using more advanced structural concepts and vocabulary. At all levels, the culture of the German-speaking world is a major part of language instruction, and students are encouraged to make connections to the German-speaking world. As students learn German, they gain a better understanding of the structure and vocabulary of their own language.

LATIN

261030	Latin 1
262030	Latin 2
263031	Latin 3
264031	Latin 4
265231	Latin Advanced Placement
266021	Latin Advanced Studies 1
266022	Latin Advanced Studies 2

As students acquire increased knowledge of Latin vocabulary and grammar, they become better able to read with comprehension and accurately translate passages written in Latin. Integrated into instruction at each level are Roman and Greek culture, civilization, and mythology. Latin derivatives and Latin expressions used in English are important components of instruction in levels 1 and 2. Beginning in Latin 3, students are expected to read, translate, and analyze the works – prose and poetry – of Roman authors; they make connections to Rome's culture and civilization as they pertain to the literary works under study.

SPANISH

261020	Spanish 1
262020	Spanish 2
263021	Spanish 3
264021	Spanish 4
265021	Spanish Advanced Placement Language

265022	Spanish Advanced Placement Literature
266011	Spanish Advanced Studies 1
267011	Spanish Advanced Studies 2

Students start by acquiring the basic skills of listening, speaking, reading, and writing, while increasing their knowledge of Spanish vocabulary, structure, and pronunciation. From the first year, Spanish is the principal means of communication between teacher and students. As the levels advance, students become more capable of functioning effectively in Spanish obtaining increasingly more information from spoken and written messages, communicating more effectively when speaking and writing, and using more advanced structural concepts and vocabulary. At all levels, the culture of the Spanish-speaking world is a major part of language instruction, and students are encouraged to make connections to the local Hispanic community. As students learn Spanish, they gain a better understanding of the structure and vocabulary of their own language.

SPANISH, APEX

269230	Spanish 1
269240	Spanish 2
269250	AP Spanish Language

These distance learning courses, which are available only under certain conditions, meet the objectives of the equivalent course. It satisfies the requirements of the Maryland State Department of Education for high school credit.

SPANISH, IB

260101	Standard Level	Grades 11 and/or 12
260201	IB/High Level (1st year of 2-year program)	Grades 11 and/or 12
260301	IB/High Level (2nd year of 2-year program)	Grades 11 and/or 12

Offered only at Urbana High School.

Prerequisite for Standard Level: Level 4.

Prerequisite for High Level: Standard Level.

IB Spanish prepares students to use the language appropriately in a wide range of situations and contexts. The skills of listening, speaking, reading, and writing are deepened and developed through the study of oral and written texts of different styles. Grammatical structures and new vocabulary are integrated with the study of themes and texts through the application of skills in the four areas referenced above.

SPANISH FOR BILINGUAL SPEAKERS

261170	Spanish for Bilingual Speakers 1
261171	Spanish for Bilingual Speakers 2

The purpose of these courses is to enhance the proficiency of students who are heritage speakers of Spanish and persons who have had significant exposure to the language. Via the use of literature, readings, and other authentic materials, the goal is to ensure a fundamental understanding of grammar, writing, spelling, speaking, and general literacy. These classes may be used to satisfy the world language completer.

OTHER COURSES

INDEPENDENT CONTRACT

562010	1
562110	2
562210	3
562310	4

The student is assigned to a teacher to pursue a one-credit independent course of study. An outline of the course must be sent to the appropriate curriculum specialist following registration. This outline must include: rationale, objectives, student resource books and materials, activities, and evaluation. Student, teacher, and principal signatures on the outline signify knowledge and approval.

STUDENT ASSISTANT

462000	Aquatics Student Assistant	Grades 10-12
290000	Art Student Assistant	Grades 11-12
560010	Cafeteria Student Assistant	Grades 11-12
490000	Career & Technology Student Assistant	Grades 11-12
340000	Computer Science Student Assistant	Grades 11-12
561020	Custodial Student Assistant	Grades 11-12
665005	Drama/Theatre Arts/Dance Student Assistant	Grades 11-12
130000	English Student Assistant	Grades 11-12
360000	Family & Consumer Sciences Student Assistant	Grades 11-12
561030	Guidance Student Assistant	Grades 11-12
560000	Student Assistant	Grades 11-12
230000	Mathematics Student Assistant	Grades 11-12
561040	Media Student Assistant	Grades 11-12
430000	Music Student Assistant	Grades 11-12
561050	Office Student Assistant	Grades 11-12
460000	Physical Education Student Assistant	Grades 11-12
190000	Science Student Assistant	Grades 11-12
160000	Social Studies Student Assistant	Grades 11-12
390000	Technology Education Student Assistant	Grade 12
260000	World Languages Student Assistant	Grades 11-12

Prerequisite: *Prior permission of the instructor.*

Student assistants help staff with non-instructional tasks in school service areas. No credit is awarded.

SPECIALLY DESIGNED INSTRUCTION

Students must have an Individual Education Plan (IEP) to enroll in these courses.

CONCEPTS OF ENGLISH

561001	Grade 9
561017	Grade 9 YL
561005	Grade 10
561022	Grade 10 YL
561009	Grade 11
561026	Grade 11 YL
561013	Grade 12
561031	Grade 12 YL

Students enrolled in Concepts of English, at any grade level, are identified by the Individual Education Program Team to be working toward a Maryland High School Certificate of Program Completion instead of a High School Diploma. Students will be instructed in Core Content Connectors that align with College and Career Ready Standards in the areas of reading, writing, speaking and listening. Students may also participate in individualized reading intervention programs aligned with IEP goals.

CONCEPTS OF MATH

561002	Grade 9
561018	Grade 9 YL
561006	Grade 10
561023	Grade 10 YL
561010	Grade 11
561027	Grade 11 YL
561014	Grade 12
561032	Grade 12 YL

Students enrolled in Concepts of Math, at any grade level, are identified by the Individual Education Program Team to be working toward a Maryland High School Certificate of Program Completion instead of a High School Diploma. Students will be instructed in Core Content Connectors that align with College and Career Ready Standards in the areas of data analysis, probability, and statistics; geometry; measurement; numbers and operations; patterns, relations, and functions; and symbolic expression. Students may also participate in individualized reading intervention programs aligned with IEP goals.

CONCEPTS OF SCIENCE

561004	Grade 9
561021	Grade 9 YL
561008	Grade 10
561025	Grade 10 YL
561012	Grade 11
561029	Grade 11 YL
561016	Grade 12
561034	Grade 12 YL

Students enrolled in Concepts of Science, at any grade level, are identified by the Individual Education Program Team to be working toward a Maryland High School Certificate of Program Completion instead of a High School Diploma. Students will be instructed in the Core Content Connectors that align with Maryland State Science Standards in the areas of Life Sciences, Physical Sciences, and Earth and Space Sciences, with the inclusion of Engineering and Technology.

