

High School

# **COURSE OFFERINGS GUIDE 2024-2025**



**FREDERICK COUNTY PUBLIC SCHOOLS  
INSPIRE • MOTIVATE • INNOVATE**

# HIGH SCHOOL DIRECTORY

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# COURSE DESCRIPTIONS

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FCPS high schools offer students the choice of more than 300 courses. 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. Academies and Signature Programs provide rigorous opportunities for students to explore their interests or for advanced learners to grow domain-specific strengths and/or interests. 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, and Academy programs at the Career and Technology Center 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 4	Governor Thomas Johnson HS	Deadline – February 15.
Navy Junior ROTC (NJROTC) Academy, page 5	Governor Thomas Johnson HS	Late Applications – May 1
Project Lead the Way – Biomedical Sciences, page 6	Career and Technology Center	Contact school for current school year deadline.
Teacher Academy of Maryland, page 6	Career and Technology Center	CTC deadline: March 8

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 and Electronics)	
Project Lead the Way – Pre-Engineering,* page 6	Walkersville HS (Aeronautical and Electronics)	
Project Lead the Way – Pre-Engineering, page 6	Tuscarora HS (Computer Integrated Manufacturing and Electronics)	

For information regarding Out of District requests, refer to BOE Regulation #400-15 on the [www.fcps.org](http://www.fcps.org) web site.

**\*Transportation outside of the local attendance area is not provided.**

## 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, musical theater 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 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.

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## 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 students to challenge themselves across all subject areas. Interested students should go to IB page of the Urbana High School website to access program details and application information.

- 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 course and Extended Essay are required of all IB students. IB courses are listed in Step 7 under the appropriate curricular categories.

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## 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/>

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## 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. Completion of Naval Science 1-3 fulfills CTE completer requirements.

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### 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 Leadership; 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.

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### 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.

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### 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.

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## 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.

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## 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.

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## 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.

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## PROJECT LEAD THE WAY: PRE-ENGINEERING ACADEMY

*Offered at Linganore, Tuscarora and Walkersville High Schools.*

A series of four courses emphasizing problem-solving applied logic, research, and design introduces students to the scope, rigor, and discipline of engineering prior to entering college. Completion of four PLTW courses fulfills CTE completer requirements.

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## 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. Completion of the four courses fulfills CTE completer requirements.

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.

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## DUAL ENROLLMENT

Dual Enrollment refers to anytime a high school student is also enrolled at an institute of higher education. 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. Through a partnership with Frederick Community College (FCC), students can engage in dual enrollment options at no cost, including High School Based, Open Campus, Career Pathways, and Early College at FCC:

**High School Based:** High school students in this program take FCC courses at their high school or the Career and Technology Center during the regular school day. These are college level, credit-bearing courses taught by FCPS teachers serving as adjunct professors. Available courses vary by school; talk to your counselor to see what is offered at your FCPS high school.

**Open Campus:** High school students complete a college course on the college campus or through the college's online program. The course may be during or outside of the school day. Courses are taught by college faculty. Frederick County Public Schools students may participate in Open Campus with FCC for no tuition cost. Students may be approved to participate in programs with other institutes of higher education, however these programs may have costs associated with participation.

**Career Pathways:** High school students in this program explore career options and earn industry certifications or credentials by following a specific career track and taking courses either at their high school, on the FCC main campus, or at the FCC Monroe Center. The goal of Career Pathways students is to earn an industry certification or credential either before or shortly after high school graduation. Available career programs vary by school; course locations vary by chosen pathway.

**Early College at FCC:** High school students in the Early College program at FCC have the opportunity to earn an associate degree while completing high school by attending FCC full-time during their junior and senior years. Similar to traditional full-time undergraduate students, Early College students follow the FCC academic calendar and have the option to take day, evening, online, and weekend courses. Schedules are developed with the Early College Coordinator at FCC. Students must apply for admission to the Early College in the Spring of their 10th grade year.

### ***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 Dual Enrollment Participation Form;
- complete the college application for admission;
- meet the prerequisites for the course(s);
- complete diagnostic assessment or an equivalent placement measure that indicates readiness for college level work as determined by the Institution of Higher Education (IHE); and
- be approved to participate in selected courses/programs by the high school principal

### ***Dual Credit:***

Dual Credit means that students receive a high school credit for college coursework that earns college credits. If students receive Dual Credit, the grade appears on both the high school and college transcripts. Dual Credit courses are weighted in the high school GPA. Some college courses are aligned with FCPS courses and will count as a repeated course on the high school transcript. Generally, three and four credit college courses are eligible for Dual Credit.

Questions about Dual Enrollment and Dual Credit should be discussed with your school counselor.

For more information, see the joint FCC-FCPS website about Dual Enrollment.

<https://www.frederick.edu/admissions/dual-enrollment.aspx>

## ACADEMY FOR THE FINE ARTS

*Offered at Governor Thomas Johnson High School. Students from all other Frederick County public high schools are eligible to audition for these courses after meeting admission requirements.*

### Mission

Reach through Enrichment, Challenge through Extension, Prepare through Experience.

The Academy for the Fine Arts (AFA) at Governor Thomas Johnson High School is a college and career pathway program that offers Frederick County high school students in grades 10 to 12, the opportunity to take exceptional classes in the fields of dance, music, theatre, musical theatre or visual arts. AFA offers rigorous advanced courses with an intense curriculum as well as Dual Enrollment courses to challenge and engage students. The academic program allows for student refinement of individual artistic styles/techniques and portfolio development. A student may enroll for a one, two, or three year option in any of the focus areas. Academy students attend Gov. Thomas Johnson High School for two blocks of the day and return to their home high schools for blocks three and four. Students who need transportation may request it during the application process. AFA students are encouraged to participate in their home school events and extracurriculars as much as possible. 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, Musical Theatre, or Visual Arts). All third year students will complete a discipline-specific course structure including Theories and Practices in Content, Mentor/Internship, and Academy Capstone Project. See course descriptions below.

### ACADEMY OF FINE ARTS DANCE FOCUS

*Academy for the Fine Arts Dance Focus* caters to students with a passion for dance who demonstrate an interest to excel. Prior training is valued, however, emphasis is placed on a student's potential to grow as an artist. Students should be able to physically and verbally express their passion for the art of dance, show a strong desire to work diligently on technique, display a willingness to accept discipline and/or positive correction, exhibit flexibility, a natural sense of movement, and musicality, have an innate ability to follow directions, maintain a positive attitude at all times, and demonstrate the physique and stamina appropriate for rigorous dance.

Academy Dance Focus students will study Dance Technique and Composition, Dance History and Criticism, and Kinesiology and Anatomy. In addition, emphasis will be placed on preparing students for life after high school as they explore dance professions and prepare for auditions and interviews. In the third year of the Academy Dance Focus, students will complete both an Internship and Capstone project that allows them to extend and demonstrate

what they have learned throughout their time at the Academy.

Academy Dance Focus students will be required to participate in some after-school events, performances, and workshops. They will be responsible for providing specific shoes and dance attire in addition to reasonable Academy fees such as field trips and costumes.

Over the course of the first two years students will earn:

- 4 credits in Dance Technique and Composition
- 2 credits in Dance History and Criticism
- 1 credit in Dance Kinesiology and Anatomy
- 1 credit in Dance College and Career Readiness

The overall arc of the program is to begin by establishing a foundation or rigor and high expectations in the first year and moving into progressively more challenging work in year two and, finally, exploring each student's unique artistic voice in the final third year. The end goal is to provide a high level of instruction and experiences that prepare students for further study at the college level or entrance into the profession.

### ACADEMY OF FINE ARTS MUSIC FOCUS

*Academy for the Fine Arts Music Focus* program provides students with the opportunity to develop the foundations introduced in beginning music programs and ensembles at their home schools. Coursework emphasis for year one and year two students is on music theory, music history, music technology, piano studies, and solo/ensemble work. Students in the program are required to attend evening showcases, performances and extra appearances. Please note, showcase dates are mandatory and are an essential part of the curriculum. Dates for all events are available on the first day of the class and on the AFA website. After school rehearsals will be held to a minimal amount to allow students to participate in their home school's music opportunities. All students who attend the Music Focus are expected to participate in their home school's concerts and other activities.

Year(s) one and two of the Music Focus is divided into five separate courses of study, each one utilizing a weighted grading system. Over the course of two years, First and Second Year students will earn:

- 2 credits in AMS Music Literature
- 1 credit in AMS Piano (Piano is also eligible for Dual Enrollment credit)
- 1 credit in Music Technology
- 2 credits in Advanced Music Studies
- 2 credits in Music Theory (Music theory is also eligible for AP and Dual Enrollment credit)

The overall experience of the first and second year music focus is designed to train musicians in a wide range of skills, techniques and experiences that provide multiple perspectives into being an independent musician with a solid understanding of music's place in society and culture. Those students who remain in the program for three years will utilize the training and studies of years one and two to create their unique artistic voice for a final capstone project.



The overall arc of the program is to begin by establishing a foundation of rigor and high expectations in the first year and moving into progressively more challenging work in year two and, finally, exploring each student's unique artistic voice in the final third year. The end goal is to provide a high level of instruction and experiences that prepare students for further study at the college level or entrance into the profession.

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### ACADEMY OF FINE ARTS THEATRE FOCUS

*Academy of Fine Arts Theatre Focus* program provides students with the opportunity to develop the foundations introduced in beginning theater programs at their home schools. Coursework emphasis for year one and year two students is on theater history, theatre criticism, character development, script analysis, vocal techniques, movement philosophies, acting training philosophies, acting techniques, script writing, theatre business, auditioning and the preparation for a student entering college as a theatre major, particularly with workload expectations and rigor. Students in the program are required to attend evening showcases, performances and extra appearances. Please note, showcase dates are mandatory and are an essential part of the curriculum. Dates for all events are available on the first day of the class and on the AFA website. After school rehearsals will be held to a minimal amount to allow students to participate in their home school's drama opportunities. All students who attend the Theatre Focus are expected to participate in their home school's theatre productions and theatre activities.

Year(s) one and two of the Theatre Focus is divided into five separate courses of study, each one utilizing a weighted grading system. Over the course of two years, First and Second Year students will earn:

- 4 credits in Theatrical Literacy, History and Criticism (Dual Enrollment)
- 1 credit in Writing for Stage and Film
- 1 credit in Voice and Movement
- 1 credit in Methods and Techniques
- 1 credit in Theatre Business

The overall experience of the first and second year Theatre Focus student is designed to train actors in a wide range of skills, techniques and experiences that provide a broad overview of theatrical performance, practice, history and literature. Those students who remain in the program for three years will utilize the training and studies of years one and two to create their unique artistic voice for a final capstone project.

The overall arc of the program is to begin by establishing a foundation of rigor and high expectations in the first year and moving into progressively more challenging work in year two and, finally, exploring each student's unique artistic voice in the final third year. The end goal is to provide a high level of instruction and experiences that prepare students for further study at the college level or entrance into the profession.

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### ACADEMY OF FINE ARTS VISUAL ART FOCUS

*Academy of Fine Arts Visual Art focus* is for students who have successfully completed previous foundation art courses. The Visual Art Focus 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. Students develop an individual portfolio, a process portfolio, and refinements in individual artistic styles and techniques. Students analyze and critique 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 two years, First and second year students will earn:

- 2 credits in Art History (Journeys Through Arts Styles or Dual Enrollment)
- 2 credits in Advanced 2D, 3D, Photography or Computer Graphics
- 2 credits in AP Art Studio
- 2 credits in Visual Art Thesis

The overall arc of the program is to begin by establishing a foundation of rigor and high expectations in the first year and moving into progressively more challenging work in year two and, finally, exploring each student's unique artistic voice in the final third year. The end goal is to provide a high level of instruction and experiences that prepare students for further study at the college level or entrance into the profession.

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### ACADEMY OF FINE ARTS MUSICAL THEATRE FOCUS

*The Academy for the Fine Arts Musical Theatre Focus* provides students with the opportunity to develop a strong foundation in acting, dance, and voice. The program will emphasize the skills needed to grow as musical theatre artists while providing individualized instruction in pursuit of college and career pathways. Coursework will focus on history, business, and technique in all three performing genres (i.e., acting, dance, and voice). The technique courses will include one-on-one instruction as well as a focus on whole ensemble performance. Emphasis will be placed on growing as individual artists while providing various performance opportunities. Please note, showcase dates are mandatory and are an essential part of the curriculum. Dates for all events are available on the first day of the class and on the AFA website. After school rehearsals will be held to a minimal amount to allow students to participate in their home school's arts programs.

Over the course of two years, First and Second year students will earn:

- 2 credits in Vocal Technique and Performance
- 2 credits in Acting Technique and Performance
- 2 credits in Dance Technique and Performance
- 1 Credit in Musical Theatre History
- 1 Credit in Musical Theatre Business

The overall arc of the program is to begin by establishing a foundation of rigor and high expectations in the first year and moving into progressively more challenging work in year two and, finally, exploring each student's unique artistic voice in the final third year. The end goal is to provide a high level of instruction and experiences that prepare students for further study at the college level or entrance into the profession.

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### **ACADEMY OF FINE ARTS THIRD YEAR CURRICULUM: ALL FOCUS AREAS**

All third year students will complete a course structure including Theories and Practices in Content, Mentor/Internship, Academy Capstone Project, and advanced discipline-specific technique. Course descriptions are listed below. Students must complete year one and year two courses as a prerequisite for third year courses.

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#### **ADVANCED MUSICAL STUDIES THIRD YEAR (MUSIC FOCUS AFA)**

664261	3A	Grade 12
664271	3B	Grade 12

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#### **ADVANCED METHODS AND TECHNIQUES THIRD YEAR (THEATRE FOCUS AFA)**

660102	3A	Grade 12
660103	3B	Grade 12

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#### **DANCE TECHNIQUE AND COMPOSITION THIRD YEAR (DANCE FOCUS AFA)**

664463	3A	Grade 12
664464	3B	Grade 12

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#### **VISUAL ART THESIS 3 (VISUAL ARTS FOCUS AFA)**

297140		Grade 12
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#### **THEORIES AND PRACTICES IN CONTENT (AFA)**

663500 Grade 12

In this course, students complete final studies in selected disciplines of their focus area. Project based learning takes place with the guidance of the instructor and should demonstrate an understanding of current trends, opposing viewpoints, career pathways, and best practices of the selected topics through research, collaboration, interaction with professionals, field study, and presentations. Artifacts from projects and current issues in the arts will be addressed through regular discussion groups with other third year AFA students.

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#### **MENTOR/INTERNSHIP (AFA)**

663501 Grade 12

Students explore career opportunities that they may consider studying in a post-secondary setting. Students are placed for one semester with adult mentors to explore the responsibilities, benefits, advantages, and disadvantages of a career choice. Each school's Transition Education Teacher-Coordinator serves as a conduit between the school and internship site. Each student will be paired with a faculty advisor. An approved project is completed during the internship and requires the demonstration of both oral and written communication skills.

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#### **ACADEMY CAPSTONE PROJECT (AFA)**

663502 Grade 12

The capstone experience may be connected to the mentor/ internship; a research project; a career-related project; an arts, media or information resource design portfolio; the preparation and performance at a competition/festival/exhibition; or leadership of a school/community initiative. The capstone experience must be planned and approved in accordance with a teacher mentor and/or business partner upon completion of the application. Students must complete and submit a Capstone Project Application, a Capstone Experience Description, and a Capstone Experience Agreement. Capstone experiences will be assessed by the mentor teacher, and/or a small group consisting of academy leaders, teachers and/or professionals from the community.

## FCPS COURSES THAT MEET THE FINE ARTS GRADUATION REQUIREMENT

*To graduate, students must earn one high school credit in the Fine Arts. Double asterisked (\*\*) courses satisfy that requirement. .5 credit offerings do not meet the 1.0 Fine Arts graduation requirement. An additional .5 is required.*

Visual Arts	Music	Drama	Dance
Art 1**  Ceramics 1** Commercial Art 1** Digital Photography 1** Drawing and Painting 1** Computer Graphics 1** Jewelry and Small Sculpture 1**  Sculpture 1** Unified Art**	American Popular Music**  Class Piano 1**, 2** Color Guard 1** Concert Band 1** Concert Choir 1** Guitar 1**, 2** Instrumental Chamber Ensemble 1**, 2** Jazz Ensemble 1** Marching Band 1** Mixed Chorus 1** Music Listening and Literature** Music Theory 1** Show Choir 1** String Orchestra 1** Voice Ensemble 1** Integrated Music Technology: Introduction**	Introduction to Theatre (Theatre 1)**	Beginner Dance**  Intermediate Dance** Advanced Dance**

**All advanced coursework in Fine Arts (level 3 and above) are weighted in the student GPA.**

**In selected art courses, there may be a studio or supply fee for materials that become the property of the student. Fee waivers will be granted by request.**

### 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. Double asterisked (\*\*) courses below satisfy that requirement. All advanced coursework in Fine Arts (level 3 and above) are weighted in the student GPA.*

#### 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.*

#### 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.

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## 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.*

*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.

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## 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.)*

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.

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## 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)*

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.

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## ART

291010	1**
292011	2
291141	3
292012	4

### **Prerequisites:**

*Art 2: Art 1*

*Art 3: Art 2*

*Art 4: Art 3*

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.

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### ART HISTORY, ADVANCED PLACEMENT

293131	1	Grades 10-12
293132	2	Grades 10-12

*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. Each Art History section is year-long. The student is responsible for application fees required to take the AP test in this subject.*

The AP Art History course welcomes students into the global art world to engage with its forms and content as they research, discuss, read, and write about art, artists, art making, and responses to and interpretations of art. By investigating specific course content of 250 works of art characterized by diverse artistic traditions from prehistory to the present, the students develop in-depth, holistic understanding of the history of art from a global perspective. Students learn and apply skills of visual, contextual, and comparative analysis to engage with a variety of art forms, developing understanding of individual works and interconnections across history.

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### 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.*

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.

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### 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.

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### CERAMICS

291060	1**
292061	2
293061	3
293191	4

**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. 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.

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### COMMERCIAL ART

292040	1**
293041	2

**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. 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.

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## COMPUTER GRAPHICS

294040	1**
294041	2
294042	3
294043	4

*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.**

Students draw, design, and print a variety of computer-generated color graphics using a variety of Adobe 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.

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## DIGITAL ANIMATION

290401	1	Grades 10-12
290402	2	Grades 10-12
290403	3	Grades 10-12
290404	4	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.*

**Prerequisite: Level 1 digital art course (Digital Photography, Computer Graphics) and/or permission of instructor**

Students will animate characters, objects, environments and other graphics using Adobe Animate CC. Students will combine observational studies with the 12 Principles of Animation to add physics and emotive qualities to animated clips and stories. Sound effects, dialogue and music will add dimension to animations. Students will also explore the history and cultural impact of animation through professional works.

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## 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 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. 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.

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## DRAWING AND PAINTING

291020	1**
292021	2
293021	3
294021	4

**Prerequisites:**

**Drawing and Painting 2: Drawing and Painting 1.**

**Drawing and Painting 3: Drawing and Painting 2.**

**Drawing and Painting 4: Drawing and Painting 3.**

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.

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## DRAWING CONCEPTS

299921	.5 Credit
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For this course, students will design and produce a variety of drawing art works to create a process portfolio which will include a collection of finished art, self-evaluations, idea sketches, handouts, notes, and aesthetics. They will study art history, the elements and principles of design, and analysis. Student activities will include: working with graphite pencil, charcoal, pastel, color pencil, pen and ink.

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## 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.*

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. 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.

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### **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.*

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.

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### **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.

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### **SCULPTURE**

291130 1\*\*

291151 2

**Prerequisites:**

**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. Activities include constructing relief sculptures as well as sculptures in the round using additive, subtractive, and casting processes.

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### **STUDIO ART, ADVANCED PLACEMENT (AP 2-D, AP 3-D, AP DRAWING)**

293141 1

294141 2

295141 3

296141 4

297141 5

297151 6

**Prerequisites:**

**Studio Art 1, AP: Completion of a level 2 visual art class and approval of instructor.**

**Studio Art, AP 2-6: Previous completion of Studio Art AP 1 and approval of instructor.**

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.