CONCEPTS OF SOCIAL STUDIES

561003	Grade 9
561019	Grade 9 YL
561007	Grade 10
561024	Grade 10 YL
561011	Grade 11
561028	Grade 11 YL
561015	Grade 12
561033	Grade 12 YL

Students enrolled in Concepts of Social Studies, at any grade level, are identified by the Individual Education Program Team to be working toward a Maryland High School Certificate of Program Completion instead of a High School Diploma. Students will be instructed in the Core Content Connectors that align with Maryland State Curriculum skills and processes.

LEARNING STRATEGIES

565100	1	0.5 credit	Grade 9
565050	1A	1 credit	Grade 9
565460	1B	1 credit	Grade 9
565110	2	0.5 credit	Grade 10
565150	2A	1 credit	Grade 10
565480	2B	1 credit	Grade 10
565260	3	0.5 credit	Grade 11
565250	3A	1 credit	Grade 11
565500	3B	1 credit	Grade 11
565360	4	0.5 credit	Grade 12
565350	4A	1 credit	Grade 12
565520	4B	1 credit	Grade 12

Based on the Special Education Instructional Guide for Learning Strategies, these courses contain objectives, instructional strategies, and materials to teach students how to acquire, manipulate, integrate, store, and retrieve information. Objectives include increased use of learning strategies in regular education, development of coping and compensatory strategies, increased understanding of self as a learner, and improved communication of knowledge once it is acquired. Each student's instructional program is determined through the school IEP process.

ALPHABETICAL COURSE INDEX

Page	Course Number	Course Title	Credits Awarded
63	168020	9-11 to Present	
26	332040	Accounting 1	1
26	333041	Accounting 2	1
15	665180	Acting 2	1
11	291110	Advanced 2-D Art 1	1
11	291120	Advanced 2-D Art 2	1
11	291121	Advanced 2-D Art 3	1
12	293200	Advanced 3-D Art 1	1
12	293210	Advanced 3-D Art 2	1
12	293220	Advanced 3-D Art 3	1
16	665190	Advanced Acting	1
52	233221	Advanced Algebra with Trigonometry	1
68	494510	Advanced Career Development Preparation and Transition	1
11	294100	Advanced Computer Graphics 1	1
11	294110	Advanced Computer Graphics 2	1
11	294120	Advanced Computer Graphics 3	1
34	532000	Advanced Floral Design	1
24	491361	Advanced Mechanics	1
16	660090	Advanced Methods and Techniques 1	.5
16	660100	Advanced Methods and Techniques 2	.5
9, 19	664121	Advanced Music Studies 1A	2
9, 19	664151	Advanced Music Studies 1B	2
9, 19	664221	Advanced Music Studies 2A	2
9, 19	664251	Advanced Music Studies 2B	2
9, 19	664261	Advanced Music Studies 3A	2
9, 19	664271	Advanced Music Studies 3B	2
11	291180	Advanced Photography 1	1
11	291190	Advanced Photography 2	1
11	291191	Advanced Photography 3	1
16	660150	Advanced Scriptwriting	.5
16	660160	Advanced Theatre Mentorship and Student Thesis	
9	664311	Advanced Theatre Studies 1A	2
9	664321	Advanced Theatre Studies 1B	2
9	664331	Advanced Theatre Studies 2A	2
9	664341	Advanced Theatre Studies 2B	2
9	664342	Advanced Theatre Studies 3A	2
9	664343	Advanced Theatre Studies 3B	2
17	660170	Advanced Theatre Studies Capstone Project	
17	660180	Advanced Theatre Studies Marketing and Producing	
16	660130	Advanced Theater Thesis A	
16	660140	Advanced Theater Thesis B	

Page	Course Number	Course Title	Credits Awarded
16	665205	Advanced Theatrical Production 1	1
16	665161	Advanced Theatrical Production 2	1
16	665171	Advanced Theatrical Production 3	1
16	665181	Advanced Theatrical Production 4	1
32	491200	Aerospace Engineering: (AE) – Project Lead the Way: Engineering	1
34	530004	Agri-Business	2
34	533144	Agricultural and Commercial Metals Technology (Welding) 1A	2
34	533142	Agricultural and Commercial Metals Technology (Welding) 1B	2
34	534144	Agricultural and Commercial Metals Technology (Welding) 2A	2
34	535142	Agricultural and Commercial Metals Technology (Welding) 2B	2
24	494153	Agricultural Work Experience	1
24	494150	Agricultural Work Experience	2
24	492150	Agriculture/Horticulture Independent Study	1
52	23130C	Algebra 1 Acquisition	1
53	23120C	Algebra 1 - Honors (single semester)	1
53	23127C	Algebra 1A	1
53	23128C	Algebra 1B	1
53	23320C	Algebra 2	1
53	23211C	Algebra 2 - Honors	1
34	531260	Allied Health Internship	2
19	431120	American Popular Music	1
71	265000	American Sign Language 1	1
71	265100	American Sign Language 2	1
71	265200	American Sign Language 3	1
71	265210	American Sign Language 4	1
63	163011	American Studies 2 (9th Grade)	1
63	163211	American Studies 2 (11th Grade)	1
63	163012	American Studies 2 – Honors (9th Grade)	1
63	163111	American Studies 2 – Honors (11th Grade)	1
57	190312	Anatomy and Physiology	1
63	164190	Ancient and Medieval History	1
71	261200	Ancient Greek	1
63	163261	Antebellum America, The Civil War and Reconstruction	1
26	333280	Applied Business Law	1
68	495701A	Apprenticeship	1
68	495702B	Apprenticeship	1
68	495703A	Apprenticeship	2
68	495704B	Apprenticeship	2

Courses shown in bold on this page are given weighted grades.