**2-D Portfolio:** Students will demonstrate an understanding of design principles as applied to a two-dimensional surface, whether physical or virtual. Students will submit in a 2-D process or medium, including but not limited to: Graphic design, digital imagery, photography, collage, illustration, and printmaking, still images from video or film.

**3-D Portfolio:** Students will demonstrate an understanding of design principles as applied to a three-dimensional surface, showing an understanding of depth and space. While demonstrating and exploring 3-D design through additive, subtractive and fabrication processes. Students will submit a 3-D digital portfolio that fulfills the requirements – approaches include (but are not limited to) figurative, nonfigurative sculpture, architectural models, metal work, ceramics, 3-D fiber arts, and jewelry.

**Drawing Portfolio:** Students will demonstrate an understanding of design principles as applied to mark-making, line, surface, space, light and shade, and composition. Students should consider marks that can be used to make drawings, the arrangement of marks, the materials and processes used to make marks, and relationships of marks and ideas. Students can work with any materials, processes, and ideas. Drawing (analog and digital), painting, printmaking, and mixed media work are among the possibilities for submission. Still images from videos or film are accepted. Composite images may be submitted.

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### UNIFIED ART

298000	Unified Art**	Grades 9-12
298002	Unified Art 2	Grades 9-12
298003	Unified Art 3	Grades 9-12
298004	Unified Art 4	Grades 9-12

This course is designed to provide students with and without disabilities the opportunity to co-experience all forms of art activities in their least restrictive environment. Students with disabilities are instructed in specific arts and crafts designed to improve competency in creative problem solving, fine motor, and communicative skills. Selected student aides will assist with adapting materials, facilitating artmaking processes, and maintaining student portfolios.

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### 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.

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### WESTERN ART HISTORY

293121

Grades 10-12

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.

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### 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.

Courses in drama and dance are considered co-curricular and may involve after school and/or weekend rehearsals, performances, and activities. Co-curricular is defined by Policy 509 as programs and activities which are countywide expectations for a particular class and in which all students in the class must participate as part of their grade.

*To graduate, students must earn one high school credit in the Fine Arts. Double asterisked (\*\*) courses below satisfy that requirement. All advanced coursework in Fine Arts (level 3 and above) are weighted in the student GPA.*

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### ACTING TECHNIQUE AND PERFORMANCE

660431	1	Grades 10-12
660432	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. Course is for first and second year Academy students.*

Acting Technique and Performance focuses on the many different methods and philosophies of actor training, including (but not limited to) Stanislavski, Stella Adler, and Practical Aesthetics. Through the use of published plays, students will 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, enlarging creativity, memorization techniques, and building self-confidence. Time will be devoted to exploring character types and finding appropriate monologues for auditions.



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**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. Course is for first and second year Academy students.*

**Methods and Techniques 1 (1 semester):** Methods and Techniques focuses on the many different methods and philosophies of actor training, including (but not limited to) Stanislavski, Stella Adler, and Practical Aesthetics. Through the use of published plays, students will 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, imaginative play, enlarging creativity, memorization techniques, and building self-confidence. (.5 credit)

**Methods and Techniques 2 (1 semester):** Methods and Techniques continues the insight gained in Methods and Techniques on the many different methods and philosophies of actor training. Students will apply their practical understanding of terms such as action, objective, tactic, obstacle, conflict, intention, motivation, and “beat” with various scene studies. Emphasis will continue to be given to ensemble-building, imaginative play, enlarging creativity, memorization techniques, and building self-confidence. (.5 credit)

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**DANCE, ADVANCED**

663341\*\*

*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.

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**DANCE, ADVANCED, CONTINUING STUDIES IN**

665200

*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.

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**DANCE, BEGINNER**

663141\*\*

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.

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**DANCE, BEGINNER, CONTINUING STUDIES IN**

665000

*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.

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**DANCE COLLEGE AND CAREER READINESS**

663467

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. Course is for first and second year Academy students.*

This course is designed to concentrate on College and Career Readiness by working on the following: an artist statement or biography, a one-page resume, solos for audition purposes, a professional website, development of interview skills, and exploration of college, conservatory, and university programs in dance and other related fields of study. In addition, the course is designed for the students to investigate, research, and develop proposals for projects, internships, and/or choreography for the Capstone Project for the student's third year.

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**DANCE HISTORY AND CRITICISM**

663464 1

Grades 10-12

663465 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. Course is for first and second year Academy students.*

In this course, students explore dance personalities with specific choreographic and artistic ideas through their writings, videotapes of their dances, and by creating dance studies that are based on their ideas. Students will study dance trends and genres as they relate to world events while exploring the place and importance of dance in various cultures throughout history. In addition, students will become dance critics as they analyze the aesthetic elements of dance performance through a critical mindset. Students will relate work in Dance Composition directly to Dance History and Criticism studies so that the students complete written work as well as create dance projects based on historical trends and personalities.

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**DANCE, INTERMEDIATE**

663241\*\*

*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.

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**DANCE, INTERMEDIATE, CONTINUING STUDIES IN**

665100

*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.

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**DANCE KINESIOLOGY AND ANATOMY**

663466

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. Course is for first and second year Academy students.*

In this course, students will examine the structure and function of skeletal and muscular systems. (Kinesiology is the study of the body in motion through examination of how the skeleton, joints and muscles move and function.) Students will examine and evaluate their own muscular flexibility and strength. From this examination, each student will summarize strengths, limitations, muscle tension and flexibility that will be used to create a personal conditioning plan. Students will also explore and apply principles of body alignment, explore how muscles and joints work in motion, increase flexibility and range of muscle and joint motion, examine anatomical and connectivity relationships to the execution of movement, examine ways improving overall strength and flexibility influence dance technique, promote greater body awareness and concentration and encourage self-responsibility and autonomy. Healthy lifestyles will be explored as they relate to dancer nutrition and overall health.

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**DANCE PRODUCTION**

663441

*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.

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**DANCE PRODUCTION, CONTINUING STUDIES IN**

665300

*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.

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**DANCE TECHNIQUE AND COMPOSITION**

663460	1A	Grades 10-12
663461	1B	Grades 10-12
663462	2A	Grades 10-12
663463	2B	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. Course is for first and second year Academy students.*

This course emphasizes rigorous training to develop and extend the artistic, affective, cognitive, and psychomotor potentials of the student. The student will be provided with opportunities to explore and perform ballet, jazz, modern, world and theatrical dance forms. Focus will be on enhancing technique in regards to alignment, flexibility and strength with the goal of honing a student's ability to retain and explore movement phrases. In addition, students will study and enhance performance skills while implementing techniques learned in the classroom in a variety of performance venues.

During composition study, students will explore a variety of processes and elements that may be used in the study of making dances. Students will create their own dance studies in response to a variety of assigned choreographic exercises. Topics will include elements such as space, time, shape, and dynamics. Improvisation will be employed to initiate the exploration of concepts. Students will begin developing their own aesthetic and stylistic approach to choreography and will engage in critiques of their own and other's work and are expected to work rigorously and imaginatively to expand in new directions. Students will participate and perform in group and individual composition assignments.

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**DANCE TECHNIQUE AND PERFORMANCE**

660441 1 Grades 10-12

660442 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. Course is for first and second year Academy students.*

This course emphasizes dance training to develop and extend the artistic, affective, cognitive, and psychomotor potentials of the student. The student will be provided with opportunities to explore a variety of dance forms as they pertain to musical theatre. Examples include ballet, jazz, contemporary, and hip-hop as well as world dance forms such as Latin and African. Focus will be on enhancing technique in regards to alignment, flexibility and strength with the goal of honing a student's ability to retain and explore movement phrases. In addition, students will study and practice performance skills while implementing techniques found in the musical theatre world.

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**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.

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**INTRODUCTION TO THEATRE (THEATRE 1)**

665170\*\* Grades 9-12

Students will develop a basic knowledge of theatre through participation in learning activities, i.e. theatre exercises and performances. Students will research and create artistic products through exploration of theatrical texts, playwriting, and technical theatre elements. They will study the history and development of a variety of dramatic forms, and the cultural influence of diverse places and historical time periods. Students will also connect with and respond critically to theatrical performances and artistic productions.

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**MUSICAL THEATRE BUSINESS (.5 CREDIT)**660451 1 Grades 10-12  
660452 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. Course is for first and second year Academy students.*

Students will be introduced to the behind-the-scenes workings of Broadway and musical theatre. The class will explore the audition process; how to find work as a musical theatre performer and insights into the day to day workplace of theatre, television, film and commercials. Production professions such as design (lighting, set, costume), choreography, producing, directing, promotion and media will be investigated. The class will also discuss cold readings, creating showcases, meeting agents, contacting agencies, creating headshots and resumes and life as an actor professionally and regionally. Students will spend time on the collegiate selection process along with preparation and expectations for the college application and audition process.

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**MUSICAL THEATRE HISTORY (.5 CREDIT)**660401 1 Grades 10-12  
660402 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. Course is for first and second year Academy students.*

In this course, students explore musical theatre personalities and trends. Analysis of texts and video will aid in discovering how prominent people and events influence the Broadway stage and beyond. By synthesizing the art of musical theatre with world events, students gain a broader understanding of how musical theatre reflects themselves, their culture, and their community. In addition, students will engage in musical theatre criticism as they analyze the aesthetic elements of performance through a critical mindset.

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**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**Prerequisites:**

*Technical Theatre 1: Introduction to Theatre (Theater 1) and/or the prior permission of the instructor.*

*Technical Theatre 2-6: Technical Theatre 1 or prior course in Technical Theatre and/or the prior permission of the instructor.*

Students will explore concepts introduced in Introduction to Theatre by researching and applying the elements of art and design in constructing and creating theatrical concepts that may include scenery, costumes, lighting, and sound. They will learn FCPS safety standards for proper use of tools and equipment. Additionally, students will connect the importance of planning and organizational skills with being an effective member of a team in developing and implementing creative designs. In Technical Theatre 2-6, students will continue to explore concepts developed in Technical Theatre 1 by researching and applying the elements of art and design in constructing and creating theatrical concepts that may include scenery, costumes, lighting, and sound.

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**THEATRE (ADVANCED)**665180 2 Grades 9-12  
665190 3 Grades 10-12  
665194 4 Grades 11-12  
665195 5 Grades 12  
665196 6 Grades 12

*Prerequisite Theatre 2: Introduction to Theatre (Theatre 1) with a grade of C or higher and permission of the instructor.*

*Prerequisite Theatre 3: Theatre 2 and permission of the instructor.*

*Prerequisite Theatre 4: Theatre 3 and permission of the instructor.*

*Prerequisite Theatre 5: Theatre 4 and permission of the instructor.*

*Prerequisite Theatre 6: Theatre 5 and permission of the instructor.*

Students will develop and refine skills in acting theory, as well as varied styles and techniques of acting, through research and individual performances/scene work. They begin to develop and refine 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 extended monologues and/or 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 will read, analyze, and perform material from a variety of theatrical eras and playwrights. Students will explore the basic elements of technical theatre (e.g., makeup, lighting) and its relationship to the actor. Students will continue to develop effective methods of responding thoughtfully to theatrical performances and productions throughout the course.

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## 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. Courses for first and second Year Academy students.*

**Theatre Business 1:** This class concentrates on choosing contemporary and classical monologues best suited for an audition. The 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 also discuss cold readings, creating showcases, voice-overs, meeting agents, contacting agencies, pictures & resumes, mailings and life as an actor professionally and regionally. Students may “cold read,” prepare assigned material, receive directorial adjustments, or be put through their paces in mock callbacks. Students will spend time on the collegiate selection process along with preparation and expectations for the college application and audition process. (.5 credits)

**Theatre Business 2:** This class concentrates on choosing contemporary and classical monologues best suited for an audition. The 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 also discuss cold readings, creating showcases, voice-overs, meeting agents, contacting agencies, pictures & resumes, mailings and life as an actor professionally and regionally. Students may “cold read,” prepare assigned material, receive directorial adjustments, or be put through their paces in mock callbacks. Students will spend time on the collegiate selection process along with preparation and expectations for the college application and audition process. (.5 credits)

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## 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. Courses for first and second Year Academy students.*

**1A and 1B (2 semesters):** Each semester this class will focus on a chosen Western theatrical history, drama and practices of an instructor chosen time period. Students will study the social, political, musical, cultural and historical influences of the instructor chosen time period to understand the context in which that theatre was created. Likewise, they will explore the means by which theatre was produced and practiced during the chosen time period that may include one or more of the following focuses: theatre companies, acting styles, actors, playwrights, and producers. They will also study the dramatic literature of this instructor chosen time period that will include a critical analysis of at least two texts that represents the instructor chosen time period. Students will also write several critical analysis pieces each semester that will include: at least two live performance

reviews approved by the instructor; two film reviews of Academy Award winning performances; and various journals and response pieces. All writing completed in the course will use appropriate MLA formatting and rules. The class also consists of a performance lab of a Shakespearean text. (1 credit per semester)

**2A and 2B (2 Semesters):** Each semester this class will continue to focus on Western theatrical history, drama and practices of Classical Athens through post-Depression American theatre. Students will study the social, political, musical, cultural and historical influences of an instructor chosen time period to understand the context in which that theatre was created. Likewise, they will explore the means by which theatre was produced and practiced during the chosen time period that may include one or more of the following focuses: theatre companies, acting styles, actors, playwrights, and producers. They will also study the dramatic literature of this instructor chosen time period that will include a critical analysis of at least two texts that represents the instructor chosen time period. Students will also write several critical analysis pieces each semester that will include: at least two live performance reviews approved by the instructor; two film reviews of Academy Award winning performances; and various journals and response pieces. All writing completed in the course will use appropriate MLA formatting and rules. The class also consists of a performance lab of a Shakespearean text. (1 credit per semester)

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## UNIFIED DANCE

666000

*Prerequisite: Permission of instructor.*

This course is designed to provide students with and without disabilities the opportunity to co-experience dance activities in their least restrictive environment. Students with disabilities are instructed in specific dance technique, creative movement, and qualities of performance. Selected student leaders will adapt materials and activities, provide peer teaching, modeling and assistance, and choreograph performances that are tailored to meet the needs of all students that are connected to the National Core Arts Standards for Dance.

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## VOCAL TECHNIQUE AND PERFORMANCE

660421	1	Grades 10-12
660422	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. Course is for first and second year Academy students.*

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. The first year will introduce basic diction and projection skills, refining the actor’s use of their voice through deepening their experience of resonance along with clarifying vowel and consonant articulation. Time will be dedicated to one-on-one vocal training in preparation for auditions. Basic elements of speech will be explored to help the actor bring vocal clarity, energy, and point of view to any song. Students will discover body mechanics, physical alignment, connection to breath, and self-awareness.

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**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. Courses for first and second year Academy students.*

**Voice and Movement 1 (1 semester):** The focus of the Voice and Movement I 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. The first year will introduce basic diction and projection skills, refining the actor's use of their voice through deepening their experience of resonance along with clarifying vowel and consonant articulation. Basic elements of speech will be explored to help the actor bring vocal clarity, energy and point of view to any text. Movement in year one will focus on the fundamentals of body awareness and control, sense, and awareness through movement. Students will discover body mechanics, physical alignment, connection to breath, and self-awareness. (.5 credit)

**Voice and Movement 2 (1 semester):** The focus of the Voice and Movement II class is to further the concepts learned from Voice and Movement I. Students will continue to work on a greater awareness of and connection to the actor's natural voice and physical body, with particular focus on movement and destinations on the stage. Further study will include the role of psychological and physical connections for continued improved self-awareness, imagination, expressiveness and embodiment. As introduced in Voice and Movement I, students will build on breath and vocal production, opening the physical channels of communication, physical alignment, and appropriate tension to begin to build vocal strength and connecting the voice to specific characters. The course will continue to utilize advanced diction and projection skills and its relation to the needs of the dramatic work. Movement in year two will build on the fundamentals of body awareness and control, sense, and awareness explored in Voice and Movement I. Students will apply body mechanics, physical alignment, connection to breath, stamina, and self-awareness in relation to performances. (.5 credit)

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**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. Courses for first and second year Academy students.*

**Writing for Stage and Film I (1 semester):** 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 workshopped both in class, and during individual conferences, and, finally, submitted in the young playwrights competition through CenterStage Baltimore. (.5 credit)

**Writing for Stage and Film II (1 semester):** Writing for stage and screen continues to provide students a chance to participate in dramatic writing. The class includes theatre games and improvisation activities, which continue to serve as a springboard for narrative techniques particular to the student's particular needs. Students continue to read and analyze a number of plays, and apply points of craft to their own work. After experimenting with various writing and acting exercises, students will write and revise a ten to 30 minute one-act play, which is then workshopped both in class, and during individual conferences, and, finally, submitted in the young playwrights competition through CenterStage of Baltimore. (.5 credit)

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**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.

Courses in music are considered co-curricular and may involve after school and/or weekend rehearsals, performances, and activities. Co-curricular is defined by Policy 509 as programs and activities which are countywide expectations for a particular class and in which all students in the class must participate as part of their grade.

*In order to graduate from a Maryland high school, students must earn one high school credit in the Fine Arts. Double asterisked (\*\*) courses below satisfy that requirement. All advanced coursework in Fine Arts (level 3 and above) are weighted in the student GPA.*

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### ADVANCED MUSIC STUDIES

668121	1	1 credit	Grades 10-12
668221	2	1 credit	Grades 10-12

*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. Courses for first and second year Academy students.*

This course integrates material studied in theory and history and improves individual musicianship through solo and ensemble performance, group discussion, study of effective practice and rehearsal techniques, and reflective analysis of performance literature. Assessments for this class involve performances outside of the normal school day. Demonstration of essential performance technique on scales, etudes, and sight reading will be regularly assessed. Professionals will periodically be brought in to conduct masterclasses and clinics.

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### ADVANCED MUSIC STUDIES MUSIC HISTORY AND LITERATURE

668140	1	1 credit	Grades 10-12
668150	2	1 credit	Grades 10-12

*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. Courses for first and second year Academy students.*

**Music History and Literature 1:** History and Literature is a course designed to expose students to the elements of music and the study of music from the beginning of time through the Renaissance and Baroque eras and ending with the Early Classical period. Students will primarily learn through listening, class discussion, projects and research as we study the past and connect it to current practice.

**Music History and Literature 2:** History and Literature is a course designed to immerse students into selected musical works that demonstrate specific compositional techniques and trends from a variety of time periods beginning with the classical era and ending with the present. Students will primarily learn through listening, class discussion, and research as we study the past and connect it to current practice.

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### ADVANCED MUSIC STUDIES MUSIC TECHNOLOGY

668230	1	1 credit	Grades 10-12
669130	2	1 credit	Grades 10-12

*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. Courses for first and second year Academy students.*

Music Technology guides students through a project-based curriculum that focuses on the principles of sound, computerized notation, digital audio, and composition through various mediums. Students will be guided through several learning modules that apply theory, science, and creative processes in order to lead to a deeper understanding of how technology in music has impacted the world for professionals and consumers, and how it can be used effectively in both realms.

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### ADVANCED MUSIC STUDIES MUSIC THEORY

668100	1A	.5 credit	Grades 10-12
669200	1B	.5 credit	Grades 10-12

*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. Courses for first and second year Academy students. AFA Music Theory 1A/1B is offered as a school-based Dual Enrollment course through FCC.*

This course will prepare students with key fundamentals of music theory and ear training allowing for full preparation for the AP music theory curriculum. Students will experience a variety of exercises and practice with listening, composing, arranging, and perceiving relative to specific theory concepts. Units covered include scales, intervals, chords, microanalysis, macro-analysis, counterpoint, and four-part writing.

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### ADVANCED MUSIC STUDIES MUSIC THEORY, ADVANCED PLACEMENT

668110	1A	.5 credit	Grades 10-12
669210	1B	.5 credit	Grades 10-12

*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. Courses for first and second year Academy students.*

*Prerequisite: Advanced Music Studies Music Theory 1A/1B.*

The Advanced Music Studies AP Music Theory course is designed to begin where the Music Theory 1 class concludes.

Students will engage in rigorous preparation to take the College Board AP Music Theory Exam. Students planning to major in music in college may be able to enroll in an advanced music theory course at an undergraduate institution, depending on each of the higher education institutions' AP policies.

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### ADVANCED MUSIC STUDIES PIANO

668120	1 Basic	1 credit	Grades 10-12
668220	2 Advanced	1 credit	Grades 10-12

*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. Courses for first and second year Academy students.*

Advanced Piano in the Academy of Fine Arts focuses on progressing from a student's admission level of performance to a level appropriate to college entrance. Demonstration of essential performance technique on scales, etudes, and sight reading will be regularly assessed. Assessments for this class will be both performance-based and include written examinations. Course is comparable to an independent study, allowing students to assume responsibility for individual progress and time management.

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## AMERICAN POPULAR MUSIC

431120**	1 credit
431125	.5 credit

**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.

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## 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.

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## COLOR GUARD

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 color guard 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 color guard for the marching band at their high school during the fall marching band season. The composition of the color guard 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 color guard, 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.

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## CONCERT BAND

439020	1**
439040	2
439060	3
439080	4

**Prerequisites:**

**First band course:** *Band program at the middle-school level. If no previous experience, permission of the instructor is required.*

**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. 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 all activities (including rehearsals) is required.

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## 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.

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## 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.

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## 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.

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## INTEGRATED MUSIC TECHNOLOGY: CONTINUING STUDIES

434100	1
434110	2
434120	3

### 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.

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## INTEGRATED MUSIC TECHNOLOGY: INTRODUCTION

431001**	Grades 10-12
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**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.

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### 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.

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### MARCHING BAND

439010	1**
439030	2
439050	3
439070	4

**Prerequisites:**

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

*Additional band courses: Previous band course(s) and prior permission of the instructor. . If no previous experience, permission of the instructor is required.*

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 required 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.

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### 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 prepared 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.

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### MUSIC - IB

SL – 660301 (one year)	Grades 11 and/or 12
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.

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## 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.

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## 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.

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## 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 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.

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**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.

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**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 & TECHNICAL EDUCATION

Career and Technical 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.

In selected art courses, there may be a studio or supply fee for materials that become the property of the student. Fee waivers will be granted by request

### COMPUTER SCIENCE OR ENGINEERING GRADUATION REQUIREMENT

THE FOLLOWING COURSES SATISFY THE MSDE GRADUATION REQUIREMENT:

#### ENGINEERING DESIGN AND APPLICATIONS

394095 Grades 9 - 12

*This course satisfies the one-credit Computer Science and Engineering Graduation requirement.*

Students will develop problem solving and design skills as they work through a variety of real-world problems. Students use creative problem solving and computational thinking to develop solutions using Computer Aided Design, modeling and prototyping, and basic computing concepts. This collaborative class combines both hands-on and digital processes and skills to engage the students as they approach complex scenarios. This course will expose students to a variety of potential career pathways in design, project management, engineering, and computer science.

#### FOUNDATIONS OF COMPUTER SCIENCE

349910 Grades 9 - 12

*This course satisfies the one-credit graduation requirement for Computer Science and Engineering.*

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.

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

497011 Grades 9 - 12

*Offered only at Linganore, Tuscarora and Walkersville.*

*This course satisfies the one-credit Computer Science and Engineering Graduation requirement.*

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).

#### PRE-ENGINEERING TECHNOLOGY 1

394080

Grades 10 - 12

*Offered only at Oakdale High School. This course satisfies the one-credit graduation Computer Science and Engineering Graduation requirement.*

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.

### AGRICULTURE

#### COMPLETERS:

#### AGRICULTURE ANIMAL SCIENCE (3 REQUIRED COURSES)

Introduction to Agricultural Science and Technology\*

Pre Vet Small Animal Care

Pre Vet Large Animal

#### AGRICULTURE MECHANICS (3 REQUIRED COURSES)

Engines and Power 1

Engines and Power 2

Advanced Mechanics

#### HORTICULTURE (3 REQUIRED COURSES)

Introduction to Agricultural Science and Technology\*

Horticulture 1

Horticulture 2

\*Also meets Financial Literacy requirement.

#### ANIMAL SCIENCE COMPLETER PROGRAM OF STUDY

#### INTRODUCTION TO AGRICULTURAL SCIENCE AND TECHNOLOGY

492351

Grades 9 - 12

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.

Meets Personal Financial Literacy requirement.

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**PRE-VET, 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.

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**PRE-VET, 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.

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**AGRICULTURE MECHANICS COMPLETER PROGRAM OF STUDY**

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**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 three credits for the Agriculture Mechanics Completer Program.

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**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 three credits for the Agriculture Mechanics Completer Program.

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**ADVANCED MECHANICS**

491361

Grades 11 - 12

**Offered at** *Catoctin, 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.

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**HORTICULTURE COMPLETER PROGRAM OF STUDY**

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**INTRODUCTION TO AGRICULTURAL SCIENCE AND TECHNOLOGY**

492351

Grades 9 - 12

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.

Meets Personal Financial Literacy requirement.

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**HORTICULTURE/FLORICULTURE**

491030 1

Grades 9 - 12

492031 2

Grades 9 - 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.

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## AGRICULTURE ELECTIVES

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### 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.

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### 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.

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### 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.

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### HORTICULTURE/FLORICULTURE

493031 3 Grades 10 - 12

*Prerequisite: Horticulture 2.*

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.

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.

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### 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.

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## BUSINESS EDUCATION

### COMPLETERS:

#### BUSINESS MANAGEMENT (3 REQUIRED COURSES)

Principles of Business Management and Entrepreneurship\*  
Principles of Finance and Accounting\*  
Advanced Business Management

#### FINANCE AND ACCOUNTING (3 REQUIRED COURSES)

Principles of Business Management and Entrepreneurship\*  
Principles of Finance and Accounting\*  
Advanced Finance and Accounting

#### MARKETING (3 REQUIRED COURSES)

Principles of Business Management and Entrepreneurship\*  
Principles of Finance and Accounting\*  
Principles of Marketing

#### BUSINESS ADMINISTRATIVE SERVICES (4 REQUIRED COURSES)

Principles of Business Management and Entrepreneurship\*  
Principles of Finance and Accounting\*  
Office Systems Management 1  
Office Systems Management 2

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.

\*Meets Personal Financial Literacy requirement

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### BUSINESS MANAGEMENT COMPLETER PROGRAM OF STUDY

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#### PRINCIPLES OF BUSINESS MANAGEMENT AND ENTREPRENEURSHIP

331010 Grades 9 – 12

Serving as one of the foundational courses for the Business, Management, and Finance CTE completers, Principles of Business Management and Entrepreneurship provides a macro-level study of the business world, including business structure and finance, and the interconnections among industry, government, and the global economy. This course emphasizes problem-based, real-world applications of business concepts as well as personal financial decision making. Students will also be introduced to some core competencies of Entrepreneurship which include: creativity, determination, integrity, communication, engagement, and putting together a business vision. Students will develop the communication skills that will be necessary for success in the workplace and college. Students will be expected to think analytically; improve written and oral communication skills; enhance listening and questioning skills; learn and practice the art of conversation; improve public speaking skills; broaden their awareness of career

options; practice using teamwork to make decisions and solve problems; and learn why people skills, communications skills, and networking skills can help them succeed in their careers. Students will understand the business world and be more prepared to meet their career goals and objectives.

Meets Personal Financial Literacy requirement.

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### **PRINCIPLES OF FINANCE AND ACCOUNTING**

332040

Grades 9- 12

Serving as one of the foundational courses for the Business, Management, and Finance CTE completers, Principles of Finance and Accounting will first expose students to the six basic principles of finance: Risk & Return, Time Value of Money, Profitability & Liquidity, Cash Flow Principle, Diversity Principle, and the Hedging Principle. An understanding of fundamental accounting concepts, skills and competencies is essential to making informed business decisions. Students will learn to apply generally accepted accounting principles to determine the value of assets, liabilities, and owner's equity as they apply to various forms of manual and computerized systems for service and merchandising business. Students will apply appropriate accounting principles to payroll and tax liabilities. Students will utilize spreadsheet software to apply the accounting and financial knowledge in order to analyze, evaluate, and understand financial data and accounting principles. Students will identify positions and career paths in the field of accounting and will examine the role of ethics and social responsibility in decision making.

Meets Personal Financial Literacy requirement.

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### **ADVANCED BUSINESS MANAGEMENT**

333090

Grades 10 - 12

*Prerequisite: Principles of Finance and Accounting or Principles of Management & Entrepreneurship*

This course is designed to be the third course for the Business Management Completer and satisfies the final credit. It provides students with the knowledge that will prepare them for post-high school levels of education and entry-level positions in the workforce. Topics include: leadership styles, types of business ownership, creating a business plan, management functions, manager/entrepreneur responsibilities, and career information. Focus will be on the role of business in society; the changing nature of contemporary business practices; major management concepts, theories, and theorists, the processes of management (functional, operational, human relations), business law and ethics, and business communications. Activities are used to develop skills in decision making, leadership, stress management, communications, marketing, finance, and selecting and managing employees. Awareness of ethical issues and application of ethical decision-making models will be reinforced throughout the course. Students will understand the business world and be more prepared to meet their career goals and objectives.

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## **FINANCE & ACCOUNTING COMPLETER PROGRAM OF STUDY**

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### **PRINCIPLES OF BUSINESS MANAGEMENT AND ENTREPRENEURSHIP**

331010

Grades 9 – 12

Serving as one of the foundational courses for the Business, Management, and Finance CTE completers, Principles of Business Management and Entrepreneurship provides a macro-level study of the business world, including business structure and finance, and the interconnections among industry, government, and the global economy. This course emphasizes problem-based, real-world applications of business concepts as well as personal financial decision making. Students will also be introduced to some core competencies of Entrepreneurship which include: creativity, determination, integrity, communication, engagement, and putting together a business vision. Students will develop the communication skills that will be necessary for success in the workplace and college. Students will be expected to think analytically; improve written and oral communication skills; enhance listening and questioning skills; learn and practice the art of conversation; improve public speaking skills; broaden their awareness of career options; practice using teamwork to make decisions and solve problems; and learn why people skills, communications skills, and networking skills can help them succeed in their careers. Students will understand the business world and be more prepared to meet their career goals and objectives.

Meets Personal Financial Literacy requirement

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### **PRINCIPLES OF FINANCE AND ACCOUNTING**

332040

Grades 9- 12

Serving as one of the foundational courses for the Business, Management, and Finance CTE completers, Principles of Finance and Accounting will first expose students to the six basic principles of finance: Risk & Return, Time Value of Money, Profitability & Liquidity, Cash Flow Principle, Diversity Principle, and the Hedging Principle. An understanding of fundamental accounting concepts, skills and competencies is essential to making informed business decisions. Students will learn to apply generally accepted accounting principles to determine the value of assets, liabilities, and owner's equity as they apply to various forms of manual and computerized systems for service and merchandising business. Students will apply appropriate accounting principles to payroll and tax liabilities. Students will utilize spreadsheet software to apply the accounting and financial knowledge in order to analyze, evaluate, and understand financial data and accounting principles. Students will identify positions and career paths in the field of accounting and will examine the role of ethics and social responsibility in decision making.

Meets Personal Financial Literacy requirement.

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**ADVANCED FINANCE AND ACCOUNTING**

333041

Grades 10 - 12

*Prerequisite: Principles of Finance and Accounting*

Students receive a basic accounting review followed by an introduction to an 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 three credits for the Finance and Accounting CTE Program Completer.

apply appropriate accounting principles to payroll and tax liabilities. Students will utilize spreadsheet software to apply the accounting and financial knowledge in order to analyze, evaluate, and understand financial data and accounting principles. Students will identify positions and career paths in the field of accounting and will examine the role of ethics and social responsibility in decision making.

Meets Personal Financial Literacy requirement.

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**PRINCIPLES OF MARKETING**

338000

Grades 10-12

*Prerequisite: Principles of Finance and Accounting or Principles of Management & Entrepreneurship*

This course is designed to be the third course for the Marketing Completer and satisfies the final credit. It introduces the student to the essential concepts of marketing theory and the foundations, functions and benefits of marketing in a free enterprise system and the students will use and incorporate technologies to conduct research and communicate. In addition, students will investigate the various and ever-improving alternatives for electronic marketing that include, but are not limited to social media, digital marketing, E-commerce, and more. Students will integrate their knowledge of legal issues, the importance of ethics, and social responsibilities in marketing. Students will understand and demonstrate strong interpersonal skills and develop an appreciation of human diversity. By the end of Principles of Marketing, students will have a solid understanding of the many diverse career opportunities in the field of marketing.

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**MARKETING COMPLETER PROGRAM OF STUDY**

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**PRINCIPLES OF BUSINESS MANAGEMENT AND ENTREPRENEURSHIP**

331010

Grades 9 – 12

Serving as one of the foundational courses for the Business, Management, and Finance CTE completers, Principles of Business Management and Entrepreneurship provides a macro-level study of the business world, including business structure and finance, and the interconnections among industry, government, and the global economy. This course emphasizes problem-based, real-world applications of business concepts as well as personal financial decision making. Students will also be introduced to some core competencies of Entrepreneurship which include: creativity, determination, integrity, communication, engagement, and putting together a business vision. Students will develop the communication skills that will be necessary for success in the workplace and college. Students will be expected to think analytically; improve written and oral communication skills; enhance listening and questioning skills; learn and practice the art of conversation; improve public speaking skills; broaden their awareness of career options; practice using teamwork to make decisions and solve problems; and learn why people skills, communications skills, and networking skills can help them succeed in their careers. Students will understand the business world and be more prepared to meet their career goals and objectives.

Meets Personal Financial Literacy requirement.

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**BUSINESS ADMINISTRATIVE SERVICES COMPLETER PROGRAM OF STUDY**

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**PRINCIPLES OF BUSINESS MANAGEMENT AND ENTREPRENEURSHIP**

331010

Grades 9 – 12

Serving as one of the foundational courses for the Business, Management, and Finance CTE completers, Principles of Business Management and Entrepreneurship provides a macro-level study of the business world, including business structure and finance, and the interconnections among industry, government, and the global economy. This course emphasizes problem-based, real-world applications of business concepts as well as personal financial decision making. Students will also be introduced to some core competencies of Entrepreneurship which include: creativity, determination, integrity, communication, engagement, and putting together a business vision. Students will develop the communication skills that will be necessary for success in the workplace and college. Students will be expected to think analytically; improve written and oral communication skills; enhance listening and questioning skills; learn and practice the art of conversation; improve public speaking skills; broaden their awareness of career options; practice using teamwork to make decisions and solve problems; and learn why people skills, communications skills, and networking skills can help them succeed in their careers. Students will understand the business world and be more prepared to meet their career goals and objectives.

Meets Personal Financial Literacy requirement.

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**PRINCIPLES OF FINANCE AND ACCOUNTING**

332040

Grades 9- 12

Serving as one of the foundational courses for the Business, Management, and Finance CTE completers, Principles of Finance and Accounting will first expose students to the six basic principles of finance: Risk & Return, Time Value of Money, Profitability & Liquidity, Cash Flow Principle, Diversity Principle, and the Hedging Principle. An understanding of fundamental accounting concepts, skills and competencies is essential to making informed business decisions. Students will learn to apply generally accepted accounting principles to determine the value of assets, liabilities, and owner's equity as they apply to various forms of manual and computerized systems for service and merchandising business. Students will



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**PRINCIPLES OF FINANCE AND ACCOUNTING**

332040

Grades 9- 12

Serving as one of the foundational courses for the Business, Management, and Finance CTE completers, Principles of Finance and Accounting will first expose students to the six basic principles of finance: Risk & Return, Time Value of Money, Profitability & Liquidity, Cash Flow Principle, Diversity Principle, and the Hedging Principle. An understanding of fundamental accounting concepts, skills and competencies is essential to making informed business decisions. Students will learn to apply generally accepted accounting principles to determine the value of assets, liabilities, and owner's equity as they apply to various forms of manual and computerized systems for service and merchandising business. Students will apply appropriate accounting principles to payroll and tax liabilities. Students will utilize spreadsheet software to apply the accounting and financial knowledge in order to analyze, evaluate, and understand financial data and accounting principles. Students will identify positions and career paths in the field of accounting and will examine the role of ethics and social responsibility in decision making.

Meets Personal Financial Literacy requirement.

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**OFFICE SYSTEMS MANAGEMENT 1**

335111

Grades 10 - 12

*Prerequisite: Principles of Finance and Accounting or Principles of Management & Entrepreneurship*

This course is designed to be the third course for the Business Administration Services Completer. The course provides the student with a study of basic business practices, information systems, and computer applications. Students develop managerial and technical skills for business support operations through applied learning. Students are exposed to various software utilized in the business world including Microsoft Office and Google Apps for Education.

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**OFFICE SYSTEMS MANAGEMENT 2**

335121

Grades 10 - 12

*Prerequisite: Principles of Finance and Accounting or Principles of Management & Entrepreneurship AND Office Systems Management 1*

This course is designed to be the fourth course for the Business Administrative Services Completer and satisfies the final credit. Students will develop advanced skills using industry leading business productivity software with the potential to acquire credentials such as the Microsoft Office Specialist (MOS). Students will be expected to think analytically, manipulate information, and use the computer as a productivity tool through integrated application programs. Expertise in technology will contribute to students' future career mobility, advancement potential, compensation and job satisfaction.

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**BUSINESS ELECTIVES**

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**OFFICE SYSTEMS MANAGEMENT 3**

335131

Grades 10 - 12

*Prerequisite: Principles of Finance and Accounting or Principles of Management & Entrepreneurship AND Office Systems Management 1 & 2*

Students develop the skills to utilize advanced word processing and spreadsheet applications. Industry-standard software package used is Microsoft Office (Word and Excel) are utilized. Students taking this course have the opportunity to 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.

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**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.

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**COMPUTER SCIENCE****COMPLETER:****COMPUTER AND INFORMATION SCIENCES  
(3 REQUIRED COURSES)**

AP Computer Science Principles

AP Computer Science

Advanced Computing Concepts or Internship/Youth Apprenticeship

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**COMPUTER SCIENCE COMPLETER PROGRAM OF STUDY**

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**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.

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**COMPUTER SCIENCE A, 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 cultivate their understanding of coding through analyzing, writing, and testing code as they explore concepts like modularity, variables, and control structures and focuses on computing skills related to programming in Java.

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## ADVANCED COMPUTING CONCEPTS

344042

Grades 10 – 12

*Prerequisite: Foundations of Computer Science, Computer Science Principles Advanced Placement, or Computer Science A Advanced Placement.*

This one-credit course provides an in-depth programming exploration and applications web development, networking, cyber-security, and ethical hacking, using a specific programming language (java, C++, html, & etc.). Students will gain the basics of HTML, JavaScript, and PHP, and will challenge them to incorporate more of the technology that happens behind the scenes. Cybersecurity will be a major theme as students learn to design and code advanced websites that can receive user input, store data, and populate pages based upon that stored data. Prior experience in programming is required.

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## 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.*

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.

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## EARLY CHILDHOOD AND CULINARY

### COMPLETERS:

#### CHILD DEVELOPMENT (4 REQUIRED COURSES)

CD 1 Child Growth and Development

CD 2 Learning Environment for Preschoolers

CD 3 CDA Portfolio and Internship 1

CD 4 CDA Portfolio and Internship 2

#### CULINARY/HOSPITALITY PROGRAM OF STUDY (4 REQUIRED COURSES)

*Offered at Frederick High School.*

Culinary 1 or HCTI 101

Culinary 2 or HCTI 102

Hospitality Management or HCTI 150

Work based Learning (Internship or Youth Apprenticeship) page 74

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## CHILD DEVELOPMENT ASSOCIATE COMPLETER PROGRAM OF STUDY

*Course must be taken sequentially.*

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### CD 1 CHILD GROWTH AND DEVELOPMENT

362040 1

Grades 9 – 12

This course introduces the study of early childhood education 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.

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### CD 2 LEARNING IN THE PRESCHOOL ENVIRONMENT

363051

Grades 10-11

This course focuses on learning environments for preschool care, as well as establishing positive, responsive, and cooperative relationships with families. Students will explore the relationship of health, nutrition, and safety to learning. Students will establish strategies to support a safe, healthy learning environment that provides appropriate mealtime experience and promotes good nutrition for preschool care while meeting best practice and regulated requirements for quality learning environments. Students will continue to explore physical and cognitive development and competencies for preschool care. The preschool classroom environment will support social and emotional development and provide opportunities for positive guidance. Students will observe, document, and assess preschool development and use multiple sources of evidence to set goals and develop lesson plans in response to the developmental needs of all children. Students will become familiar with local child-care regulations and adhere to professional mandated reporting requirements related to abuse and neglect. Students will develop components of a professional CDA Preschool portfolio. Meets financial literacy requirements.