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Page	Course Number	Course Title	Credits Awarded
49	463050	Aquatic Sports/Fitness	1
49	463250	Aquatic Sports/Fitness 1A	0.5
49	463350	Aquatic Sports/Fitness 1B	0.5
49	463030	Aquatics 1 - Lifeguard Training	1
49	463040	Aquatics 2 - Water Safety Instructor Training (WSI)	1
49	463080	Aquatics 3 - WSI/Lifeguard Management Training	1
50	463090	Aquatics 4 - Independent Study	1
29	392500	Architectural Engineering and Design 1	1
29	392510	Architectural Engineering and Design 2	1
29	392520	Architectural Engineering and Design 3	1
12	291010	Art 1	1
12	292011	Art 2	1
12	291141	Art 3	1
12	293131	Art History 1, Advanced Placement	1
12	293132	Art History 2, Advanced Placement	1
12	294051	Art Independent Study 1	1
12	294151	Art Independent Study 2	1
12	294451	Art Independent Study 3	1
12	294551	Art Independent Study 4	1
50	461000	Athletic Coaching, Introduction to	1
50	461001	Athletic Coaching 2	1
29	492110	Auto Mechanics 1	1
29	492210	Auto Mechanics 1	2
29	492130	Auto Mechanics 2	2
29	492340	Auto Mechanics 2	1
29	494111	Auto Mechanics 3	2
36	533202	Autobody/Collision Repair 1A	2
36	533203	Autobody/Collision Repair 1B	2
36	535033	Autobody/Collision Repair 2A	2
36	535034	Autobody/Collision Repair 2B	2
35	533064	Automotive Technology 1A	2
35	533065	Automotive Technology 1B	2
35	534064	Automotive Technology 2A	2
35	534062	Automotive Technology 2B	2
20	439010	Band 1	1
20	439020	Band 2	1
20	439030	Band 3	1
20	439040	Band 4	1
20	439050	Band 5	1
20	439060	Band 6	1
20	439070	Band 7	1

Page	Course Number	Course Title	Credits Awarded
20	439080	Band 8	1
31	391100	Biomedical Innovation – Project Lead the Way: Biomedical Sciences	1
36	531100	Biomedical Innovation – Project Lead the Way: Biomedical Sciences (CTC)	2
57	192211	Biology	1
57	191111	Biology - Honors	1
57	193111	Biology 1, Advanced Placement	1
57	194111	Biology 2, Advanced Placement	1
	562006	Bridge Plan	0.5
	562004	Bridge Plan 1	1
	562005	Bridge Plan 2	1
30	491920	Cabinetmaking 1	1
30	492040	Cabinetmaking 1	2
30	492940	Cabinetmaking 2	1
30	493040	Cabinetmaking 2	2
30	494041	Cabinetmaking 3	2
30	494241	Cabinetmaking 3	1
30	494281	Cabinetmaking 4	1
30	494291	Cabinetmaking 4	2
35	533085	CAD Architectural 1A	2
35	533086	CAD Architectural 1B	2
35	534241	CAD Architectural 2A	2
35	534251	CAD Architectural 2B	2
39	533072	CAD Engineering 1A	2
39	533073	CAD Engineering 1B	2
39	534261	CAD Engineering 2A	2
39	534271	CAD Engineering 2B	2
53	234181	Calculus I, Advanced Placement A	1
53	234191	Calculus I, Advanced Placement B	1
53	234101	Calculus I, Advanced Placement (AB)	1
53	234121	Calculus II, Advanced Placement (BC)	1
53	234131	Calculus III	1
36	533341	Carpentry 1A	2
36	533342	Carpentry 1B	2
36	535042	Carpentry 2A	2
36	535043	Carpentry 2B	2
13	291060	Ceramics 1	1
13	292061	Ceramics 2	1
13	293061	Ceramics 3	1
13	293191	Ceramics 4	1
58	193001	Chemistry 1	1
58	196051	Chemistry 1, Advanced Placement	1

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Page	Course Number	Course Title	Credits Awarded
58	193101	Chemistry 2	1
58	196061	Chemistry 2, Advanced Placement	1
58	193211	Chemistry, Fundamentals of	1
28	362040	Child Development 1	1
28	363041	Child Development 2	1
28	363061	Child Development 3	1
37	538551	Cisco Networking Academy 1A	2
37	538552	Cisco Networking Academy 1B	2
37	538553	Cisco Networking Academy - Security Plus	2
32	497401	Civil Engineering and Architecture: (CEA) – Project Lead the Way: Engineering	1
20	439110	Class Piano 1	1
20	439120	Class Piano 2	1
20	439130	Class Piano 3	1
20	439140	Class Piano 4	1
20	439150	Class Piano 5	1
20	439160	Class Piano 6	1
20	439170	Class Piano 7	1
20	439180	Class Piano 8	1
58	191243	Climate Ocean Weather Space Science	1
34	531270	College Allied Health	2
13	292040	Commercial Art 1	1
13	293041	Commercial Art 2	1
28	362070	Commercial Foods 1	1
28	363070	Commercial Foods 2	1
28	364070	Commercial Foods 3	1
13	294040	Computer Graphics 1	1
13	294041	Computer Graphics 2	1
13	294042	Computer Graphics 3	1
13	294043	Computer Graphics 4	1
32	497201	Computer Integrated Manufacturing: (CIM) – Project Lead the Way: Engineering	1
27	343011	Computer Science, Advanced Placement	1
27	343012	Computer Science Principles, Advanced Placement	1
37	538514	Computer Technician/Analyst 1A	2
37	538515	Computer Technician/Analyst 1B	2
43, 73	561001	Concepts of English 9	
43, 73	561017	Concepts of English 9 YL	
43, 73	561005	Concepts of English 10	
43, 73	561002	Concepts of English 10 YL	
43, 73	561009	Concepts of English 11	
43, 73	561026	Concepts of English 11 YL	

Page	Course Number	Course Title	Credits Awarded
43, 73	561013	Concepts of English 12	
43, 73	561031	Concepts of English 12 YL	
73	561002	Concepts of Math 9	
73	561018	Concepts of Math 9 YL	
73	561006	Concepts of Math 10	
73	561023	Concepts of Math 10 YL	
73	561010	Concepts of Math 11	
73	561027	Concepts of Math 11 YL	
73	561014	Concepts of Math 12	
73	561032	Concepts of Math 12 YL	
74	561004	Concepts of Science 9	
74	561021	Concepts of Science 9 YL	
74	561008	Concepts of Science 10	
74	561025	Concepts of Science 10 YL	
74	561012	Concepts of Science 11	
74	561029	Concepts of Science 11 YL	
74	561016	Concepts of Science 12	
74	561034	Concepts of Science 12 YL	
74	561003	Concepts of Social Studies 9	
74	561019	Concepts of Social Studies 9 YL	
74	561007	Concepts of Social Studies 10	
74	561024	Concepts of Social Studies 10 YL	
74	561011	Concepts of Social Studies 11	
74	561028	Concepts of Social Studies 11 YL	
74	561015	Concepts of Social Studies 12	
74	561033	Concepts of Social Studies 12 YL	
20	439210	Concert Choir 1	1
20	439220	Concert Choir 2	1
20	439230	Concert Choir 3	1
20	439240	Concert Choir 4	1
20	439250	Concert Choir 5	1
20	439260	Concert Choir 6	1
20	439270	Concert Choir 7	1
20	439280	Concert Choir 8	1
54	233230	Contemporary Mathematics	1
54	233231	Contemporary Mathematics with Math Modules	1
68	495560	Cooperative Work Study 1	1
68	495570	Cooperative Work Study 2	2
68	495580	Cooperative Work Study 3	3
68	494410	Cooperative Work Study A	1
68	494430	Cooperative Work Study A	3
68	494450	Cooperative Work Study A	4

Courses shown in bold on this page are given weighted grades.