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### CD 3 CDA PORTFOLIO AND INTERNSHIP 1\*\*

360112 (Fall)

1 credit

Grades 11 – 12

360212 (Spring)

1 credit

Grades 11 – 12

360312 (Fall)

2 credits

Grades 11 – 12

360412 (Spring)

2 credits

Grades 11 – 12

This course, provides opportunities for students to complete the CDA Preschool professional portfolio and prepare for the CDA certification exam and site visit. During this course, future educators will have an opportunity to become directly involved with students in the teaching-learning process. Students will be required to obtain experiential learning hours in a Pre-K classroom or a licensed program serving the preschool age group. Students will practice effective teaching and management practices.

\*Meets Personal Financial Literacy requirement.

\*\*As this course is an internship, students must be able to provide their own transportation to their preschool internship site either at an FCPS Pre-K or a licensed child care center.

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**CD 4 CDA PORTFOLIO AND INTERNSHIP 2\*\***

360113 A (Fall)	1 credit	Grades 11 – 12
360213 (Spring)	1 credit	Grades 11 – 12
360114 (Fall)	2 credits	Grades 11 – 12
360214 (Spring)	2 credits	Grades 11 – 12

Child Development Associate (CDA) Internship 2 is the culminating course for the CTE CDA Program of Study. This course provides opportunities for students to link course content to theory in early childhood education as well as apply knowledge in a classroom setting. Students will have an opportunity to become directly involved in the teaching-learning process. Students will complete the CDA Preschool professional portfolio and prepare for the CDA certification exam and site visit. Students will be required to obtain experiential learning hours in a Pre-K classroom or a licensed program serving the preschool age group. Students will practice effective teaching and management practices.

\*\*As this course is an internship, students must be able to provide their own transportation to their preschool internship site either at an FCPS Pre-K or a licensed child care center.

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**CULINARY/HOSPITALITY COMPLETER PROGRAM OF STUDY**

*Offered at Frederick High School.*

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**CULINARY 1**

362070	1	Grades 9 – 12
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Students develop a basic understanding of food sanitation and safety in food, beverage, and hospitality operations. Successfully passing the National Restaurant Association exam will earn students a ServSafe Kitchen Safety and Sanitation Certification. Instruction is provided for basic concepts, skills and attributes related to food preparation and related areas such as catering and hotel/restaurant management. Hands-on cooking tasks cover equipment operation, knife skills, stocks, soups, and sauces; fruit, vegetable and starch cookery; egg/breakfast cookery. Dual Enrollment option is available.

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**CULINARY 2**

363070	2	Grades 10 - 12
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*Prerequisite: Culinary 1.*

This course builds on food preparation techniques from Culinary 1 and emphasizes the professional competencies necessary to meet industry standards within the Food Service industry. Culinary terminology, measurements, and recipe conversions are further explored. As well as meat, seafood, and poultry cookery. Various baking and pastry stations are also explored. Dual Enrollment option is available.

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**HOSPITALITY MANAGEMENT**

364070	3	Grades 11 – 12
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Students are trained as hospitality professionals in a variety of areas such as tourism, lodging, food and beverage, and event planning. Students have the opportunity to earn Certified Guest Services Professional certification from the American Hotel and Lodging Institute. Capstone projects will allow students to apply what they learned. Upon completion, students

may choose to participate in a capstone internship experience. Dual Enrollment option is available.

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**ELECTIVE**

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**CULTURES AND CUISINE**

361010	Grades 9 - 12
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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.

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**TECHNOLOGY EDUCATION AND ENGINEERING EDUCATION****COMPLETERS:****ARCHITECTURE, ENGINEERING, AND CONSTRUCTION MANAGEMENT**

AEC Management 1-3 and Capstone Course

**AUTOMOTIVE MECHANICS (BHS)  
(3 REQUIRED COURSES, 4 CREDITS TOTAL)**

Automotive Mechanics 1, 2, 3

**INTERACTIVE DIGITAL MEDIA**

IDM 1, 2, 3 and Capstone

**PROJECT LEAD THE WAY (3 REQUIRED COURSES  
IN ADDITION TO IED AS ENGINEERING  
GRADUATION CREDIT)**

Engineering (LHS, THS, WHS)

Introduction to Engineering Design (Satisfies the Computer Science or Engineering graduation requirement)

Principles of Engineering

Specialty course

PLTW Engineering Capstone

**WOOD, DESIGN, AND APPLICATIONS  
(4 REQUIRED COURSES)**

WDA 1, 2, 3, 4

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**ARCHITECTURE, ENGINEERING, AND CONSTRUCTION MANAGEMENT**

392500	AEC Management 1	Grades 9 - 12
392510	AEC Management 2	Grades 10 - 12
392520	AEC Management 3	Grades 11 - 12
392530	AEC Management Capstone	Grades 11 - 12

*Courses must be taken in sequence.*

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 and Revit, and software applications across

the four levels of course work. The first 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. The 4th course serves as a capstone course and can be substituted for the related Dual Enrollment Course. Effective 2023-2024, the program has been reevaluated and adjusted to be an approved MSDE Program of Study; this distinction allows students to graduate as a CTE Completer option.

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### AUTO MECHANICS COMPLETER PROGRAM (4 CREDITS REQUIRED)

492110	1	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.

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### WOOD, DESIGN, AND APPLICATIONS COMPLETER PROGRAM

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

*Courses must be taken in sequence.*

This program will develop both hands-on fabrication skills as well as computer aided design (CAD) skills. Students will use a variety of woodworking hand tools, stationary power tools, as well as computer numerically controlled (CNC) routers, laser engravers, and 3D printers to practice traditional and advanced manufacturing and construction processes. Wood-working skills will be learned, enabling student to fabricate the projects they design. Students will learn CAD skills by designing both architecture and products throughout all four courses. This program will prepare students for a CAD industry certification. Students will practice and apply the planning and management skills necessary for careers in manufacturing, architecture, design, management and similar industries. Projects will become increasingly more complex, building on prior skills throughout the four courses, refining the student's skills to tackle projects from start to finish. *Baseline materials are provided free for all students. Students have the opportunity to purchase additional materials based on their interest and project complexity.*

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### PROJECT LEAD THE WAY: PROGRAM OF STUDY ENGINEERING COMPLETER PROGRAM

*Offered only at Linganore, Tuscarora and 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.

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### 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).

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### PRINCIPLES OF ENGINEERING: (POE)

497000

Grades 9 - 12

*Highly recommended prerequisite: Completion of Geometry and Algebra-Based Physics and required prerequisite IED.*

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.

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### STUDENTS SELECT ONE OF THE FOLLOWING SPECIALTY COURSES (SOME COURSES ARE ONLY OFFERED AT ONE HIGH SCHOOL)

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#### DIGITAL ELECTRONICS: (DE)

497301

Grades 9 - 12

*Recommended prerequisite: Completion of IED and POE. 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.

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#### 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.

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**CIVIL ENGINEERING AND ARCHITECTURE (CEA)**

497401

Grades 11 - 12

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

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.

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**COMPUTER INTEGRATED MANUFACTURING: (CIM)**

497201

Grades 10 - 12

*Offered only at Tuscarora High School.**Recommended prerequisites: POE and IED.*

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.

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**PLTW ENGINEERING CAPSTONE**

497001

Grades 11 - 12

*Prerequisites: POE, IED, and CEA, CIM, DE 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.

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**TECHNOLOGY EDUCATION ELECTIVES**

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**INTERACTIVE DIGITAL MEDIA 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. Students will prepare to successfully earn Adobe certification.

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**INTERACTIVE DIGITAL MEDIA 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. Students will prepare to successfully earn Adobe certification.

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**INTERACTIVE DIGITAL MEDIA 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. Students will prepare to successfully earn Adobe certification.

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**INTERACTIVE DIGITAL MEDIA 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 Interactive Digital Media 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. Students will prepare to successfully earn Adobe certification.

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**JOHNS HOPKINS ENGINEERING INNOVATIONS**

491000

Grades 11-12

*Held during the summer at Hood College.**This course provides an elective Computer Science and Engineering 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/>.

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**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.

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## 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.

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## HEALTH SCIENCES

### COMPLETERS:

#### PLTW BIOMEDICAL SCIENCE (THS) (4 REQUIRED COURSES)

Human Body Systems  
Medical Intervention  
Principles of the Biomedical Sciences  
Biomedical Innovation

#### ACADEMY OF HEALTH PROFESSIONS (FHS) (4 REQUIRED COURSES)

Foundations of Health and Medical Science  
Structure and Function of the Human Body  
Specialty area:  
Pharmacy Tech Course and Internship  
Dental Assisting  
Certified Nursing Assistant

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### PROJECT LEAD THE WAY: BIOMEDICAL SCIENCES COMPLETER

*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.

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## 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.

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## 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 struc-

tures 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.

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## 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.

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## 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.

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## ACADEMY OF HEALTH PROFESSIONS COMPLETER PROGRAM

*Offered at Frederick High School*

This program includes a sequence of four courses, developed to prepare students for entry-level healthcare certification and college programs. After completing the first two courses, students select one of three medical specialty options; Pharmacy Tech, Dental Assisting, or Certified Nursing Assistant.

Students may be required to purchase attire representative of the health care profession.

*Prerequisite: Completion or concurrent enrollment in Biology.*

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## FOUNDATIONS OF MEDICINE & HEALTH SCIENCE

398100

1 credit

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.

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### STRUCTURE AND FUNCTION OF THE HUMAN BODY

398101 1 credit

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.

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### STUDENTS SELECT ONE OF THE FOLLOWING SPECIALTY PROGRAMS: Pharmacy Tech, Dental Assisting, or Certified Nursing Assistant.

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#### PHARMACY TECH

531300 1 credit Grades 11 – 12

Students participate in classroom, lab-based experiences to prepare for a career as a Pharmacy Tech. Throughout the course students will prepare for and take the nationally recognized Pharmacy Technician Certification from the National Healthcare Association.

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#### ALLIED HEALTH PHARMACY INTERNSHIP

531301 1 credit Grade 12  
531302 2 credits Grade 12

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 coursework to date.

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#### DENTAL ASSISTING

*Students complete the Dental Assistant Dual Enrollment courses at FCC's Monroe Center. Check with your school's Dean of Dual Enrollment for details.*

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#### DENTAL ASSISTING 1 AT FCC CAH 272

533095OC 1 credit Grades 11 – 12

Students participate in classroom, lab-based experiences that prepare them for employment as Dental Assistants. Upon completion of the course students will take two certification exams: Maryland General Chairside Exam and the Dental Assisting National Board Radiation Health and Safety (RHS).

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#### ORAL RADIOLOGY WITH CLINICAL AT FCC CAH 273

533096OC 1 credit Grades 11 – 12

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 coursework to date.

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#### NURSING ASSISTANT

*Students complete the Certified Nursing Assistant Dual Enrollment courses at FCC's Monroe Center. Check with your school's Dean of Dual Enrollment for details.*

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#### CERTIFIED NURSING ASSISTANT 1 AT FCC CAH 132

533092OC 1 credit Grade 11- 12

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#### CERTIFIED NURSING ASSISTANT 2 AT FCC CAH 133

533093OC 1 credit Grade 11- 12

Students participate in classroom, lab-based and clinical experiences that prepare them for employment in acute or long-term care facilities. Upon completion of this course students take the Certified Nursing Assistant (CNA) certification exam.

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#### CLINICAL INTERNSHIP WITH FCC CAH 190

533094OC 1 credit Grades 11- 12

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.

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#### NAVAL JUNIOR RESERVE OFFICERS TRAINING CORPS (NJROTC) COMPLETER

#### NAVAL SCIENCE 1, 2, 3

*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.

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#### 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 Leadership; 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.

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**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.

Meets Personal Financial Literacy requirement.

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**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.

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**NAVAL SCIENCE 4 (NOT REQUIRED FOR THE COMPLETER BUT RECOMMENDED)**

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.

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**CAREER AND TECHNOLOGY CENTER****ALL PROGRAMS AT THE CTC REQUIRE:***Student shadowing and application process. 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.***COMPLETERS:****AOHP - DENTAL ASSISTING****AOHP – MEDICAL ASSISTING****AOHP – NURSING****AOHP – PHYSICAL REHABILITATION****AGRI-BUSINESS****AGRICULTURAL AND COMMERCIAL METALS TECHNOLOGY (WELDING)****AUTOMOTIVE BODY/COLLISION REPAIR AND REFINISHING****AUTOMOTIVE TECHNOLOGY****BIOMEDICAL SCIENCES****CAD ARCHITECTURE****CAD ENGINEERING****CARPENTRY****CISCO CYBER SECURITY****CISCO NETWORKING ACADEMY****CISCO OPERATING SYSTEMS****COSMETOLOGY****CULINARY ARTS****DIGITAL DESIGN AND PRINTING METHODS (PRINT ED)****ELECTRICITY****ENVIRONMENTAL LANDSCAPE DESIGN AND MANAGEMENT****HOMELAND SECURITY/CRIMINAL JUSTICE****HVACR/PLUMBING****INTEGRATED MEDIA AND WEB TECHNOLOGY****TEACHER ACADEMY OF MARYLAND****TELEVISION/MULTIMEDIA PRODUCTION**

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**ACADEMY OF HEALTH PROFESSIONS COMPLETER PROGRAM****STUDENTS HAVE THREE SPECIALIZATION OPTIONS: NURSING ASSISTANT, CLINICAL MEDICAL ASSISTING OR PHYSICAL REHABILITATION***These courses prepare students for entry-level healthcare certification and college programs.**Offered only at the Career & Technology Center.**Prerequisite: Completion or concurrent enrollment in Biology.*



## COMPLETERS:

### ACADEMY OF HEALTH PROFESSIONS (4 REQUIRED COURSES)

Foundations of Health and Medical Science  
Structure and Function of the Human Body  
Specialty area:  
Dental Assisting  
Certified Nursing Assistant  
Clinical Medical Assistant  
Physical Rehabilitation

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#### DENTAL ASSISTING

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#### FOUNDATIONS OF MEDICINE & HEALTH SCIENCE

531273 1 credit

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

#### STRUCTURE AND FUNCTIONS OF THE HUMAN BODY

531274 1 credit

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.

#### DENTAL ASSISTING

*Prerequisite: Foundations of Medicine and Structures and Functions of the Human Body.*

533035 2 credits Grades 11 & 12

Students participate in classroom, lab-based and optional allied health internship experiences that prepare them for employment as Dental Assistants. Upon completion of the course students will take two certification exams: Maryland General Chairside Exam and the Dental Assisting National Board Radiation Health and Safety (RHS). Students will explore a variety of dental careers, perform instrument sterilization procedures; Identify and use common equipment used by Dental Assistants, identify and perform basic procedures in patient oral care; make impressions; perform structure placement and removal; perform crown procedures x-ray imaging and upon program completion will apply for certification through the Maryland State Board of Dental Examiners

#### DENTAL ALLIED HEALTH INTERNSHIP

533036 1 credit Grades 11 & 12  
533037 2 credits Grades 11 & 12

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 Dental Assisting coursework to date.

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#### NURSING ASSISTANT OR CLINICAL MEDICAL ASSISTANT

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#### 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.

#### 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.

*Students must choose one of the following options: Nursing Assistant or Clinical Medical.*

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#### NURSING ASSISTANT

*Prerequisite: Academy of Health Professions I.*

531230 2 credits Grades 11 & 12

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)

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**ALLIED HEALTH INTERNSHIP**

531272 1 credit Grades 11 &amp; 12

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.

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**MEDICAL ASSISTING, CLINICAL**

531240 2 credits Grades 11 &amp; 12

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.

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**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.

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**PHYSICAL REHABILITATION COMPLETER PROGRAM**

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**FOUNDATIONS OF MEDICINE & HEALTH SCIENCE**

531273 1 credit

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.

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**STRUCTURE AND FUNCTION OF THE HUMAN BODY**

531274 1 credit

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.

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**PHYSICAL REHABILITATION**

531275 2 credits

This course integrates concepts of physical therapy, occupational therapy, kinesiology and athletic training. Students will focus on musculoskeletal, neuromuscular, cardiopulmonary and Integumentary related injuries, diseases and disorders. In addition, students will also focus on preventative activities, therapeutic practices and rehabilitation. Students are prepared for actual experience in the clinical setting with a focus on the specific knowledge, skill and abilities that relate to physical rehabilitation and/or occupational therapy Certification through the National Strength Professionals Association (NSPA).

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**PHYSICAL REHABILITATION INTERNSHIP**

531271 1 credit

531272 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 offering services in physical therapy, occupational therapy or athletic training.

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**AGRI-BUSINESS COMPLETER PROGRAM**

Agri-Business \*  
Principles of Finance and Accounting  
Entrepreneurship & Small Business \*  
Marketing

*This completer is offered as a one year half day option.*

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**AGRI-BUSINESS**

530004\* 1 credits Grades 10-12

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 (honey bees), 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. Students have the opportunity to participate in dual enrollment.

Meets Personal Financial Literacy requirement

\*Dual Enrollment Option available

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**PRINCIPLES OF FINANCE AND ACCOUNTING**

332040 1 credit Grades 10-12

Serving as one of the foundational courses for the Business, Management, and Finance CTE completers, Principles of Finance and Accounting will first expose students to the six basic principles of finance: Risk & Return, Time Value of Money, Profitability & Liquidity, Cash Flow Principle, Diversity Principle, and the Hedging Principle. An understanding of fundamental accounting concepts, skills and competencies is essential to making informed business decisions. Students will learn to apply generally accepted accounting principles to determine the value of assets, liabilities, and owner's equity as they apply to various forms of manual and computerized systems for service and merchandising business. Students will apply appropriate accounting principles to payroll and tax liabilities. Students will utilize spreadsheet software to apply the accounting and financial knowledge in order to analyze, evaluate, and understand financial data and accounting principles. Students will identify positions and career paths in the field of accounting and will examine the role of ethics and social responsibility in decision making.

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**ENTREPRENEURSHIP & SMALL BUSINESS ENTERPRISE**

530005 2 credits Grades 10-12

This course is taught in conjunction with the Marketing 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 (honey bees), 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. Students have the opportunity to participate in dual enrollment.

Meets Personal Financial Literacy requirement

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**PRINCIPLES OF MARKETING**

338000 1 credit Grades 10-12

This course covers the essential concepts of marketing theory and the foundations, functions and benefits of marketing in a free enterprise system and the students will use and incorporate technologies to conduct research and communicate. In addition, students will investigate the various and ever-improving alternatives for electronic marketing that include, but are not limited to social media, digital marketing, E-commerce, and more. Students will integrate their knowledge of legal issues, the importance of ethics, and social responsibilities in marketing. Students will understand and demonstrate strong interpersonal skills and develop an appreciation of human diversity. By the end of Principles of Marketing, students will have a solid understanding of the many diverse career opportunities in the field of marketing.

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**AGRICULTURAL & COMMERCIAL METALS TECHNOLOGY COMPLETER PROGRAM (WELDING)**

533144	1A	2 credits	Grades 10-12
534344	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.*

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

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.

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**ARCHITECTURE – CAD COMPLETER PROGRAM**

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.*

This program is for students who plan 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 and have the opportunity to participate in dual enrollment.

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## AUTOMOTIVE TECHNOLOGY COMPLETER PROGRAM

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.*

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.

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## PROJECT LEAD THE WAY: BIOMEDICAL SCIENCES COMPLETER PROGRAM

*Offered at the Career and Technology Center.*

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(s) but not required. Students may receive articulated college credits upon successful completion of the program.

### (4 REQUIRED COURSES)

- Human Body Systems
- Medical Intervention
- Principles of the Biomedical Sciences
- Biomedical Innovation

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## PRINCIPLES OF THE BIOMEDICAL SCIENCES

535100	2 credits	Grades 10 - 12
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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.

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## HUMAN BODY SYSTEMS

531000	2 credits	Grades 10 - 12
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*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.

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## MEDICAL INTERVENTION

531200	2 credits	Grades 11 - 12
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*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 a 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.

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## BIOMEDICAL INNOVATION

531100	2 credits	Grades 11 - 12
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*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.

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**AUTOBODY/COLLISION REPAIR COMPLETER PROGRAM**

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.*

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.

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**CARPENTRY COMPLETER PROGRAM**

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.*

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.

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**CISCO ACADEMY COMPLETER PROGRAMS**

*Offered only at the Career and Technology Center.*

CTC offers students three Cisco Academy options. They include: CISCO Networking, Cyber Security or Operating Systems.

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**CISCO NETWORKING ACADEMY COMPLETER PROGRAM**

Intro to Networks and CompTIA

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

Linux Essentials

538516		1 credit	Grades 11 – 12
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Year one courses prepare students for a career as an IT professional and the CompTIA A+ certification exams and students have the opportunity to participate in dual enrollment.

Switching Routing and Wireless Essentials

538551	1A	2 credits	Grades 11 – 12
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Networking Security and Automation

538552	1B	2 credits	Grades 11 – 12
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Advanced courses in the CISCO Networking Academy program prepare students to sit for the networking industry standard CCNA (Cisco Certified Networking Associate) certification. 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.

Students who complete this rigorous college-level curriculum take the CCNA exam.

Students may receive articulated or transcribed college credits for the successful completion of the program and have the opportunity to participate in dual enrollment.

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**CISCO CYBER SECURITY ACADEMY COMPLETER PROGRAM**

Intro to Networks and CompTIA

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

Linux Essentials

538516		1 credit	Grades 11 – 12
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Year one courses prepare students for a career as an IT professional and the CompTIA A+ certification exams and students have the opportunity to participate in dual enrollment.

Switching Routing and Wireless Essentials

538551	1A	2 credits	Grades 11 – 12
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Cybersecurity Essentials and CCNA Security +

538553	1A and B	2 credits	Grades 11 – 12
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The Cybersecurity Essentials and 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 principles necessary for 21st century careers.

Students may receive articulated or transcribed college credits for the successful completion of the program and have the opportunity to participate in dual enrollment.

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## CISCO OPERATING SYSTEMS ACADEMY COMPLETER PROGRAM

Intro to Networks and CompTIA

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

Linux Essentials

538516		1 credit	Grades 11 – 12
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Year one courses prepare students for a career as an IT professional and the CompTIA A+ certification exams and students have the opportunity to participate in dual enrollment.

### 1 Semester Only

Linux +

538556		2 credits	Grades 11 – 12
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The Linux+ course explores the practical use and operation of the open-source operating system Linux. Students will learn how to use the basic Linux commands, shell scripting, and various system utilities.

Students may receive articulated or transcribed college credits for the successful completion of the program and have the opportunity to participate in dual enrollment.

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## COSMETOLOGY COMPLETER PROGRAM

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.*

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.)

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## CULINARY ARTS COMPLETER PROGRAM

533224	1A	2 credits	Grades 10 – 12
533321	1B	2 credits	Grades 10 – 12
Baking Option			
533301	2A	2 Credits	Grades 11-12
533302	2B	2 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.*

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. 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 certification exam which consists of a written (online) test and a practical (cooking) test.

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**DIGITAL DESIGN & PRINTING METHODS  
COMPLETER PROGRAM**

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.*

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.

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**ELECTRICITY COMPLETER PROGRAM**

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.*

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.

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**ENGINEERING CAD COMPLETER PROGRAM**

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.*

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 and students have the opportunity to participate in dual enrollment.

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**ENVIRONMENTAL LANDSCAPE DESIGN &  
MANAGEMENT COMPLETER PROGRAM**

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.*

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.

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.

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**HOMELAND SECURITY/CRIMINAL JUSTICE  
COMPLETER PROGRAM**

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

*Offered only at the Career and Technology Center.*

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 and students have the opportunity to participate in dual enrollment.

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**HVACR/PLUMBING COMPLETER PROGRAM**

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.*

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 SkillsUSA 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.

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**TEACHER ACADEMY  
COMPLETER PROGRAM**

*Offered at the Career and Technology Center.*

**FOUR REQUIRED COURSES:**

Teaching As a Profession  
Human Growth and Development  
Foundations of Curriculum and Instruction  
Internship/Field Experience

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**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.

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**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. Students have the opportunity to participate in dual enrollment.

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**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.



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**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.

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**TELEVISION/MULTIMEDIA PRODUCTION  
COMPLETER PROGRAM**

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.*

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 and students have the opportunity to participate in dual enrollment.

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**CTC ELECTIVES**

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**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.

# 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
<b>REQUIRED COURSES</b>	English 9	English 10* Accelerated English 10*/ English 11 Honors	English 11* *The following courses are equivalent to English 11: AP Language and Composition, AP Literature and Composition, or ENG 101. Or International Baccalaureate English (Urbana High only)	English 12* *The following courses are equivalent to English 12: AP Language and Composition, AP Literature and Composition, ENG101, or ENG102. Or International Baccalaureate English (Urbana High only)
<b>ENGLISH ELECTIVES</b>	Creative Writing Journalism Forensics & Debate	Creative Writing 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
<i>*Courses that are asterisked culminate with a state-mandated assessment.</i>				

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**CREATIVE WRITING**

134255	Intro to Creative Writing	.5
134250	Creative Writing 1	
134262	Creative Writing 2	
134263	Creative Writing 3	
134264	Creative Writing 4	

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.

Intro to Creative Writing is a .5 introductory course for students interested in applying composition skills in creative writing. Creative Writing 1, 2, 3, and 4 are elective courses for students who wish to apply composition skills in fiction, poetry, autobiographical essays, and other forms of creative writing. The class produces an annual literary magazine.

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**ENGLISH 9**

131211		
131111	Honors	
131313	English 9 YL A (elective credit)	
131314	English 9 YL 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 A and B are designed for students needing extra support in reading. A primary reading comprehension or foundational reading intervention is infused into this course that spans the entire year. Students are placed into the appropriate tier of intervention based on assessments given at the start of the course. Successful completion of this course results in 2 credits: 1 credit for English 9 and 1 English elective credit. \*The graduation credit requirement for English is satisfied with successful completion of English 9 YL B.

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**ENGLISH 10**

13P211*		
13P111*	Honors	
131315	English 10 YL A (elective credit)	
131316*	English 10 YL 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 A and B are designed for students needing extra support in reading. A primary reading comprehension or foundational reading intervention is infused into this course that spans the entire year. Students are placed into the appropriate tier of intervention based on assessments given at the start of the

course. Successful completion of this course results in 2 credits: 1 credit for English 10 and 1 English elective credit.

\*Course culminates with a state-mandated assessment.

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**ACCELERATED ENGLISH 10/ENGLISH 11 HONORS**

\*132222 Honors – 2 credits

This rigorous, yearlong College and Career Ready Standards based course for honors tenth grade students accelerates students and results in English 10 and English 11 credit upon successful completion. Thematic units that incorporate world and 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. Students interested in taking an Advanced Placement English courses or English 101 in eleventh grade are prepared to meet the demands of college level coursework.

Students must pass both semesters to earn both English 10 and English 11 credits.

\*Students will take the state-mandated English MCAP assessment in the fall block.

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**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.

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**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.

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**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.

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**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.*

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**ENGLISH LITERATURE AND COMPOSITION,  
ADVANCED PLACEMENT**

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

134371		Grades 11 - 12
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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.*

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**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.

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**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.

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**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.

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**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.

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**MODERN ISSUES**

136110		Grades 10 - 12
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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. In addition, it allows those wishing to accelerate critical reading, composition, and language usage skills an opportunity to earn an English elective credit.

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**SAT PREPARATION – ENGLISH AND MATH**

561100	0.5 credit	Grades 11-12
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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.

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**FCC ENGL 101 (DUAL ENROLLMENT COURSE)**

130091		Grades 11-12
130091OC		Grades 11-12

Develops students' ability to use writing, reading, research, and thinking processes to create documented essays that demonstrate the conventions of academic writing. Earns 3 college credits.

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**FCC ENGL 102 (DUAL ENROLLMENT COURSE)**

130092		Grade 12
130092OC		Grade 12

*Prerequisite: FCC ENGL 101 or AP Language and Composition test score 4 or 5*

Reinforces, through an examination of literature, the reading, writing, critical thinking, and information literacy skills introduced in English Composition. By exploring literary texts from fiction, poetry, and drama, students learn to clarify their own values and identities as well as develop a better understanding of ideas and cultures beyond their own experience. Earns 3 college credits.

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## INTERVENTIONS FOR READING

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### ENGLISH 9

131313 English 9 YL A (elective credit)

131314 English 9 YL 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. A primary reading comprehension or 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.

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### ENGLISH 10

131315 English 10 YL A (elective credit)

131316\* English 10 YL B (English 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. A primary reading comprehension or 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 MCAP assessment second semester.

\*Course culminates with a state-mandated assessment.

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## SKILLS ENRICHMENT - READING

562002

1 credit

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

## 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.

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### AQUATIC SPORTS/FITNESS

463050			Grades 9 - 12
463250	1A	0.5 credit	Grades 9 - 12
463350	1B	0.5 credit	Grades 9 - 12

*Prerequisite: Students must complete Fitness for Life prior to enrolling in Aquatic Sports/Fitness.*

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.

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### AQUATICS 1 LIFEGUARD TRAINING

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

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.

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### 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.*

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.

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### AQUATICS 3 WSI/LIFEGUARD MANAGEMENT TRAINING

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

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.

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**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.

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**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.

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**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.

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**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.

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**HEALTH EDUCATION 1**

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. Topics included are: Mental and Emotional Health; Substance Abuse Prevention; Family Life and Human Sexuality; Safety and Violence Prevention; Healthy Eating; and Disease Prevention and Control. Skills

developed in relation to health enhancing behaviors include: analyzing influences, accessing valid and reliable information, interpersonal communication, decision-making, goal setting, self-management, and advocacy.

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**HEALTH EDUCATION 2**

461021

0.5 Credit

This course will use the introductory instruction from Health Education I to expand on the development of skills, attitudes, and behaviors that will enable them to make decisions that promote healthful behaviors. Students engage in inquiry and problem-solving approaches utilizing a developmentally appropriate progression of content related to health education concepts.

Prerequisites and other notes: Health Education I. Health 2 is recommended for grades 11 or 12.

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**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.

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**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.

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**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.

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**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.

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.

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**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.

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**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.



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**UNIFIED PHYSICAL ACTIVITY AND LEADERSHIP**

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 will also be involved in activities that foster inclusive youth leadership skills that help students with and without disabilities find their voices by teaching them to become change agents striving for respect and inclusion. 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. This concept encourages co-leadership opportunities amongst inclusive pairs/small groups to promote a deeper understanding of the strengths, gifts and skills of all students.

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**FCC HLTH 150 HEALTH EDUCATION  
(DUAL ENROLLMENT COURSE)**

460800  
460800OC

Covers basic areas of health, including mental health, fitness, nutrition, weight control, sexual health, drugs and alcohol, disease and consumer and environmental health. Earns 3 college credits.

# 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 and the state of Maryland mandates 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 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	Precalculus with Trigonometry AP Precalculus	AP Calculus I AP Calculus II <i>Dual Enrollment Options</i>
Algebra 1*	Geometry	Algebra 2	Statistics & Probability	Precalculus with Trigonometry AP Precalculus AP Statistics <i>Dual Enrollment Options</i>
Algebra 1*	Geometry Algebra 2	Precalculus with Trigonometry AP Precalculus	AP Calculus I AP Calculus II	Statistics & Probability AP Statistics <i>Dual Enrollment Options</i>
Grade 8 Math	Algebra 1*	Geometry	Algebra 2	Precalculus with Trigonometry AP Precalculus <i>Dual Enrollment Options</i>
Grade 8 Math	Algebra 1* Geometry	Algebra 2	Precalculus with Trigonometry AP Precalculus	AP Calculus I AP Calculus II <i>Dual Enrollment Options</i>

*In addition to the mathematics courses 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.*

*\*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 Precalculus with Trigonometry. Topics include mathematical modeling with functions (linear, polynomial, rational, exponential, logarithmic, and trigonometric), sequences and series, linear systems, and matrices. Explorations in analytical trigonometry are also part of this course.

### ALGEBRA READINESS (TWO SEMESTERS)

231405 A 1 math elective credit

231406 B 1 math elective credit

Algebra Readiness is a course that provides instruction to students who require additional preparation prior to enrollment in Algebra 1. Students enrolled in this course participate in a specially designed course that remediates and accelerates standards spanning third through eighth grade. Research-validated and evidence-informed instructional strategies are utilized. These strategies include: explicit instruction, the use of manipulatives and multi-sensory approaches, small group instruction, individualized skill work, frequent formative assessments, and

feedback. Students enrolled in this course are enrolled following consultation with FCPS intervention and curriculum specialists.

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### 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.

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### ALGEBRA 1 (A AND B) (TWO SEMESTERS)

23127C A (Elective Credit)  
23128C\* B (Algebra Credit)

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.

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### 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.

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### CALCULUS I, A & B

234181 Advanced Placement A  
234191 Advanced Placement B

*Prerequisite: Precalculus 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).

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### CALCULUS, I & II

234101 I Advanced Placement (AB)  
234121 II Advanced Placement (BC)

*Prerequisite: Precalculus 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 prepare 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 prepare students for the AP Calculus BC test.

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### 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.

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### CONTEMPORARY FINANCIAL ALGEBRA

233231  
*Prerequisite: Both Algebra 1 and Geometry.*

This course engages students with real-world financial applications while maintaining deep mathematical rigor. Each unit

in the course blends core personal finance topics with core mathematics content to support students as they become financially and mathematically literate consumers.

Meets Personal Financial Literacy requirement

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## CONTEMPORARY MATHEMATICS

233230

*Prerequisite: Both Algebra 1 and Geometry.*

*This course is only offered online through the Frederick County Virtual School.*

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.

Meets Personal Financial Literacy requirement

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## GEOMETRY (SINGLE SEMESTER)

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.

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## GEOMETRY A AND B (TWO SEMESTERS)

232205 A (Elective Credit)

232206 B (Geometry Credit)

*Prerequisite: Algebra 1A and Algebra 1B*

This Geometry 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 Geometry. See Geometry (above) for course description.

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## 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.

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## MATHEMATICS, APPLICATIONS AND INTERPRETATIONS, IB

230701 SL

*Available only at Urbana High School.*

*Prerequisites: Algebra 2H required. Statistics and Probability strongly recommended*

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.

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## 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.

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## 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.

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## PRECALCULUS 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.

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## PRECALCULUS – ADVANCED PLACEMENT

233133

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

This course prepares students for college-level mathematics through the study of modeling and functions, utilizing multiple representations and problem-solving. Course topics include but are not limited to polynomial and rational functions, exponential

and logarithmic functions, trigonometric and polar functions, and functions involving parameters, vectors and matrices. Completion of this course prepares students for the AP Precalculus test.

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### SAT PREPARATION – ENGLISH AND MATH

561100 0.5 credit Grades 11-12

This course, offered at comprehensive 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.

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### SKILLS ENRICHMENT – MATH (TWO SEMESTERS)

562003 Experience 1 1 math elective credit

562007 Experience 2 1 math elective credit

Skills Enrichment High School – Math: is an intervention course that provides instruction to students who require additional preparation beyond the scope of the Algebra Readiness course. Students enrolled in this course would participate in mathematics interventions in consultation with FCPS intervention specialists.

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### 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.

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### 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.

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### FCC MATH 101A FOUNDATIONAL MATH (DUAL ENROLLMENT COURSE)

231102

231102OC

Presents topics including real numbers, algebraic expressions, solving and graphing linear equations, exponents, and logarithmic equations with an emphasis on functions, graphing, and modeling. Topics of college math covered may include problem solving strategies, logic, numeration systems, classification of numbers, algebra, financial management, geometry, measurement and right triangle trigonometry, probability, statistics, graphs, systems of equations, and linear programming. Earns 2 developmental and 3 transferrable college credits.

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### FCC MATH 120 STATISTICS (DUAL ENROLLMENT COURSE)

231095

231095OC

Introduces non-calculus statistics. Topics include descriptive analysis and treatment of data, probability, statistical inference, linear regression and correlation, and chi-square tests and non-parametric tests. Earns 3 college credits.

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### FCC MATH 145 COLLEGE ALGEBRA (DUAL ENROLLMENT COURSE)

233091

233091OC

Includes a study of function behavior, composition, and inverse using linear, polynomial, rational, and radical functions; definition and analysis of exponential and logarithmic functions, complex numbers, formulae of midpoint, and distance and average rate of change. Earns 3 college credits.

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### FCC MATH 185 CALCULUS I (DUAL ENROLLMENT COURSE)

231096

231096OC

*Prerequisite: FCPS Precalculus grade A, appropriate FCC placement test score, or FCC MATH 165 grade C or better*

Presents topics including functions, limits, continuity, the derivative concept, differentiation techniques (including product rule, quotient rule, chain rule, and implicit differentiation), applications of the derivative, and definite and indefinite integral concepts. The Fundamental Theorem of Calculus is discussed and used in the context of introductory integration. Intended for students in mathematics, science, engineering, medical, and other technical programs as the first course in the three-semester calculus sequence (MATH 185, MATH 195, MATH 285). Earns 4 college credits.

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### FCC MATH 195 CALCULUS II (DUAL ENROLLMENT COURSE)

231097

231097OC

*Prerequisite: FCC MATH 185 grade C or better or AP Calculus AB test score 4 or 5*

Presents the second of three courses in the calculus sequence. Topics include methods and applications of integration, improper integrals, sequences and series, Taylor approximations, and an introduction to differential equations. Earns 4 college credits.

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### FCC MATH 285 CALCULUS III (DUAL ENROLLMENT COURSE)

231098

231098OC

*Prerequisite: FCC MATH 195 grade C or better or AP Calculus BC test score 4 or 5*

Presents the final course in the three-semester calculus sequence. Topics include functions of several variables and their graphs, vectors, parametric equations, partial derivatives, multiple integrals and applications, Greens Theorem, Stokes Theorem, and the Fundamental Theorem of Line Integrals. Earns 4 college credits.

## MULTILINGUAL EDUCATION (ME) PROGRAM

The Multilingual Education (ME) Program provides English language instruction that assists students with acquiring the basic interpersonal communication skills and essential academic language proficiency to achieve success in a mainstream classroom over time. The program enrolls linguistically and culturally diverse students, at varying levels of English proficiency, who require instruction in English as a new language. ME Program 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. This instruction occurs in an accelerated model, using strategic language learning supports based on second language acquisition theory and research. 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 Multilingual Learners (MLs) 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 a high-quality, equitable education for ML students. Please note that all placements in ME Program classes will be made by the appropriate ME Program counselor(s) and teachers in collaboration with the ME Program registrar at the International Office, and based on transcript review (as appropriate).

### SAMPLE ME PROGRAM SEQUENCE FOR BEGINNING ML STUDENTS

Semester 1	Semester 2	Semester 3	Semester 4
English as a World Language 1	English as a World Language 2	English as a World Language 3 or Elective	English as a World Language 4 or Elective
Algebra 1 or Algebra 1a (Year-Long)	Algebra 1b or Financial Literacy	Fitness for Life / Health	Geometry
Fine Arts	American Studies 2	English 9 or English 9a (Year-Long)	English 9b or English 10
Elective	Engineering Design and Applications	Government	Science

#### ENGLISH AS A WORLD LANGUAGE 1

262080 Grades 9-12

English as a World Language (EWL) 1,2,3, and 4 are the core English Language Development courses in the ME Program. Reading, writing, listening, and speaking skills are taught and assessed in this course. Increased emphasis is placed on assisting beginner students to acquire oral language proficiency and language usage skills. This course satisfies one credit towards a world language completer.

#### ENGLISH AS A WORLD LANGUAGE 2

262090 Grades 9-12

English as a World Language (EWL) 1,2,3, and 4 are the core English Language Development courses in the ME Program. Increasingly higher-level reading, writing, listening, and speaking skills are taught and assessed in EWL 2. Increased emphasis is placed on assisting beginner students to acquire oral language proficiency and language usage skills. This course satisfies one credit towards a world language completer.