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Page	Course Number	Course Title	Credits Awarded
68	494470	Cooperative Work Study A	0.5
68	494490	Cooperative Work Study A	1.5
68	494500	Cooperative Work Study A	2
68	494420	Cooperative Work Study B	1
68	494400	Cooperative Work Study B	1.5
68	494440	Cooperative Work Study B	3
68	494460	Cooperative Work Study B	4
68	494480	Cooperative Work Study B	0.5
68	494520	Cooperative Work Study B	2
37	532024	Cosmetology 1A	2
37	533025	Cosmetology 1B	2
37	533024	Cosmetology 2A	4
37	539121	Cosmetology 2B	4
43	134250	Creative Writing	1
69	490001	CTE Completer - Ag Mentor Int 1A	1
69	490005	CTE Completer - Ag Mentor Int 1B	1
69	490002	CTE Completer - Ag Mentor Int 2A	2
69	490006	CTE Completer - Ag Mentor Int 2B	2
69	490003	CTE Completer - Ag Mentor Int 3A	3
69	490007	CTE Completer - Ag Mentor Int 3B	3
69	490004	CTE Completer - Ag Mentor Int 4A	4
69	490008	CTE Completer - Ag Mentor Int 4B	4
69	490010	CTE Completer - Ag Work Study 1A	1
69	490013	CTE Completer - Ag Work Study 1B	1
69	490020	CTE Completer - Ag Work Study 2A	2
69	490023	CTE Completer - Ag Work Study 2B	2
69	360001	CTE Completer - Child Dev Mentor Int 1A	1
69	360005	CTE Completer - Child Dev Mentor Int 1B	1
69	360002	CTE Completer - Child Dev Mentor Int 2A	2
69	360006	CTE Completer - Child Dev Mentor Int 2B	2
69	360003	CTE Completer - Child Dev Mentor Int 3A	3
69	360007	CTE Completer - Child Dev Mentor Int 3B	3
69	360004	CTE Completer - Child Dev Mentor Int 4A	4
69	360008	CTE Completer - Child Dev Mentor Int 4B	4
69	360010	CTE Completer - Child Dev Work Study 1A	1
69	360011	CTE Completer - Child Dev Work Study 1B	1
69	360020	CTE Completer - Child Dev Work Study 2A	2
69	360021	CTE Completer - Child Dev Work Study 2B	2
69	360031	CTE Completer - Comm Food Mentor Int 1A	1
69	360035	CTE Completer - Comm Food Mentor Int 1B	1
69	360032	CTE Completer - Comm Food Mentor Int 2A	2
69	360036	CTE Completer - Comm Food Mentor Int 2B	2

Page	Course Number	Course Title	Credits Awarded
69	360033	CTE Completer - Comm Food Mentor Int 3A	3
69	360037	CTE Completer - Comm Food Mentor Int 3B	3
69	360034	CTE Completer - Comm Food Mentor Int 4A	4
69	360038	CTE Completer - Comm Food Mentor Int 4B	4
69	360040	CTE Completer - Comm Food Work Study 1A	1
69	360041	CTE Completer - Comm Food Work Study 1B	1
69	360050	CTE Completer - Comm Food Work Study 2A	2
69	360051	CTE Completer - Comm Food Work Study 2B	2
69	340001	CTE Completer - Comp SC Mentor Int 1A	1
69	340005	CTE Completer - Comp SC Mentor Int 1B	1
69	340002	CTE Completer - Comp SC Mentor Int 2A	2
69	340006	CTE Completer - Comp SC Mentor Int 2B	2
69	340003	CTE Completer - Comp SC Mentor Int 3A	3
69	340007	CTE Completer - Comp SC Mentor Int 3B	3
69	340004	CTE Completer - Comp SC Mentor Int 4A	4
69	340008	CTE Completer - Comp SC Mentor Int 4B	4
69	340010	CTE Completer - Comp SC Work Study 1A	1
69	340011	CTE Completer - Comp SC Work Study 1B	1
69	340020	CTE Completer - Comp SC Work Study 2A	2
69	340021	CTE Completer - Comp SC Work Study 2B	2
38	533220	Culinary Arts 1	4
38	533224	Culinary Arts 1A	2
38	533321	Culinary Arts 1B	2
38	533300	Culinary Arts 2	4
38	534164	Culinary Arts 2A	2
38	534162	Culinary Arts 2B	2
29	361010	Cultures and Cuisine	1
17	663341	Dance, Advanced	1
17	665200	Dance, Advanced, Continuing Studies in	1
17	663141	Dance, Beginner	1
17	665000	Dance, Beginner, Continuing Studies in	1
17	663241	Dance, Intermediate	1
17	665100	Dance, Intermediate, Continuing Studies in	1
17	663441	Dance Production	1
18	665300	Dance Production, Continuing Studies in	1
30	394090	Digital Communication Technology 1	1
30	394092	Digital Communication Technology 2	1
30	394093	Digital Communication Technology 3	1
30	394094	Digital Communication Technology 4	1
38	532054	Digital Design & Printing Methods 1A	2
38	532055	Digital Design & Printing Methods 1B	2
38	534214	Digital Design & Printing Methods 2A	2

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Page	Course Number	Course Title	Credits Awarded
38	534215	Digital Design & Printing Methods 2B	2
32	497301	Digital Electronics: (DE) – Project Lead the Way: Engineering	1
13	292200	Digital Photography 1	1
13	292202	Digital Photography 2	1
13	292203	Digital Photography 3	1
13	292204	Digital Photography 4	1
13	292205	Digital Photography 5	1
13	292206	Digital Photography 6	1
63	160100	Discovering Your History: Maryland and Frederick County	
14	291020	Drawing and Painting 1	1
14	292021	Drawing and Painting 2	1
14	293021	Drawing and Painting 3	1
58	193901	Earth System Science Research Honors	1
63	164170	Economics	0.5
63	164070	Economics and Geography	1
48	169141	EL American Studies 2	1
46	563510	EL Emergent Read/Write 1	1
48	239200	EL CCR Math Foundations 1	1
48	239201	EL CCR Math Foundations 2	1
48	239202	EL CCR Math Foundations 3	1
47	563520	EL Read/Write 2	1
47	563530	EL Read/Write 3	1
47	563540	EL Read/Write 4	1
47	262080	EL – English as a World Language Beginner 1	1
47	262090	EL – English as a World Language Beginner 2	1
47	262100	EL – English as a World Language Beginner 3	1
47	262110	EL – English as a World Language Beginner 4	1
48	563800	EL English 1	1
48	56P810	EL English 10 PARCC	1
47	563820	EL English 9A	1
47	563880	EL English 9B	1
48	563890	EL Government	1
64	563590	EL Government A	1
64	563890	EL Government B	1
47	563550	EL Intermediate 1	1
47	563560	EL Intermediate 2	1
46	563400	EL Literacy for Emergent Students A	0.5
46	563500	EL Literacy for Emergent Students B	0.5
48, 64	169131	EL Modern World History	1
38	533054	Electricity 1A	2
38	533151	Electricity 1B	2