#### ENGLISH AS A WORLD LANGUAGE 3

262100 Grades 9-12

English as a World Language (EWL) 1,2,3, and 4 are the core English Language Development courses in the ME Program. This is the third course in the sequence. EWL 3 provides additional scaffolding and support to students who need continued English language acquisition support as they transition to the next proficiency level. This course satisfies one credit towards a world language completer. Although this course is a part of the English as a World language series, not all Multilingual Learners will need the additional support provided in this course.

#### ENGLISH AS A WORLD LANGUAGE 4

262110 Grades 9-12

English as a World Language (EWL) 1,2,3, and 4 are the core English Language Development courses in the ME Program. This is the fourth course in the sequence. EWL 4 provides 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. Although this course is a part of the English as a World language series, not all Multilingual Learners will need the additional support provided in this course.

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**FCC ESOL 100 (DUAL ENROLLMENT COURSE)**

FCC ESOL 100 earns 2 high school credits (English 12: 134121 and EWL 4: 563540)

This course is designed for Multilingual Learners whose English language competency is at the high intermediate level. The course includes integrated instruction in writing, reading, listening, and speaking with a focus on conventions consistent with academic standards. This course focuses on expanding critical reading and writing skills through extensive reading and analysis of essays and academic texts and composition of original essays and presentations. Additional focus is placed on listening and speaking skills essential for success in academic settings. Earns 3 transferable college credits.

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**ML AMERICAN STUDIES 2 AND GOVERNMENT (YEAR LONG)**

160102

Grades 9-12

The year-long American Studies 2 and Government course was developed to meet the needs of students who have limited knowledge and understanding of this content, especially students who may not have had the opportunity to take American Studies 1 in middle school. The content from both American Studies 2 and Government is combined throughout this yearlong course that culminates in the required state assessment in Government. Students completing this course will earn 2 credits - 1 for American Studies 2 first semester and 1 for Government second semester.

\*Course culminates with a state-mandated assessment in May.

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**ML READ/WRITE 1**

563510

Grades 9-12

The ML Read/Write series are a set of courses designed to provide additional support in English Language development and literacy for students who have interruptions in their educational background. ML Read/Write 1 focuses on all four language domains (reading, writing, listening, speaking), with an emphasis on improving beginner students' reading and writing skills. Multilingual Learners in this course focus on communicating information, ideas, and concepts necessary for academic success.

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**ML READ/WRITE 2**

563520

Grades 9-12

The ML Read/Write series are a set of courses designed to provide additional support in English Language development and literacy for students who have interruptions in their educational background. This is the second course in the Read/Write series; not all Multilingual Learners will need the additional support provided in this course. This course focuses on all four language domains (reading, writing, listening, speaking), with an increased emphasis on improving students' reading and writing skills. Multilingual Learners in this course focus on communicating information, ideas, and concepts in academic settings.

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**ML READ/WRITE 3**

563530

Grades 9-12

The ML Read/Write series are a set of courses designed to provide additional support in English Language development and literacy for students who have interruptions in their educational

background. This is the third course in the Read/Write series; not all Multilingual 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 success in content classes.

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**ML READ/WRITE 4**

563540

Grades 9-12

ML Read/Write 4 is the final course in the Read/Write series; not all Multilingual Learners will need the additional support provided in this course as 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 success in content classes.

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**ML MATH FOUNDATIONS A**

239205

Grades 9-12

This course is offered to multilingual learners that have significant skill gaps in mathematics due to interrupted education. The course will focus on developing students' mathematical and language proficiencies through research-based and evidenced-informed 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 MCCRS (Maryland College and Career Ready Standards) domains of Operations and Algebraic Thinking, Number and Operations in Base Ten, Number and Operations-Fractions, Expressions and Equations, Measurement and Data, Geometry, and Statistics and Probability.

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**ML MATH FOUNDATIONS B**

239206

Grades 9-12

This course is offered to multilingual learners that have significant skill gaps in mathematics due to interrupted education. The course will focus on developing students' mathematical and language proficiencies through research-based and evidenced-informed 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 MCCRS (Maryland College and Career Ready Standards) domains of Operations and Algebraic Thinking, Number and Operations in Base Ten, Number and Operations-Fractions, Expressions and Equations, Measurement and Data, Geometry, and Statistics and Probability.

## 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.

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 culminate with a state-mandated assessment, which counts for 20% of the student's final course grade.*



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**ADVANCED SCIENCE TOPICS**

199965	0.5 credit	Grades 11 – 12
199966	1.0 credit	Grades 11 – 12

Advanced Science Topics is an upper-level elective science course that can be taken for 1 term (.5 credit) or for 2 terms (1.0 credit). It provides students the opportunity to study, investigate and discuss current topics and issues in science. The content will span earth and space science, physical science and life science. Students will have the opportunity to independently explore a scientific topic of their choosing in addition to the topics the class studies as a whole. Participation may involve reading journal articles, designing and conducting investigations, collecting field and laboratory data, analyzing data sets, researching and writing as well as class discussions.

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**ANATOMY AND PHYSIOLOGY**

190312	Grades 11 - 12
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*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.

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**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 Science Standards for life science 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.

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**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.

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**BIOLOGY, IB-HL**

190201 (two-year program, 1st year)	Grade 11
190301 (two-year program, 2nd year)	Grade 12

*Available only at Urbana High School.*

*Prerequisite: 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.

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## CHEMISTRY 1 HONORS

193001 Grades 10 - 12

*Prerequisites: Algebra 1 and 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.

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## 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.

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## 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.

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## 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.

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## CHEMISTRY, IB

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.*

*Chemistry Honors recommended.*

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.

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## CLIMATE OCEAN WEATHER SPACE SCIENCE

191243 Grades 11 - 12

*Prerequisites: Completion of 3 MSSS aligned 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.

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## EARTH SYSTEM SCIENCE RESEARCH HONORS

193901 Grades 11 - 12

*Prerequisites: Completion of 3 MSSS aligned 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.

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**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).

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**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.

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**FORENSIC SCIENCE**

195110

Grades 11-12

*Prerequisites: Completion of 3 MSSS aligned laboratory courses. (Chemistry recommended)*

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.

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**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.

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**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.

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**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.

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**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.

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

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**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.

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**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.

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**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.

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**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.

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**PHYSICS, IB**

SL - 190702 2 credits (year long, meets daily)

*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.

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**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.

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**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.

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**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.

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**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.

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**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.

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**FCC BSCI 150 PRINCIPLES OF BIOLOGY I (DUAL ENROLLMENT COURSE)**

190098 Grades 11-12

190098OC Grades 11-12

*Prerequisites: FCPS Biology, FCPS Chemistry 1.*

Explores the basic biological principles common to all living organisms, including biological chemistry, bioenergetics and metabolism, cellular and molecular biology, and classical and molecular genetics. Methods of scientific inquiry and data analysis are studied and practiced. Intended for STEM (science, technology, engineering, and math) majors and health majors. Earns 4 college credits.

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**FCC CHEM 101 GENERAL CHEMISTRY (DUAL ENROLLMENT COURSE)**

190092 Grades 11-12

190092OC Grades 11-12

*Prerequisites: FCPS Biology, FCPS Chemistry 1.*

Examines the concepts underlying modern chemistry including atomic and molecular structure, bonding, states of matter, and solutions. Laboratory experiments illustrate the lecture material. Intended for STEM (science, technology, engineering, and math) majors and health majors. Earns 4 college credits.

## 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, American government and world history.

### SOCIAL STUDIES COURSE SEQUENCE SAMPLES

Grade 9	Grade 10	Grade 11	Grade 12
American Studies 2 163211 or 163111 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 165151 (1 Semester) FCC HIST122 16100 or 161001C	
*Courses that are asterisked culminate with a state-mandated assessment, which counts for 20% of the student's final course grade.			

#### 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

163211 Grade 9  
163111 Honors Grade 9

American Studies 2 continues the timeline 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.

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**BLACK & AFRICAN AMERICAN STUDIES**

168110 Grades 10 - 12  
The course charts the accomplishments and struggles of people of African descent in America. While instructors will take an approach rooted in historical exploration to teach a course that centers the experiences and voices of African Americans, the course will be interdisciplinary. Through a largely, but not exclusively, chronological approach, this course will emphasize how African Americans have worked to determine the trajectory of their own lives while navigating extensive challenges to freedom, advancement, and prosperity. While some attention will be paid to African origins, the course will analyze the historical, economic, political, and cultural paths from the African Slave Trade through the modern era. We analyze how African Americans forged identities and culture that have shaped our nation.

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**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.

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**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.

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**ECONOMICS AND GEOGRAPHY**

164070 Grades 9 - 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

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**EUROPEAN HISTORY, ADVANCED PLACEMENT**

164111 Grades 10 - 12  
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.

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**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.

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**GEOGRAPHY**

164180 (0.5 credit) Grades 11 - 12  
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.

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## GOVERNMENT

161201\* Grade 10  
161101\* Honors Grade 10

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.

**THIS COURSE MUST BE TAKEN NO LATER THAN FALL OF SENIOR YEAR.**

\*Course culminates with a state-mandated assessment.

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## GOVERNMENT AND POLITICS: COMPARATIVE, ADVANCED PLACEMENT

164191 Grades 10 - 12

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: China, Iran, Mexico, Nigeria, Russia and the United Kingdom. Additionally, students examine how different governments solve similar problems by comparing the effectiveness of approaches to many global issues.

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## GOVERNMENT AND POLITICS: UNITED STATES, ADVANCED PLACEMENT

164051 Grades 10 - 12

AP U.S. Government and Politics is an introductory college-level course in U.S. government and politics. Students cultivate their understanding of U.S. government and politics through analysis of data and text-based sources as they explore topics like constitutionalism, liberty and order, civic participation in a representative democracy, competing policy-making interests, and methods of political analysis.

\*Students taking the course for original credit must take the AP exam in order to fulfill the state test requirement for Government.

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## IB ECONOMICS

160902

IB Economics emphasizes the economic theories of microeconomics, 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.

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## IB HISTORY

160301 and 160701 IB History 11  
160901 IB History 12 - Africa and the Middle East  
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.

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## HUMAN GEOGRAPHY, ADVANCED PLACEMENT

164161 Grades 10 - 12

AP Human Geography is an introductory college-level human geography course. Students cultivate their understanding of human geography through data and geographic analyses as they explore topics like patterns and spatial organization, human impacts and interactions with their environment, and spatial processes and societal changes.

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## LAW AND SOCIETY

164060 Grades 10 - 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.

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## 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.



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**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 Implementation. 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.

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**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.

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**MACROECONOMICS, ADVANCED PLACEMENT**

164411

Grades 10 - 12

AP Macroeconomics is an introductory college-level macroeconomics course. Students cultivate their understanding of the principles that apply to an economic system as a whole by using principles and models to describe economic situations and predict and explain outcomes with graphs, charts, and data as they explore concepts like economic measurements, markets, macroeconomic models, and macroeconomic policies.

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**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.

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**MICROECONOMICS, ADVANCED PLACEMENT**

164311

Grades 10 - 12

AP Microeconomics is an introductory college-level microeconomics course. Students cultivate their understanding of the principles that apply to the functions of individual economic decision-makers by using principles and models to describe

economic situations and predict and explain outcomes with graphs, charts, and data as they explore concepts like scarcity and markets; costs, benefits, and marginal analysis; production choices and behavior; and market inefficiency and public policy.

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**MODERN WORLD HISTORY**

161211

Grade 11

161111 Honors

Grade 11

Students begin with an overview on the foundations of world history through an examination of the state of world affairs and their origins in C.E. with a focus on 1750 to the present. In world history students interpret evidence and identify significant trends in order to understand major developments across the globe. Students will explore how humans have thought, behaved, and interacted across the ages in order to develop an understanding of global patterns of change and continuity. Students of world history study specific people, events, and ideas by situating them in global, interregional, and regional contexts. Organizationally, world history requires students to shift between global, interregional, and regional spatial scales in order to emphasize interactions between different scales of historical study and to identify connections across time and geography

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**MONEY, FINANCE AND ECONOMICS**

164370

Grades 9 - 12

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

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**NATIONAL AND GLOBAL ISSUES**

164010

Grades 11 - 12

This one credit 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.

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**NATIONAL AND GLOBAL ISSUES**

164015 (.5 credit)

Grades 11 - 12

This half credit course is an abbreviated version of the original course and 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.

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**PHILOSOPHY OF KNOWLEDGE**

164520

Grades 11 - 12

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.

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**PSYCHOLOGY**

164030

Grades 11 - 12

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 are also examined.

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**PSYCHOLOGY, ADVANCED PLACEMENT**

165031

Grades 11 - 12

AP Psychology is an introductory college-level psychology course. Students cultivate their understanding of the systematic and scientific study of human behavior and mental processes through inquiry-based investigations as they explore concepts like 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.

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**SOCIOLOGY**

164020

Grades 11 - 12

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.

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**THEORY OF KNOWLEDGE - IB**

160601

Grades 11 and/or 12

*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.

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**UNITED STATES, 1945 TO THE PRESENT**

167020

Grades 10 - 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.

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**UNITED STATES HISTORY, ADVANCED PLACEMENT**

164101

Grades 10 - 12

AP U.S. History is an introductory college-level U.S. history course. Students cultivate their understanding of U.S. history from c. 1491 CE to the present through analyzing historical sources and learning to make connections and craft historical arguments as they explore concepts like American and national identity; work, exchange, and technology; geography and the environment; migration and settlement; politics and power; America in the world; American and regional culture; and social structures. This version of the course is 1 semester and 1 credit open to 10-12th grade students.

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**UNITED STATES HISTORY, ADVANCED PLACEMENT AND SEMINAR**

164141 AP US

Grades 9 - 12

164140 AP US Seminar

Grades 9 - 12

AP U.S. History is an introductory college-level U.S. history course. Students cultivate their understanding of U.S. history from c. 1491 CE to the present through analyzing historical sources and learning to make connections and craft historical arguments as they explore concepts like American and national identity; work, exchange, and technology; geography and the environment; migration and settlement; politics and power; America in the world; American and regional culture; and social structures. This version of the course is a 2 semester, 2 credit course open to 9th grade students.

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**UNITED STATES WOMEN'S HISTORY**

167030

Grades 10-12

This course is an introduction to the history of women in the United States and the areas that became the United States from European contact to the present. The range of women's experiences was vast, and often differed as a result of race, ethnicity, class, region, age, marital status, and many other characteristics. Nonetheless, there have also been commonalities based on cultural and legal ideas about women's role in society and social and economic organization. This course will provide an overview of women from many perspectives in the broad areas of work, family/community relationships, social position, economic status and political action.

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**WORLD HISTORY: MODERN, ADVANCED PLACEMENT**

165151

Grades 11-12

AP World History: Modern is an introductory college-level modern world history course. Students cultivate their understanding of world history from c. 1200 CE to the present through analyzing historical sources and learning to make connections and craft historical arguments as they explore concepts like humans and the environment, cultural developments and interactions, governance, economic systems, social interactions and organization, and technology and innovation.

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**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.

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**WORLD WAR 2**

164510

Grades 10-12

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.

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**FCC HIST 122 WORLD HISTORY II (DUAL ENROLLMENT COURSE)**

161001

Grades 11-12

161001OC

Grades 11-12

Examines global interactions during the post-Bubonic Plague world, origins and development of modernity, and contemporary history after World War II. This course is a survey of world history from 1450 to present. Earns 3 college credits.

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**FCC HUMN 101 CULTURAL IDENTITY IN AMERICA (DUAL ENROLLMENT COURSE)**

160115

Grades 11-12

160115OC

Grades 11-12

Introduces students to the fundamental concepts of identity construction and examines such identities in the context of culture, with particular focus on race, gender, class, and sexuality. As an experiential course, it seeks to increase the skills and sensitivity necessary to process the intersections of one's identities in a diverse global, national, and local community. Earns 3 college credits.

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**FCC PSYC 101 (DUAL ENROLLMENT COURSE)**

160093

Grades 11-12

160093OC

Grades 11-12

Emphasizes the major factors that influence human behavior, including behavioral neuroscience, perceptual processes, consciousness, intelligence, personality and psychological disorders. Earns 3 college credits.

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**FCC SOCY 101 INTRODUCTION TO SOCIOLOGY (DUAL ENROLLMENT COURSE)**

160094

Grades 11-12

160094OC

Grades 11-12

Introduces the student to the study of society and the impact of society upon the individual. Exemplifies social processes in cultural patterns and institutions. Examines group values at various levels of human relationship. Earns 3 college credits.

## WORK BASED LEARNING

Work Based Learning program and courses allow students 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.

### COMPLETERS

#### CAREER, RESEARCH AND DEVELOPMENT (WORK STUDY) (3 REQUIRED COURSES)

Introduction to Career Research and Development (1) OR College and Career Prep (1)  
Advanced Career Research and Development (1)  
Work Study (1)

#### YOUTH APPRENTICESHIP (4 CREDITS REQUIRED)

Related concurrent instruction (1)  
Youth Apprenticeship (3)

The **Mentor-Internship, Peer and Community Engagement Experience** programs are work-based learning experiences but are not CTE completer programs.

Youth Apprenticeship is a completer offered in conjunction with Department of Labor and approved employers. Students work alongside a mentor for a minimum of 450 hours to earn the DOL Apprenticeship certificate.

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#### CAREER, RESEARCH AND DEVELOPMENT COMPLETER PROGRAM

##### 3 COURSES REQUIRED

Introduction to Career Research and Development (Or)  
College and Career Prep  
Advanced Career Research and Development  
Work Study

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#### INTRODUCTION TO CAREER RESEARCH AND DEVELOPMENT

498000 Grades 10 - 12  
*First course in sequence option, required by MSDE for any student  
intending to take work study their senior year.*

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 meets the Advanced Career Development prerequisite.

Meets Personal Financial Literacy requirement

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#### CAREER AND COLLEGE PREP (NEW FOR 22-23)

498110 Grades 9 – 12  
*First course in sequence option, required MSDE for any student  
intending to take work study their senior year.*

College and Career Prep provides students with opportunities to explore the skills needed to make informed decisions as they progress through high school related to further education and/or employment in a career field of their interest upon graduating high school. Students apply financial literacy to make informed, responsible choices and decisions related to personal earning, spending, and saving plans and explore real world financial scenarios related to paying for transportation and housing expenses. This course meets Personal Financial Literacy requirements and can be used for for the first course in the Career Research and Development CTE completer program.

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#### ADVANCED CAREER RESEARCH AND DEVELOPMENT

494510 Grade 12  
*Concurrent enrollment in Work Study. (REQUIRED BY MSDE).  
Prerequisite starting in 2023-24: Introduction to Career Research  
and Development or College and Career Prep.*

This course is required for all students enrolled in 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. This course meets Personal Financial Literacy requirement

## 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 Research and Development*. Required by MSDE.

**Prerequisite:** *Introduction to Career Research and Development or College and Career Prep*.

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.

Work Study A — Fall Semester.

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. Work locations 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. Places of business are required to cover workman's compensation and follow all labor laws. 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.

## APPRENTICESHIP COMPLETER PROGRAM

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. All internships/apprenticeships are now weighted.

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
495705	A	3 credits	Grades 11 -12
495706	B	3 credits	Grades 11 -12
495707	C	1 credit	Grades 11 -12
495708	D	1 credit	Grades 11 -12
495709	C	2 credits	Grades 11 -12
495710	D	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.

## CTE COMPLETER WORK STUDY AND INTERNSHIPS

**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. All internships/apprenticeships are now weighted.*

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.

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
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
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
360031	Culinary/Hospitality Int 1A	1 credit	Grade 12
360035	Culinary/Hospitality Int 1B	1 credit	Grade 12
360032	Culinary/Hospitality Int 2A	2 credits	Grade 12
360036	Culinary/Hospitality Int 2B	2 credits	Grade 12
360033	Culinary/Hospitality Int 3A	3 credits	Grade 12
360037	Culinary/Hospitality Int 3B	3 credits	Grade 12
360034	Culinary/Hospitality Int 4A	4 credits	Grade 12
360038	Culinary/Hospitality Int 4B	4 credits	Grade 12
360040	Culinary/Hosp. Work Study 1A	1 credit	Grade 12
360041	Culinary/Hosp. Work Study 1B	1 credit	Grade 12
360050	Culinary/Hosp. Work Study 2A	2 credits	Grade 12
360051	Culinary/Hosp. Work Study 2B	2 credits	Grade 12
360060	Fire and Rescue Internship 1A	2 credits	Grade 12
360061	Fire and rescue Internship 2A	2 credits	Grade 12

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### WORK BASED LEARNING ELECTIVES

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#### CAREER & TECHNOLOGY CENTER EXPLORATORY ELECTIVE COURSE

539810

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

*Non-CTE completer program.*

This one-semester elective, available during the junior and senior year, provides students with disabilities the opportunity to experience a variety of work-related activities in a comprehensive, hands-on setting at the CTC. This course is NOT required to be recommended by the IEP team but should be selected in the course schedule in conjunction with a transition plan, and the student 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.