Page	Course Number	Course Title	Credits Awarded
38	534054	Electricity 2A	2
38	535052	Electricity 2B	2
24	491050	Engine and Power Technology 1	1
24	491051	Engine and Power Technology 2	1
32	497001	Engineering Design and Development: (EDD) – Project Lead the Way: Engineering	1
43	131211	English 9	1
43	131111	English 9 - Honors	1
43, 44	131313	English 9 YL Comprehension A	2
43, 44	131314	English 9 YL Comprehension B	
43, 44	131317	English 9 YL Foundational A	
43, 44	131318	English 9 YL Foundational B	
43	13P211	English 10	1
43	13P111	English 10 - Honors	1
43, 45	131315	English 10 YL Comprehension A	1
43, 45	131316	English 10 YL Comprehension B	
43, 45	131319	English 10 YL Foundational A	
43, 45	131320	English 10 YL Foundational B	
43	133211	English 11	1
43	133111	English 11 - Honors	1
43	134121	English 12	1
43	134281	English 12 (CTC)	1
43	134181	English Language and Composition, Advanced Placement	1
43	134381	English Language and Composition, Advanced Placement (CTC)	1
43	134371	English Literature and Composition, Advanced Placement	1
35	530005	Entrepreneurship & Small Business Enterprise	2
39	533111	Environmental Landscape Design & Management 1A	2
39	533112	Environmental Landscape Design & Management 1B	2
39	533113	Environmental Landscape Design & Management 2A	2
39	533114	Environmental Landscape Design & Management 2B	2
59	193511	Environmental Science, Advanced Placement	1
59	192401	Environmental Science/Science and Societal Issues	1
63	164111	European History, Advanced Placement	1
64	164121	European History, Advanced Placement and Seminar	1
64	164100	European History, Advanced Placement Seminar	1

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Page	Course Number	Course Title	Credits Awarded
39	538110	Extended Technical Studies A	2
39	538120	Extended Technical Studies B	2
44	663310	Film Study	1
44	663320	Film Study A	0.5
44	663330	Film Study B	0.5
50	461030	Fitness for Life	0.5
44	135051	Forensics and Debate 1	1
44	135251	Forensics and Debate 2	1
44	135351	Forensics and Debate 3	1
44	135451	Forensics and Debate 4	1
59	195110	Forensic Science	1
24	492160	Forestry/Wildlife Management	1
28	349910	Foundations of Computer Science	1
40	531160	Foundations of Curriculum and Instruction	1
33	531210	Foundations of Medicine & Health Science	2
30	344070	Foundations of Technology	1
71	261000	French 1	1
71	262000	French 2	1
71	263001	French 3	1
71	264001	French 4	1
71	265001	French Advanced Placement Language	1
71	265002	French Advanced Placement Literature	1
71	266031	French Advanced Studies 1	1
71	266032	French Advanced Studies 2	1
71	269200	French APEX 1	1
71	269210	French APEX 2	1
71	269220	French APEX, Advanced Placement	1
64	164180	Geography	0.5
54	23220C	Geometry	1
54	23111C	Geometry - Honors	1
72	261010	German 1	1
72	262010	German 2	1
72	263011	German 3	1
72	264011	German 4	1
72	265011	German Advanced Placement Language	1
72	265012	German Advanced Placement Literature	1
72	266041	German Advanced Studies 1	1
72	266042	German Advanced Studies 2	1
64	161201	Government	1
64	161101	Government – Honors	1
64	164191	Government and Politics: Comparative, Advanced Placement	1

Page	Course Number	Course Title	Credits Awarded
64	164051	Government and Politics: United States, Advanced Placement Non-HSA – Has elective credit only	1
64	164052	Government and Politics: United States, Advanced Placement with HSA – 10th grade and original credit	1
34	531280	Guided Research in Allied Health	2
20	431160	Guitar 1	1
20	432160	Guitar 2	1
20	433260	Guitar 3	1
20	434160	Guitar 4	1
20	435160	Guitar 5	1
20	436160	Guitar 6	1
20	437160	Guitar 7	1
20	438160	Guitar 8	1
50	461020	Health	0.5
39	539110	Homeland Security/Criminal Justice 1	4
39	539114	Homeland Security/Criminal Justice 1A	2
39	539115	Homeland Security/Criminal Justice 1B	2
39	539130	Homeland Security/Criminal Justice 2	4
39	539134	Homeland Security/Criminal Justice 2A	2
39	539121	Homeland Security/Criminal Justice 2B	2
25	491020	Horse Care and Management	1
25	491030	Horticulture/Floriculture 1	1
25	492031	Horticulture/Floriculture 2	1
25	493031	Horticulture/Floriculture 3	1
31	391000	Human Body Systems – Project Lead the Way: Biomedical Sciences (CTC)	1
36	531000	Human Body Systems – Project Lead the Way: Biomedical Sciences	2
65	164161	Human Geography, Advanced Placement	1
40	533400	Human Growth and Development Through Adolescence	1
44	134211	Humanities	1
44	134221	Humanities	0.5
40	533104	HVACR/Plumbing 1A	2
40	533105	HVACR/Plumbing 1B	2
40	534104	HVACR/Plumbing 2A	2
40	534105	HVACR/Plumbing 2B	2
13	290201	IB Arts – Visual – HL – 1st year	1
13	290301	IB Arts – Visual – HL – 2nd year	1
13	290101	IB Arts – Visual – SL	1
57	190201	IB Biology – HL – 1st year	1
57	190301	IB Biology – HL – 2nd year	1

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Page	Course Number	Course Title	Credits Awarded
57	190101	IB Biology – SL	1
58	190501	IB Chemistry – HL – 1st year	1
58	190601	IB Chemistry – HL – 2nd year	1
58	190401	IB Chemistry – SL	1
27	340201	IB Computer Science – HL – 1st year	1
27	340301	IB Computer Science – HL – 2nd year	1
27	340101	IB Computer Science – SL	1
64	160902	IB Economics	1
43	130101	IB English – HL – 1st year	1
43	130201	IB English – HL – 2nd year	1
64	160401	IB European History – HL – 1st year	1
64	160501	IB European History – HL – 2nd year	1
64	160301	IB European History – SL	1
71	260501	IB French – HL – 1st year	1
71	260601	IB French – HL – 2nd year	1
71	260401	IB French – SL	1
64	160301	IB History 11	1
64	160501	IB History 12 – Europe	1
64	160701	IB History 11	1
64	160901	IB History 12 – Americas	1
54	230101	IB Math Methods – SL	1
54	230501	IB Mathematical Studies – SL	1
55	230201	IB Mathematics – HL – 1st year	1
55	230301	IB Mathematics – HL – 2nd year	1
54	230701	IB Mathematics – Applications and Interpretations – SL	1
55	230702	IB Mathematics – Applications and Interpretations – HL	1
55	230801	IB Mathematics – Analysis and Approaches	1
22	660101	IB Music – HL – 1st year	1
22	660201	IB Music – HL – 2nd year	1
22	660301	IB Music – SL	1
60	190701	IB Physics – SL	1
60	190801	IB Physics – HL	
72	260201	IB Spanish – HL – 1st year	1
72	260301	IB Spanish – HL – 2nd year	1
72	260101	IB Spanish – SL	1
66	160601	IB Theory of Knowledge	1
73	562010	Independent Contract 1	1
73	562110	Independent Contract 2	1
73	562210	Independent Contract 3	1
73	562310	Independent Contract 4	1
29	362020	Independent Living: Reality 101	1

Page	Course Number	Course Title	Credits Awarded
50	463110	Individual and Dual Sports 1	1
50	463120	Individual and Dual Sports 1A	0.5
50	463210	Individual and Dual Sports 1B	0.5
50	465110	Individual and Dual Sports 2	1
50	465140	Individual and Dual Sports 3	1
50	465400	Individual and Dual Sports 4	1
50	465500	Individual and Dual Sports 5	1
50	465600	Individual and Dual Sports 6	1
21	439310	Instrumental Chamber Ensemble 1	1
21	439320	Instrumental Chamber Ensemble 2	1
21	439330	Instrumental Chamber Ensemble 3	1
21	439340	Instrumental Chamber Ensemble 4	1
21	439350	Instrumental Chamber Ensemble 5	1
21	439360	Instrumental Chamber Ensemble 6	1
21	439370	Instrumental Chamber Ensemble 7	1
21	439380	Instrumental Chamber Ensemble 8	1
21	434100	Integrated Music Technology 1: Continuing Studies	1
21	432110	Integrated Music Technology 2: Continuing Studies	1
21	434120	Integrated Music Technology 3: Continuing Studies	1
21	431001	Integrated Music Technology: Introduction	1
26	332010	International Business and Finance	1
54	231500	Intermediate Transitional Algebra	1
41	532111	Internship/Field Experience (Learning Theory) A	2
41	532112	Internship/Field Experience (Learning Theory) B	2
25	492351	Introduction to Agricultural Science and Technology	1
26	331010	Introduction to Business	1
69	498000	Introduction to Career, Research and Development	1
40	539061	Introduction to Construction Management	1
32	497011	Introduction to Engineering Design: (IED) – Project Lead the Way: Engineering	1
18	665170	Introduction to Theatre	1
21	439410	Jazz Ensemble 1	1
21	439420	Jazz Ensemble 2	1
21	439430	Jazz Ensemble 3	1
21	439440	Jazz Ensemble 4	1
21	439450	Jazz Ensemble 5	1
21	439460	Jazz Ensemble 6	1
21	439470	Jazz Ensemble 7	1
21	439480	Jazz Ensemble 8	1

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Page	Course Number	Course Title	Credits Awarded
14	291171	Jewelry and Small Sculpture 1	1
14	291172	Jewelry and Small Sculpture 2	1
14	291173	Jewelry and Small Sculpture 3	1
14	291174	Jewelry and Small Sculpture 4	1
30	491000	Johns Hopkins Engineering Innovations	1
44	134220	Journalism 1	1
44	134230	Journalism 2	1
44	134330	Journalism 3	1
44	134430	Journalism 4	1
14	297100	Journeys through Art Styles, Theories and Applications	1
72	261030	Latin 1	1
72	262030	Latin 2	1
72	263031	Latin 3	1
72	264031	Latin 4	1
72	265231	Latin Advanced Placement	1
72	266021	Latin Advanced Studies 1	1
72	266022	Latin Advanced Studies 2	1
65	164060	Law and Society	1
65	161010	Leadership	0.5
65	161040	Leadership 1	1
65	161020	Leadership 2	1
74	565100	Learning Strategies 1	0.5
74	565050	Learning Strategies 1A	1
74	565460	Learning Strategies 1B	1
74	565110	Learning Strategies 2	0.5
74	565150	Learning Strategies 2A	1
74	565480	Learning Strategies 2B	1
74	565260	Learning Strategies 3	0.5
74	565250	Learning Strategies 3A	1
74	565500	Learning Strategies 3B	1
74	565360	Learning Strategies 4	0.5
74	565350	Learning Strategies 4A	1
74	565520	Learning Strategies 4B	1
65	164411	Macroeconomics, Advanced Placement	1
26	333090	Management and Entrepreneurship	1
27	336040	Managing Your Personal Finances	0.5
22	432000	Marching Band: Band Front 1	1
22	432100	Marching Band: Band Front 2	1
22	433100	Marching Band: Band Front 3	1
22	435100	Marching Band: Band Front 4	1
65	164500	Media Literacy: Understanding the Information Age	1

Page	Course Number	Course Title	Credits Awarded
34	531250	Medical Assisting, Administrative	2
34	531240	Medical Assisting, Clinical	2
31	391200	Medical Intervention – Project Lead the Way: Biomedical Sciences	1
36	531200	Medical Intervention – Project Lead the Way: Biomedical Sciences (CTC)	2
69	566710	Mentor/Intern Program A	1
69	566730	Mentor/Intern Program A	2
69	566750	Mentor/Intern Program A	3
69	566770	Mentor/Intern Program A	4
69	566800	Mentor/Intern Program A	0.5
69	566820	Mentor/Intern Program A	1.5
69	566720	Mentor/Intern Program B	1
69	566740	Mentor/Intern Program B	2
69	566760	Mentor/Intern Program B	3
69	566780	Mentor/Intern Program B	4
69	566810	Mentor/Intern Program B	0.5
69	566830	Mentor/Intern Program B	1.5
65	164311	Microeconomics, Advanced Placement	1
27	335111	Microsoft Certification Training 1	1
27	335121	Microsoft Certification Training 2	1
27	335131	Microsoft Certification Training 3	1
22	439510	Mixed Chorus 1	1
22	439520	Mixed Chorus 2	1
22	439530	Mixed Chorus 3	1
22	439540	Mixed Chorus 4	1
22	439550	Mixed Chorus 5	1
22	439560	Mixed Chorus 6	1
22	439570	Mixed Chorus 7	1
22	439580	Mixed Chorus 8	1
44	136110	Modern Issues	1
66	161211	Modern World History	1
66	161111	Modern World History – Honors	1
66	169131	Modern World History – EL	1
66	164370	Money, Finance and Economics	1
22	431141	Music Listening and Literature	1
22	433130	Music Theory 1	1
22	434131	Music Theory 2	1
22	433151	Music Theory, Advanced Placement	1
66	164010	National and Global Issues	1
5	568810	Naval Science 1	1
6	568820	Naval Science 2	1
6	568830	Naval Science 3	1