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#### 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. All internships/apprenticeships are now weighted.*

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.

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#### PEER AND COMMUNITY ENGAGEMENT EXPERIENCE

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.*

This course is open for students interested in volunteering with a community nonprofit agency, private school, or with an FCPS teacher/classroom program. During the course students will have the opportunity to investigate ways in which they might help others by using the basic components of service learning: Preparation, Action, and Reflection. Serving others offers students the opportunity to use existing strengths and develop new skills in an independent setting with support. Students will make a commitment to a specific placement for the semester.

Students will be assigned a specific placement with a teacher/course/program or a community agency. Students placed outside their home school must provide transportation. Students commit to the placement for a semester and will complete assignments related to their experiences at their placement site.

Additionally, students will complete an individual service project for the semester. Students are cooperatively supervised by a placement supervisor and their school's Work-Based Learning/Student Service Learning coordinator.

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#### TEMPORARY ADMINISTRATIVE ATTENDANCE WAIVER

562030	Grade 12
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Students must comply with the Temporary Administrative Attendance Waiver (Regulation 400-33) guidelines which require a completed waiver application, formal written application from the student and his/her parent or guardian, and the ability to meet all graduation requirements. The temporary administrative attendance waiver is determined to be in the best interest of the student. This waiver requires the approval of the instructional director of high schools or designee. Please see your school counselor for an application and further information.

## 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. *Many 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.*

**Maryland Seal of Biliteracy:** The Maryland Seal of Biliteracy is an award given upon high school graduation that recognizes a student's high level of proficiency in listening, speaking, reading and writing in one or more languages other than English. Students must demonstrate high levels of proficiency in listening, speaking, reading, and writing in a language other than English, as measured by assessments authorized by the Maryland State Department of Education. These approved assessments include Advanced Placement examinations in world languages.

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### 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.

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### 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.

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### 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.

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**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.

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**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.

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**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.

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**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.

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**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.

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**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 Program (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 Essential Elements 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 Essential Elements 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.

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**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 Essential Elements 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.

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**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 Essential Elements that align with Maryland State Curriculum skills and processes.

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**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.

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Page	Course Number	Course Title	Credits Awarded
70	168020	9-11 to Present	1
10	663502	Academy of Fine Arts Academy Capstone Project	1
10	663501	Academy of Fine Arts Mentor/Internship	1
10	663500	Academy of Fine Arts Theories and Practices in Content	1
16	660431	Acting Technique and Performance 1	1
16	660432	Acting Technique and Performance 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
58	233221	Advanced Algebra with Trigonometry	1
31	333090	Advanced Business Management	1
76	494510	Advanced Career Research and Development	1
34	344042	Advanced Computing Concepts	1
12	294100	Advanced Computer Graphics 1	1
12	294110	Advanced Computer Graphics 2	1
12	294120	Advanced Computer Graphics 3	1
32	333041	Advanced Finance and Accounting	1
29	491361	Advanced Mechanics	1
17	660090	Advanced Methods and Techniques 1	.5
17	660100	Advanced Methods and Techniques 2	.5
10	660102	Advanced Methods and Techniques 3A	1
10	660103	Advanced Methods and Techniques 3B	1
22	668121	Advanced Music Studies 1	1
22	668221	Advanced Music Studies 2	1
10	664261	Advanced Music Studies 3A	1
10	664271	Advanced Music Studies 3B	1
22	668140	Advanced Music Studies Music History and Literature 1	1
22	668150	Advanced Music Studies Music History and Literature 2	1
22	668230	Advanced Music Studies Music Technology 1	1
22	669130	Advanced Music Studies Music Technology 2	1
22	668100	Advanced Music Studies Music Theory 1A	.5
22	669200	Advanced Music Studies Music Theory 1B	.5
22	668110	Advanced Music Studies Music Theory, Advanced Placement 1A	.5
22	669210	Advanced Music Studies Music Theory, Advanced Placement 1B	.5
23	668120	Advanced Music Studies Piano 1, Basic	1

Page	Course Number	Course Title	Credits Awarded
23	668220	Advanced Music Studies Piano 2, Advanced	1
12	291180	Advanced Photography 1	1
12	291190	Advanced Photography 2	1
12	291191	Advanced Photography 3	1
65	199965	Advanced Science Topics	.5
65	199966	Advanced Science Topics	1
36	491200	Aerospace Engineering: (AE) – Project Lead the Way: Engineering	1
42	530004	Agri-Business	2
43	533144	Agricultural and Commercial Metals Technology (Welding) 1A	2
43	533142	Agricultural and Commercial Metals Technology (Welding) 1B	2
43	534144	Agricultural and Commercial Metals Technology (Welding) 2A	2
43	535142	Agricultural and Commercial Metals Technology (Welding) 2B	2
30	492150	Agriculture/Horticulture Independent Study	1
58	231405A	Algebra Readiness (Two Semesters)	1
58	231406B	Algebra Readiness (Two Semesters)	1
59	23120C	Algebra 1 - Honors (Single Semester)	1
59	23127C	Algebra 1A	1
59	23128C	Algebra 1B	1
59	23320C	Algebra 2	1
59	23211C	Algebra 2 - Honors	1
42	531272	Allied Health Internship	2
23	431120	American Popular Music	1
23	431125	American Popular Music	.5
79	265000	American Sign Language 1	1
79	265100	American Sign Language 2	1
79	265200	American Sign Language 3	1
79	265210	American Sign Language 4	1
70	163211	American Studies 2	1
70	163111	American Studies 2 – Honors	1
65	190312	Anatomy and Physiology	1
70	164190	Ancient and Medieval History	1
70	163261	Antebellum America, The Civil War and Reconstruction	1
77	495701A	Apprenticeship	1
77	495702B	Apprenticeship	1
77	495703A	Apprenticeship	2
77	495704B	Apprenticeship	2
77	495705B	Apprenticeship	3
77	495706B	Apprenticeship	3

Courses shown in bold on this page are given weighted grades.

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Page	Course Number	Course Title	Credits Awarded
<b>77</b>	<b>495707C</b>	<b>Apprenticeship</b>	<b>1</b>
<b>77</b>	<b>495708D</b>	<b>Apprenticeship</b>	<b>1</b>
<b>77</b>	<b>495709C</b>	<b>Apprenticeship</b>	<b>2</b>
<b>77</b>	<b>495710D</b>	<b>Apprenticeship</b>	<b>2</b>
54	463050	Aquatic Sports/Fitness	1
54	463250	Aquatic Sports/Fitness 1A	0.5
54	463350	Aquatic Sports/Fitness 1B	0.5
54	463030	Aquatics 1 - Lifeguard Training	1
54	463040	Aquatics 2 - Water Safety Instructor Training (WSI)	1
54	463080	Aquatics 3 - WSI/Lifeguard Management Training	1
55	463090	Aquatics 4 - Independent Study	1
35	392500	Architecture, Engineering, and Construction Management 1	1
35	392510	Architecture, Engineering, and Construction Management 2	1
35	392520	Architecture, Engineering, and Construction Management 3	1
35	392530	Architecture, Engineering, and Construction Management Capstone	1
12	291010	Art 1	1
12	292011	Art 2	1
<b>12</b>	<b>291141</b>	<b>Art 3</b>	<b>1</b>
<b>12</b>	<b>292012</b>	<b>Art 4</b>	<b>1</b>
<b>13</b>	<b>293131</b>	<b>Art History 1, Advanced Placement</b>	<b>1</b>
<b>13</b>	<b>293132</b>	<b>Art History 2, Advanced Placement</b>	<b>1</b>
13	294051	Art Independent Study 1	1
13	294151	Art Independent Study 2	1
<b>13</b>	<b>294451</b>	<b>Art Independent Study 3</b>	<b>1</b>
<b>13</b>	<b>294551</b>	<b>Art Independent Study 4</b>	<b>1</b>
55	461000	Athletic Coaching, Introduction to	1
55	461001	Athletic Coaching 2	1
36	492110	Auto Mechanics 1	1
36	492130	Auto Mechanics 2	2
36	494111	Auto Mechanics 3	2
45	533202	Autobody/Collision Repair 1A	2
45	533203	Autobody/Collision Repair 1B	2
45	535033	Autobody/Collision Repair 2A	2
45	535034	Autobody/Collision Repair 2B	2
44	533064	Automotive Technology 1A	2
44	533065	Automotive Technology 1B	2
44	534064	Automotive Technology 2A	2
44	534062	Automotive Technology 2B	2
<b>38</b>	<b>391100</b>	<b>Biomedical Innovation – Project Lead the Way: Biomedical Sciences</b>	<b>1</b>

Page	Course Number	Course Title	Credits Awarded
<b>44</b>	<b>531100</b>	<b>Biomedical Innovation – Project Lead the Way: Biomedical Sciences (CTC)</b>	<b>2</b>
65	192211	Biology	1
<b>65</b>	<b>191111</b>	<b>Biology - Honors</b>	<b>1</b>
<b>65</b>	<b>193111</b>	<b>Biology 1, Advanced Placement</b>	<b>1</b>
<b>65</b>	<b>194111</b>	<b>Biology 2, Advanced Placement</b>	<b>1</b>
71	168110	Black & African American Studies	1
	562006	Bridge Plan	0.5
	562004	Bridge Plan 1	1
	562005	Bridge Plan 2	1
<b>43</b>	<b>533085</b>	<b>CAD Architectural 1A</b>	<b>2</b>
<b>43</b>	<b>533086</b>	<b>CAD Architectural 1B</b>	<b>2</b>
<b>43</b>	<b>534241</b>	<b>CAD Architectural 2A</b>	<b>2</b>
<b>43</b>	<b>534251</b>	<b>CAD Architectural 2B</b>	<b>2</b>
<b>47</b>	<b>533072</b>	<b>CAD Engineering 1A</b>	<b>2</b>
<b>47</b>	<b>533073</b>	<b>CAD Engineering 1B</b>	<b>2</b>
<b>47</b>	<b>534261</b>	<b>CAD Engineering 2A</b>	<b>2</b>
<b>47</b>	<b>534271</b>	<b>CAD Engineering 2B</b>	<b>2</b>
<b>59</b>	<b>234181</b>	<b>Calculus I, Advanced Placement A</b>	<b>1</b>
<b>59</b>	<b>234191</b>	<b>Calculus I, Advanced Placement B</b>	<b>1</b>
<b>59</b>	<b>234101</b>	<b>Calculus I, Advanced Placement (AB)</b>	<b>1</b>
<b>59</b>	<b>234121</b>	<b>Calculus II, Advanced Placement (BC)</b>	<b>1</b>
<b>59</b>	<b>234131</b>	<b>Calculus III</b>	<b>1</b>
76	498110	Career and College Prep	1
78	539810	Career & Technology Center Exploratory Elective Course	1
45	533341	Carpentry 1A	2
45	533342	Carpentry 1B	2
45	535042	Carpentry 2A	2
45	535043	Carpentry 2B	2
34	362040	CD 1 Child Growth and Development	1
34	363051	CD 2 Learning Environment for Preschoolers	1
<b>35</b>	<b>360112</b>	<b>CD 3 Portfolio and Internship 1 (Fall)</b>	<b>1</b>
<b>35</b>	<b>360212</b>	<b>CD 3 Portfolio and Internship 1 (Spring)</b>	<b>1</b>
<b>35</b>	<b>360312</b>	<b>CD 3 Portfolio and Internship 1 (Fall)</b>	<b>2</b>
<b>35</b>	<b>360412</b>	<b>CD 3 Portfolio and Internship 1 (Spring)</b>	<b>2</b>
<b>35</b>	<b>360113A</b>	<b>CD 4 Portfolio and Internship 2 (Fall)</b>	<b>1</b>
<b>35</b>	<b>360213</b>	<b>CD 4 Portfolio and Internship 2 (Spring)</b>	<b>1</b>
<b>35</b>	<b>360114</b>	<b>CD 4 Portfolio and Internship 2 (Fall)</b>	<b>2</b>
<b>35</b>	<b>360214</b>	<b>CD 4 Portfolio and Internship 2 (Spring)</b>	<b>2</b>
13	291060	Ceramics 1	1
13	292061	Ceramics 2	1
<b>13</b>	<b>293061</b>	<b>Ceramics 3</b>	<b>1</b>

Courses shown in bold on this page are given weighted grades.

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<b>13</b>	<b>293191</b>	<b>Ceramics 4</b>	<b>1</b>
<b>39</b>	<b>5330920C</b>	<b>Certified Nursing Assistant 1 at FCC CAH 132</b>	<b>1</b>
<b>39</b>	<b>5330930C</b>	<b>Certified Nursing Assistant 2 at FCC CAH 133</b>	<b>1</b>
<b>66</b>	<b>193001</b>	<b>Chemistry 1</b>	<b>1</b>
<b>66</b>	<b>196051</b>	<b>Chemistry 1, Advanced Placement</b>	<b>1</b>
<b>66</b>	<b>193101</b>	<b>Chemistry 2</b>	<b>1</b>
<b>66</b>	<b>196061</b>	<b>Chemistry 2, Advanced Placement</b>	<b>1</b>
66	193211	Chemistry, Fundamentals of	1
<b>45, 46</b>	<b>538514</b>	<b>Cisco Intro to Networks (Year 1)</b>	<b>2</b>
<b>45, 46</b>	<b>538515</b>	<b>Cisco CompTIA (Year 1)</b>	<b>1</b>
<b>45, 46</b>	<b>538516</b>	<b>Cisco Linux Essentials</b>	<b>1</b>
<b>45</b>	<b>538551</b>	<b>Cisco Switching, Routing and Wireless Essentials (Year 2, Cyber Security and Networking Academies)</b>	<b>2</b>
<b>45</b>	<b>538552</b>	<b>Cisco Network Security and Automation (Year 2 Networking Academy)</b>	<b>2</b>
<b>46</b>	<b>538556</b>	<b>Cisco - Linux+ (Year 2 Operating Systems Academy)</b>	<b>2</b>
<b>45</b>	<b>538553</b>	<b>Cisco CyberSecurity Essentials and CCNA Security (Year 2 Cyber Security Academy)</b>	<b>2</b>
<b>37</b>	<b>497401</b>	<b>Civil Engineering and Architecture: (CEA) – Project Lead the Way: Engineering</b>	<b>1</b>
23	439110	Class Piano 1	1
23	439120	Class Piano 2	1
<b>23</b>	<b>439130</b>	<b>Class Piano 3</b>	<b>1</b>
<b>23</b>	<b>439140</b>	<b>Class Piano 4</b>	<b>1</b>
<b>23</b>	<b>439150</b>	<b>Class Piano 5</b>	<b>1</b>
<b>23</b>	<b>439160</b>	<b>Class Piano 6</b>	<b>1</b>
<b>23</b>	<b>439170</b>	<b>Class Piano 7</b>	<b>1</b>
<b>23</b>	<b>439180</b>	<b>Class Piano 8</b>	<b>1</b>
66	191243	Climate Ocean Weather Space Science	1
<b>39</b>	<b>5330940C</b>	<b>Clinical Internship with FCC CAH 190</b>	<b>1</b>
23	432000	Color Guard 1	1
23	432100	Color Guard 2	1
<b>23</b>	<b>433100</b>	<b>Color Guard 3</b>	<b>1</b>
<b>23</b>	<b>435100</b>	<b>Color Guard 4</b>	<b>1</b>
13	292040	Commercial Art 1	1
13	293041	Commercial Art 2	1
14	294040	Computer Graphics 1	1
14	294041	Computer Graphics 2	1
<b>14</b>	<b>294042</b>	<b>Computer Graphics 3</b>	<b>1</b>
<b>14</b>	<b>294043</b>	<b>Computer Graphics 4</b>	<b>1</b>
<b>37</b>	<b>497201</b>	<b>Computer Integrated Manufacturing: (CIM) – Project Lead the Way: Engineering</b>	<b>1</b>

Page	Course Number	Course Title	Credits Awarded
<b>33</b>	<b>343011</b>	<b>Computer Science A, Advanced Placement</b>	<b>1</b>
<b>33</b>	<b>343012</b>	<b>Computer Science Principles, Advanced Placement</b>	<b>1</b>
81	561001	Concepts of English 9	1
81	561017	Concepts of English 9 YL	1
81	561005	Concepts of English 10	1
81	561002	Concepts of English 10 YL	1
81	561009	Concepts of English 11	1
81	561026	Concepts of English 11 YL	1
81	561013	Concepts of English 12	1
81	561031	Concepts of English 12 YL	1
81	561002	Concepts of Math 9	1
81	561018	Concepts of Math 9 YL	1
81	561006	Concepts of Math 10	1
81	561023	Concepts of Math 10 YL	1
81	561010	Concepts of Math 11	1
81	561027	Concepts of Math 11 YL	1
81	561014	Concepts of Math 12	1
81	561032	Concepts of Math 12 YL	1
82	561004	Concepts of Science 9	1
82	561021	Concepts of Science 9 YL	1
82	561008	Concepts of Science 10	1
82	561025	Concepts of Science 10 YL	1
82	561012	Concepts of Science 11	1
82	561029	Concepts of Science 11 YL	1
82	561016	Concepts of Science 12	1
82	561034	Concepts of Science 12 YL	1
82	561003	Concepts of Social Studies 9	1
82	561019	Concepts of Social Studies 9 YL	1
82	561007	Concepts of Social Studies 10	1
82	561024	Concepts of Social Studies 10 YL	1
82	561011	Concepts of Social Studies 11	1
82	561028	Concepts of Social Studies 11 YL	1
82	561015	Concepts of Social Studies 12	1
82	561033	Concepts of Social Studies 12 YL	1
23	439020	Concert Band 1	1
23	439040	Concert Band 2	1
<b>23</b>	<b>439060</b>	<b>Concert Band 3</b>	<b>1</b>
<b>23</b>	<b>439080</b>	<b>Concert Band 4</b>	<b>1</b>
24	439210	Concert Choir 1	1
24	439220	Concert Choir 2	1
<b>24</b>	<b>439230</b>	<b>Concert Choir 3</b>	<b>1</b>
<b>24</b>	<b>439240</b>	<b>Concert Choir 4</b>	<b>1</b>

Courses shown in bold on this page are given weighted grades.