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Page	Course Number	Course Title	Credits Awarded
6	568840	Naval Science 4	1
33	531230	Nursing Assistant	2
69	561000	Open Campus	0
50	463330	Personal Fitness 1	1
50	463430	Personal Fitness 1A	0.5
50	463530	Personal Fitness 1B	0.5
50	464230	Personal Fitness 2	1
50	464240	Personal Fitness 3 - Independent Study	1
27	331150	Personal Keyboarding	0.5
29	362030	Personal Relationships and Effective Parenting (P.R.E.P.)	1
66	164520	Philosophy of Knowledge	1
59	191242	Physics of Earth and Space	1
59	191241	Physics of Earth and Space – Honors	1
59	194301	Physics 1	1
59	194121	Physics 2	1
60	194161	Physics 1: Algebra-Based, Advanced Placement	1
60	194171	Physics 2: Algebra-Based, Advanced Placement	1
60	194181	Physics C, Advanced Placement 1: Mechanics	1
60	194191	Physics C, Advanced Placement 2: Electricity and Magnetism	1
61	194211	Physics with Applications	1
60	191901	Physics, Algebra-Based - Honors	1
55	233111	Pre-Calculus with Trigonometry - Honors	1
30	394080	Pre-Engineering Technology 1	1
31	390040	Pre-Engineering Technology 2	1
31	390050	Pre-Engineering Technology 3	1
25	493000	Pre-Veterinary, Large Animal Science	1
25	492000	Pre-Veterinary, Small Animal Care	1
32	497000	Principles of Engineering: (POE) – Project Lead the Way: Engineering	1
31	395100	Principles of the Biomedical Sciences – Project Lead the Way: Biomedical Sciences	1
36	535100	Principles of the Biomedical Sciences – Project Lead the Way: Biomedical Sciences (CTC)	2
66	164030	Psychology	1
66	165031	Psychology, Advanced Placement	1
67	165131	Psychology, Advanced Placement and Seminar	1
67	165130	Psychology, Advanced Placement and Seminar	1
14	292050	Publications 1	1

Page	Course Number	Course Title	Credits Awarded
14	293050	Publications 2	1
14	294050	Publications 3	1
14	295050	Publications 4	1
14	296050	Publications 5	1
14	296060	Publications 6	1
45	137200	Reading and Writing Workshop 1	1
45	137210	Reading and Writing Workshop 2	1
45	137220	Reading and Writing Workshop 3	0.5
45	137230	Reading and Writing Workshop 4	0.5
44, 55	561100	SAT Preparation – English & Math	0.5
61	197100	Science Mentor Intern Program 1	1
61	197110	Science Mentor Intern Program 2	1
61	197120	Science Mentor Intern Program 3	1
61	197130	Science Mentor Intern Program 4	1
61	197051	Science Mentor Intern Program 5	2
61	197061	Science Mentor Intern Program 6	2
61	197071	Science Mentor Intern Program 7	2
61	197081	Science Mentor Intern Program 8	2
61	195011	Science Research	1
61	195000	Science Research A	0.5
61	195100	Science Research B	0.5
14	291130	Sculpture 1	1
14	291151	Sculpture 2	1
23	432220	Show Choir 1	1
23	432230	Show Choir 2	1
23	432240	Show Choir 3	1
23	432250	Show Choir 4	1
45	562002	Skills Enrichment – Reading	1
55	562003	Skills Enrichment – Math – Experience 1	1
55	562007	Skills Enrichment – Math – Experience 2	1
66	164020	Sociology	1
72	261020	Spanish 1	1
72	262020	Spanish 2	1
72	263021	Spanish 3	1
72	264021	Spanish 4	1
72	265021	Spanish Advanced Placement Language	1
72	265022	Spanish Advanced Placement Literature	1
72	266011	Spanish Advanced Studies 1	1
72	267011	Spanish Advanced Studies 2	1
72	269230	Spanish APEX 1	1
72	269240	Spanish APEX 2	1
72	269250	Spanish APEX Advanced Placement	1

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Page	Course Number	Course Title	Credits Awarded
72	261170	Spanish for Bilingual Speakers 1	1
72	261171	Spanish for Bilingual Speakers 2	1
50	467010	Sports Medicine	1
55	232211	Statistics and Probability	1
55	232281	Statistics, Advanced Placement	1
51	462100	Strength Training/Fitness 1	1
51	462400	Strength Training/Fitness 1A	0.5
51	462500	Strength Training/Fitness 1B	0.5
51	463130	Strength Training/Fitness 2	1
51	464130	Strength Training/Fitness 3	1
51	464140	Strength Training/Fitness 4 - Independent Study	1
51	464450	Strength Training/Fitness 5 - Independent Study	1
51	464460	Strength Training/Fitness 6 - Independent Study	1
23	439610	String Orchestra 1	1
23	439620	String Orchestra 2	1
23	439630	String Orchestra 3	1
23	439640	String Orchestra 4	1
23	439650	String Orchestra 5	1
23	439660	String Orchestra 6	1
23	439670	String Orchestra 7	1
23	439680	String Orchestra 8	1
33	531220	Structure and Function of the Human Body	2
73	462000	Student Assistant, Aquatics	0
73	290000	Student Assistant, Art	0
73	560010	Student Assistant, Cafeteria	0
73	490000	Student Assistant, Career and Technology	0
73	340000	Student Assistant, Computer Science	0
73	561020	Student Assistant, Custodial	0
73	665005	Student Assistant, Drama/Theatre Arts/Dance	0
73	130000	Student Assistant, English	0
73	360000	Student Assistant, Family and Consumer Sciences	0
73	561030	Student Assistant, Guidance	0
73	560000	Student Assistant	0
73	230000	Student Assistant, Mathematics	0
73	561040	Student Assistant, Media	0
73	430000	Student Assistant, Music	1
73	561050	Student Assistant, Office	0
73	460000	Student Assistant, Physical Education	0
73	190000	Student Assistant, Science	0

Page	Course Number	Course Title	Credits Awarded
73	160000	Student Assistant, Social Studies	0
73	390000	Student Assistant, Technology Education	0
73	260000	Student Assistant, World Language	0
70	561160	Student Service Learning A	1
70	561170	Student Service Learning A	0.5
70	561190	Student Service Learning A	2
70	561360	Student Service Learning A	2
70	561460	Student Service Learning A	1
70	561470	Student Service Learning A	0.5
70	561180	Student Service Learning B	1
70	561200	Student Service Learning B	2
70	561260	Student Service Learning B	0.5
70	561370	Student Service Learning B	2
70	561480	Student Service Learning B	1
70	561560	Student Service Learning B	0.5
15	293141	Studio Art 1, Advanced Placement	1
15	294141	Studio Art 2, Advanced Placement	1
15	295141	Studio Art 3, Advanced Placement	1
15	296141	Studio Art 4, Advanced Placement	1
15	297141	Studio Art 5, Advanced Placement	1
15	297151	Studio Art 6, Advanced Placement	1
40	532001	Teaching as a Profession	1
51	466110	Team Sports Baseball/Softball 1	1
51	466120	Team Sports Baseball/Softball 2	1
51	466130	Team Sports Baseball/Softball 3	1
51	466131	Team Sports Baseball/Softball 4	1
51	466132	Team Sports Baseball/Softball 5	1
51	466133	Team Sports Baseball/Softball 6	1
51	466140	Team Sports Basketball 1	1
51	466150	Team Sports Basketball 2	1
51	466160	Team Sports Basketball 3	1
51	466161	Team Sports Basketball 4	1
51	466162	Team Sports Basketball 5	1
51	466163	Team Sports Basketball 6	1
51	466170	Team Sports Field Hockey 1	1
51	466180	Team Sports Field Hockey 2	1
51	466190	Team Sports Field Hockey 3	1
51	466191	Team Sports Field Hockey 4	1
51	466192	Team Sports Field Hockey 5	1
51	466193	Team Sports Field Hockey 6	1
51	466200	Team Sports Football 1	1
51	466210	Team Sports Football 2	1

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Page	Course Number	Course Title	Credits Awarded
51	466220	Team Sports Football 3	1
51	466221	Team Sports Football 4	1
51	466222	Team Sports Football 5	1
51	466223	Team Sports Football 6	1
51	462110	Team Sports General 1	1
51	462210	Team Sports General 1A	0.5
51	462310	Team Sports General 1B	0.5
51	462220	Team Sports General 2	1
51	462250	Team Sports General 3	1
51	462280	Team Sports General 4 - Independent Study	1
51	462290	Team Sports General 5	1
51	462360	Team Sports General 6	1
51	462370	Team Sports General 7	1
51	466230	Team Sports Lacrosse 1	1
51	466240	Team Sports Lacrosse 2	1
51	466250	Team Sports Lacrosse 3	1
51	466251	Team Sports Lacrosse 4	1
51	466252	Team Sports Lacrosse 5	1
51	466253	Team Sports Lacrosse 6	1
51	466260	Team Sports Soccer 1	1
51	466270	Team Sports Soccer 2	1
51	466280	Team Sports Soccer 3	1
51	466281	Team Sports Soccer 4	1
51	466282	Team Sports Soccer 5	1
51	466283	Team Sports Soccer 6	1
51	466290	Team Sports Volleyball 1	1
51	466300	Team Sports Volleyball 2	1
51	466310	Team Sports Volleyball 3	1
51	466311	Team Sports Volleyball 4	1
51	466312	Team Sports Volleyball 5	1
51	466313	Team Sports Volleyball 6	1
32	391030	Technical Drawing 1	1
32	392030	Technical Drawing 2	1
32	393031	Technical Drawing 3	1
32	394031	Technical Drawing 4	1
18	662150	Technical Theatre 1	1
18	662160	Technical Theatre 2	1
18	663220	Technical Theatre 3	1
18	663230	Technical Theatre 4	1
18	663240	Technical Theatre 5	1
18	663250	Technical Theatre 6	1

Page	Course Number	Course Title	Credits Awarded
18	663260	Technical Theatre 7	1
18	663270	Technical Theatre 8	1
41	531024	Television/Multimedia Production 1A	2
41	531025	Television/Multimedia Production 1B	2
41	531044	Television/Multimedia Production 2A	2
41	531051	Television/Multimedia Production 2B	2
70	562030	Temporary Administrative Attendance Waiver	0
70	539810	Transition Skills Program at CTC	1
18	660050	Theatre Business 1	.5
18	660060	Theatre Business 2	.5
18	660010	Theatrical Literacy, History and Criticism 1A	
18	660020	Theatrical Literacy, History and Criticism 1B	
18	660030	Theatrical Literacy, History and Criticism 2A	
18	660040	Theatrical Literacy, History and Criticism 2B	
51	461040	Unified Physical Activity 1	1
51	461042	Unified Physical Activity 2	1
51	461043	Unified Physical Activity 3	1
51	461044	Unified Physical Activity 4	1
67	164101	United States History, Advanced Placement (10th – 12th grade only)	1
67	164141	United States History, Advanced Placement and Seminar (9th – 12th grade)	1
67	164140	United States History, Advanced Placement and Seminar (9th – 12th grade)	1
67	167020	United States, 1945 to the Present	1
15	297120	Visual Arts First Year Thesis	1
15	297130	Visual Arts Second Year Thesis	1
15	297140	Visual Arts Third Year Thesis	1
18	660110	Voice and Movement 1	.5
18	660120	Voice and Movement 2	.5
23	439710	Voice Ensemble 1	1
23	439720	Voice Ensemble 2	1
23	439730	Voice Ensemble 3	1
23	439740	Voice Ensemble 4	1
23	439750	Voice Ensemble 5	1
23	439760	Voice Ensemble 6	1
23	439770	Voice Ensemble 7	1
23	439780	Voice Ensemble 8	1
28	344030	Web Site Development 1	1
28	344031	Web Site Development 2	1
41	538511A	Web Technology and Integrated Media A	2
41	538521B	Web Technology and Integrated Media B	2

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Page	Course Number	Course Title	Credits Awarded
15	293121	Western Art History	1
25	491210	Wood and Metal Structures	1
33	496120	Woodworking 1	1
33	496220	Woodworking 2	1
33	496321	Woodworking 3	1
33	496421	Woodworking 4	1
67	165151	World History: AP Modern	1
67	165141	World History: AP Modern	1
67	165140	World History: AP Modern, Seminar	1
67	169220	World Religions	1
67	164510	World War 2	1
19	660070	Writing For Stage and Film 1	.5
19	660080	Writing For Stage and Film 2	.5

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