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Page	Course Number	Course Title	Credits Awarded
24	439250	<b>Concert Choir 5</b>	1
24	439260	<b>Concert Choir 6</b>	1
24	439270	<b>Concert Choir 7</b>	1
24	439280	<b>Concert Choir 8</b>	1
59	233231	Contemporary Financial Algebra	1
60	233230	Contemporary Mathematics	1
46	532024	Cosmetology 1A	2
46	533025	Cosmetology 1B	2
46	533024	Cosmetology 2A	4
46	539121	Cosmetology 2B	4
51	134255	Creative Writing, Intro	1
51	134250	Creative Writing 1	1
51	134262	Creative Writing 2	1
51	<b>134263</b>	<b>Creative Writing 3</b>	1
51	<b>134264</b>	<b>Creative Writing 4</b>	1
77	<b>490001</b>	<b>CTE Completer - Ag Mentor Int 1A</b>	1
77	<b>490005</b>	<b>CTE Completer - Ag Mentor Int 1B</b>	1
77	<b>490002</b>	<b>CTE Completer - Ag Mentor Int 2A</b>	2
77	<b>490006</b>	<b>CTE Completer - Ag Mentor Int 2B</b>	2
77	<b>490003</b>	<b>CTE Completer - Ag Mentor Int 3A</b>	3
77	<b>490007</b>	<b>CTE Completer - Ag Mentor Int 3B</b>	3
77	<b>490004</b>	<b>CTE Completer - Ag Mentor Int 4A</b>	4
77	<b>490008</b>	<b>CTE Completer - Ag Mentor Int 4B</b>	4
77	490010	CTE Completer - Ag Work Study 1A	1
77	490013	CTE Completer - Ag Work Study 1B	1
77	490020	CTE Completer - Ag Work Study 2A	2
77	490023	CTE Completer - Ag Work Study 2B	2
77	<b>360001</b>	<b>CTE Completer - Child Dev Mentor Int 1A</b>	1
77	<b>360005</b>	<b>CTE Completer - Child Dev Mentor Int 1B</b>	1
77	<b>360002</b>	<b>CTE Completer - Child Dev Mentor Int 2A</b>	2
77	<b>360006</b>	<b>CTE Completer - Child Dev Mentor Int 2B</b>	2
77	<b>360003</b>	<b>CTE Completer - Child Dev Mentor Int 3A</b>	3
77	<b>360007</b>	<b>CTE Completer - Child Dev Mentor Int 3B</b>	3
77	<b>360004</b>	<b>CTE Completer - Child Dev Mentor Int 4A</b>	4
77	<b>360008</b>	<b>CTE Completer - Child Dev Mentor Int 4B</b>	4
77	360010	CTE Completer - Child Dev Work Study 1A	1
77	360011	CTE Completer - Child Dev Work Study 1B	1
77	360020	CTE Completer - Child Dev Work Study 2A	2
77	360021	CTE Completer - Child Dev Work Study 2B	2
77	<b>340001</b>	<b>CTE Completer - Comp SC Mentor Int 1A</b>	1
77	<b>340005</b>	<b>CTE Completer - Comp SC Mentor Int 1B</b>	1
77	<b>340002</b>	<b>CTE Completer - Comp SC Mentor Int 2A</b>	2
77	<b>340006</b>	<b>CTE Completer - Comp SC Mentor Int 2B</b>	2

Page	Course Number	Course Title	Credits Awarded
77	<b>340003</b>	<b>CTE Completer - Comp SC Mentor Int 3A</b>	3
77	<b>340007</b>	<b>CTE Completer - Comp SC Mentor Int 3B</b>	3
77	<b>340004</b>	<b>CTE Completer - Comp SC Mentor Int 4A</b>	4
77	<b>340008</b>	<b>CTE Completer - Comp SC Mentor Int 4B</b>	4
77	340010	CTE Completer - Comp SC Work Study 1A	1
77	340011	CTE Completer - Comp SC Work Study 1B	1
77	340020	CTE Completer - Comp SC Work Study 2A	2
78	340021	CTE Completer - Comp SC Work Study 2B	2
78	<b>360031</b>	<b>CTE Completer - Culinary/Hospitality Int 1A</b>	1
78	<b>360035</b>	<b>CTE Completer - Culinary/Hospitality Int 1B</b>	1
78	<b>360032</b>	<b>CTE Completer - Culinary/Hospitality Int 2A</b>	2
78	<b>360036</b>	<b>CTE Completer - Culinary/Hospitality Int 2B</b>	2
78	<b>360033</b>	<b>CTE Completer - Culinary/Hospitality Int 3A</b>	3
78	<b>360037</b>	<b>CTE Completer - Culinary/Hospitality Int 3B</b>	3
78	<b>360034</b>	<b>CTE Completer - Culinary/Hospitality Int 4A</b>	4
78	<b>360038</b>	<b>CTE Completer - Culinary/Hospitality Int 4B</b>	4
78	360040	CTE Completer - Culinary/Hospitality Work Study 1A	1
78	360041	CTE Completer - Culinary/Hospitality Work Study 1B	1
78	360050	CTE Completer - Culinary/Hospitality Work Study 2A	2
78	360051	CTE Completer - Culinary/Hospitality Work Study 2B	2
78	<b>360060</b>	<b>CTE Completer - Fire and Rescue Internship 1A</b>	2
78	<b>360061</b>	<b>CTE Completer - Fire and Rescue Internship 2A</b>	2
35	362070	Culinary 1	1
35	363070	Culinary 2	1
46	533224	Culinary Arts 1A	2
46	533321	Culinary Arts 1B	2
46	533301	Culinary Arts 2A – Baking Option	2
46	533302	Culinary Arts 2B – Baking Option	2
46	534164	Culinary Arts 2A – Culinary Option	2
46	534162	Culinary Arts 2B – Culinary Option	2
35	361010	Cultures and Cuisine	1
17	<b>663341</b>	<b>Dance, Advanced</b>	1
17	665200	Dance, Advanced, Continuing Studies in	1
17	663141	Dance, Beginner	1
17	665000	Dance, Beginner, Continuing Studies in	1
17	<b>663467</b>	<b>Dance, College and Career Readiness</b>	1
17	<b>663464</b>	<b>Dance History and Criticism 1</b>	1
17	<b>663465</b>	<b>Dance History and Criticism 2</b>	1

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Page	Course Number	Course Title	Credits Awarded
17	<b>663241</b>	<b>Dance, Intermediate</b>	<b>1</b>
18	<b>665100</b>	<b>Dance, Intermediate, Continuing Studies in</b>	<b>1</b>
18	<b>663466</b>	<b>Dance Kinesiology and Anatomy</b>	<b>1</b>
18	<b>663441</b>	<b>Dance Production</b>	<b>1</b>
18	<b>665300</b>	<b>Dance Production, Continuing Studies in</b>	<b>1</b>
18	<b>663460</b>	<b>Dance Technique and Composition 1A</b>	<b>1</b>
18	<b>663461</b>	<b>Dance Technique and Composition 1B</b>	<b>1</b>
18	<b>663462</b>	<b>Dance Technique and Composition 2A</b>	<b>1</b>
18	<b>663463</b>	<b>Dance Technique and Composition 2B</b>	<b>1</b>
10	<b>664463</b>	<b>Dance Technique and Composition 3A</b>	<b>1</b>
10	<b>664464</b>	<b>Dance Technique and Composition 3B</b>	<b>1</b>
18	<b>660441</b>	<b>Dance Technique and Performance 1</b>	<b>1</b>
18	<b>660442</b>	<b>Dance Technique and Performance 2</b>	<b>1</b>
41	<b>533036</b>	<b>Dental Allied Health Internship</b>	<b>1</b>
41	<b>533037</b>	<b>Dental Allied Health Internship</b>	<b>2</b>
41	<b>533035</b>	<b>Dental Assisting</b>	<b>2</b>
39	<b>5330950C</b>	<b>Dental Assisting 1 at FCC CAH 439</b>	<b>1</b>
14	290401	Digital Animation 1	1
14	290402	Digital Animation 2	1
14	290403	Digital Animation 3	1
14	290404	Digital Animation 4	1
47	532054	Digital Design & Printing Methods 1A	2
47	532055	Digital Design & Printing Methods 1B	2
47	534214	Digital Design & Printing Methods 2A	2
47	<b>534215</b>	<b>Digital Design &amp; Printing Methods 2B</b>	<b>2</b>
36	<b>497301</b>	<b>Digital Electronics: (DE) – Project Lead the Way: Engineering</b>	<b>1</b>
14	292200	Digital Photography 1	1
14	292202	Digital Photography 2	1
14	<b>292203</b>	<b>Digital Photography 3</b>	<b>1</b>
14	<b>292204</b>	<b>Digital Photography 4</b>	<b>1</b>
14	<b>292205</b>	<b>Digital Photography 5</b>	<b>1</b>
14	<b>292206</b>	<b>Digital Photography 6</b>	<b>1</b>
71	160100	Discovering Your History: Maryland and Frederick County	1
14	291020	Drawing and Painting 1	1
14	292021	Drawing and Painting 2	1
14	<b>293021</b>	<b>Drawing and Painting 3</b>	<b>1</b>
14	<b>294021</b>	<b>Drawing and Painting 4</b>	<b>1</b>
14	299921	Drawing Concepts	.5
66	<b>193901</b>	<b>Earth System Science Research Honors</b>	<b>1</b>
71	164170	Economics	0.5
71	164070	Economics and Geography	1

Page	Course Number	Course Title	Credits Awarded
47	533054	Electricity 1A	2
47	533151	Electricity 1B	2
47	534054	Electricity 2A	2
47	535052	Electricity 2B	2
29	491050	Engine and Power Technology 1	1
29	491051	Engine and Power Technology 2	1
28	394095	Engineering Design and Applications	1
51	131211	English 9	1
<b>51</b>	<b>131111</b>	<b>English 9 - Honors</b>	<b>1</b>
51, 53	131313	English 9 YL A	1
51, 53	131314	English 9 YL B	1
51	13P211	English 10	1
<b>51</b>	<b>13P111</b>	<b>English 10 - Honors</b>	<b>1</b>
51, 53	131315	English 10 YL A	1
51, 53	131316	English 10 YL B	1
51	133211	English 11	1
<b>51</b>	<b>133111</b>	<b>English 11 - Honors</b>	<b>1</b>
51	134121	English 12	1
51	134281	English 12 (CTC)	1
<b>51</b>	<b>132222</b>	<b>English, Accelerated 10/11 Honors</b>	<b>2</b>
<b>52</b>	<b>134181</b>	<b>English Language and Composition, Advanced Placement</b>	<b>1</b>
<b>52</b>	<b>134381</b>	<b>English Language and Composition, Advanced Placement (CTC)</b>	<b>1</b>
<b>52</b>	<b>134371</b>	<b>English Literature and Composition, Advanced Placement</b>	<b>1</b>
<b>43</b>	<b>530005</b>	<b>Entrepreneurship &amp; Small Business Enterprise</b>	<b>2</b>
47	533111	Environmental Landscape Design & Management 1A	2
47	533112	Environmental Landscape Design & Management 1B	2
47	533113	Environmental Landscape Design & Management 2A	2
47	533114	Environmental Landscape Design & Management 2B	2
<b>67</b>	<b>193511</b>	<b>Environmental Science, Advanced Placement</b>	<b>1</b>
67	192401	Environmental Science/Science and Societal Issues	1
<b>71</b>	<b>164111</b>	<b>European History, Advanced Placement</b>	<b>1</b>
<b>49</b>	<b>538110</b>	<b>Extended Technical Studies A</b>	<b>2</b>
<b>49</b>	<b>538120</b>	<b>Extended Technical Studies B</b>	<b>2</b>
<b>69</b>	<b>190098</b>	<b>FCC BSCI 150 Prin Biology I</b>	<b>1</b>
<b>69</b>	<b>190092</b>	<b>FCC CHEM 101 Gen Chemistry I</b>	<b>1</b>

Courses shown in bold on this page are given weighted grades.

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Page	Course Number	Course Title	Credits Awarded
52	130091	FCC ENGL 101 English Comp	1
52	130092	FCC ENGL 102 Comp & Literature	1
63	231095	FCC ESOL 100A English Academic	1-2
57	460800	FCC HLTH 150 Health Education	1
75	161001	FCC HIST 122 World Hist 2	1
75	160115	FCC HUMN 101 Cultural Identity	1
61	231102	FCC Math 101A Foundational Math	1
61	231095	FCC Math 120 Statistics	1
61	233091	FCC Math 145 College Algebra	1
61	231096	FCC Math 185 Calculus I	1
61	231097	FCC Math 195 Calculus II	1
61	231098	FCC Math 285 Calculus III	1
75	160093	FCC PSYC 101 Gen Psychology	1
75	160094	FCC SOCY 101 Intro Sociology	1
18, 52	663310	Film Study	1
18, 52	663320	Film Study A	0.5
18, 52	663330	Film Study B	0.5
55	461030	Fitness for Life	0.5
52	135051	Forensics and Debate 1	1
52	135251	Forensics and Debate 2	1
52	135351	Forensics and Debate 3	1
52	135451	Forensics and Debate 4	1
67	195110	Forensic Science	1
30	492160	Forestry/Wildlife Management	1
28	349910	Foundations of Computer Science	1
48	531160	Foundations of Curriculum and Instruction	1
38	398100	Foundations of Medicine & Health Science	1
41	531210	Foundations of Medicine & Health Science	2
41, 42	531273	Foundations of Medicine & Health Science (Dental & Physical Rehab options)	1
79	261000	French 1	1
79	262000	French 2	1
79	263001	French 3	1
79	264001	French 4	1
79	265001	French Advanced Placement Language	1
79	265002	French Advanced Placement Literature	1
79	266031	French Advanced Studies 1	1
79	266032	French Advanced Studies 2	1
79	269200	French APEX 1	1
79	269210	French APEX 2	1
79	269220	French APEX, Advanced Placement	1
71	164180	Geography	0.5
60	23111C	Geometry - Honors	1

Page	Course Number	Course Title	Credits Awarded
60	232205	Geometry A	1
60	232206	Geometry B	1
72	161201	Government	1
72	161101	Government – Honors (single semester)	1
72	164191	Government and Politics: Comparative, Advanced Placement	1
72	164051	Government and Politics: United States, Advanced Placement Non-HSA – Has elective credit only	1
72	164052	Government and Politics: United States, Advanced Placement with HSA – 10th grade and original credit	1
24	431160	Guitar 1	1
24	432160	Guitar 2	1
24	433260	Guitar 3	1
24	434160	Guitar 4	1
24	435160	Guitar 5	1
24	436160	Guitar 6	1
24	437160	Guitar 7	1
24	438160	Guitar 8	1
55	461020	Health Education 1	0.5
55	461021	Health Education 2	0.5
48	539114	Homeland Security/Criminal Justice 1A	2
48	539115	Homeland Security/Criminal Justice 1B	2
48	539134	Homeland Security/Criminal Justice 2A	2
48	539121	Homeland Security/Criminal Justice 2B	2
30	491020	Horse Care and Management	1
29	491030	Horticulture/Floriculture 1	1
29	492031	Horticulture/Floriculture 2	1
30	493031	Horticulture/Floriculture 3	1
35	364070	Hospitality Management	1
38	391000	Human Body Systems – Project Lead the Way: Biomedical Sciences	1
44	531000	Human Body Systems – Project Lead the Way: Biomedical Sciences (CTC)	2
72	164161	Human Geography, Advanced Placement	1
48	533400	Human Growth and Development Through Adolescence	1
52	134211	Humanities	1
52	134221	Humanities	0.5
48	533104	HVACR/Plumbing 1A	2
48	533105	HVACR/Plumbing 1B	2
48	534104	HVACR/Plumbing 2A	2
48	534105	HVACR/Plumbing 2B	2
13	290101	IB Arts – Visual – SL	1

Courses shown in bold on this page are given weighted grades.



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Page	Course Number	Course Title	Credits Awarded
13	290201	IB Arts – Visual – HL – 1st year	1
13	290301	IB Arts – Visual – HL – 2nd year	1
65	190201	IB Biology – HL – 1st year	1
65	190301	IB Biology – HL – 2nd year	1
66	190501	IB Chemistry – HL – 1st year	1
66	190601	IB Chemistry – HL – 2nd year	1
34	340101	IB Computer Science – SL	1
34	340201	IB Computer Science – HL – 1st year	1
34	340301	IB Computer Science – HL – 2nd year	1
72	160902	IB Economics	1
51	130101	IB English – HL – 1st year	1
51	130201	IB English – HL – 2nd year	1
71	160301	IB European History – SL	1
71	160401	IB European History – HL – 1st year	1
71	160501	IB European History – HL – 2nd year	1
80	260401	IB French – SL	1
80	260501	IB French – HL – 1st year	1
80	260601	IB French – HL – 2nd year	1
72	160301	IB History 11	1
72	160701	IB History 11	1
72	160501	IB History 12 – Europe	1
72	160901	IB History 12 – Africa and the Middle East	1
60	230701	IB Mathematics – Applications and Interpretations – SL	1
60	230702	IB Mathematics – Applications and Interpretations – HL	1
60	230801	IB Mathematics – Analysis and Approaches	1
25	660301	IB Music – SL	1
25	660101	IB Music – HL – 1st year	1
25	660201	IB Music – HL – 2nd year	1
68	190702	IB Physics – SL	2
80	260101	IB Spanish – SL	1
80	260201	IB Spanish – HL – 1st year	1
80	260301	IB Spanish – HL – 2nd year	1
74	160601	IB Theory of Knowledge	1
81	562010	Independent Contract 1	1
81	562110	Independent Contract 2	1
81	562210	Independent Contract 3	1
81	562310	Independent Contract 4	1
55	463110	Individual and Dual Sports 1	1
55	463120	Individual and Dual Sports 1A	0.5
55	463210	Individual and Dual Sports 1B	0.5
55	465110	Individual and Dual Sports 2	1

Page	Course Number	Course Title	Credits Awarded
55	465140	Individual and Dual Sports 3	1
55	465400	Individual and Dual Sports 4	1
55	465500	Individual and Dual Sports 5	1
55	465600	Individual and Dual Sports 6	1
24	439310	Instrumental Chamber Ensemble 1	1
24	439320	Instrumental Chamber Ensemble 2	1
<b>24</b>	<b>439330</b>	<b>Instrumental Chamber Ensemble 3</b>	<b>1</b>
<b>24</b>	<b>439340</b>	<b>Instrumental Chamber Ensemble 4</b>	<b>1</b>
<b>24</b>	<b>439350</b>	<b>Instrumental Chamber Ensemble 5</b>	<b>1</b>
<b>24</b>	<b>439360</b>	<b>Instrumental Chamber Ensemble 6</b>	<b>1</b>
<b>24</b>	<b>439370</b>	<b>Instrumental Chamber Ensemble 7</b>	<b>1</b>
<b>24</b>	<b>439380</b>	<b>Instrumental Chamber Ensemble 8</b>	<b>1</b>
24	434100	Integrated Music Technology 1: Continuing Studies	1
<b>24</b>	<b>432110</b>	<b>Integrated Music Technology 2: Continuing Studies</b>	<b>1</b>
<b>24</b>	<b>434120</b>	<b>Integrated Music Technology 3: Continuing Studies</b>	<b>1</b>
24	431001	Integrated Music Technology: Introduction	1
37	394090	Interactive Digital Media 1	1
37	394092	Interactive Digital Media 2	1
37	394093	Interactive Digital Media 3	1
37	394094	Interactive Digital Media 4	1
60	231500	Intermediate Transitional Algebra	1
<b>49</b>	<b>532111</b>	<b>Internship/Field Experience (Learning Theory) A</b>	<b>2</b>
<b>49</b>	<b>532112</b>	<b>Internship/Field Experience (Learning Theory) B</b>	<b>2</b>
28, 29	492351	Introduction to Agricultural Science and Technology	1
76	498000	Introduction to Career, Research and Development	1
<b>28, 36</b>	<b>497011</b>	<b>Introduction to Engineering Design: (IED) – Project Lead the Way: Engineering</b>	<b>1</b>
19	665170	Introduction to Theatre (Theater 1)	1
25	439410	Jazz Ensemble 1	1
25	439420	Jazz Ensemble 2	1
<b>25</b>	<b>439430</b>	<b>Jazz Ensemble 3</b>	<b>1</b>
<b>25</b>	<b>439440</b>	<b>Jazz Ensemble 4</b>	<b>1</b>
<b>25</b>	<b>439450</b>	<b>Jazz Ensemble 5</b>	<b>1</b>
<b>25</b>	<b>439460</b>	<b>Jazz Ensemble 6</b>	<b>1</b>
<b>25</b>	<b>439470</b>	<b>Jazz Ensemble 7</b>	<b>1</b>
<b>25</b>	<b>439480</b>	<b>Jazz Ensemble 8</b>	<b>1</b>
14	291171	Jewelry and Small Sculpture 1	1
14	291172	Jewelry and Small Sculpture 2	1

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Page	Course Number	Course Title	Credits Awarded
14	<b>291173</b>	<b>Jewelry and Small Sculpture 3</b>	<b>1</b>
14	<b>291174</b>	<b>Jewelry and Small Sculpture 4</b>	<b>1</b>
37	491000	Johns Hopkins Engineering Innovations	1
52	134220	Journalism 1	1
52	134230	Journalism 2	1
<b>52</b>	<b>134330</b>	<b>Journalism 3</b>	<b>1</b>
<b>52</b>	<b>134430</b>	<b>Journalism 4</b>	<b>1</b>
<b>15</b>	<b>297100</b>	<b>Journeys through Art Styles, Theories and Applications</b>	<b>1</b>
80	261030	Latin 1	1
80	262030	Latin 2	1
<b>80</b>	<b>263031</b>	<b>Latin 3</b>	<b>1</b>
<b>80</b>	<b>264031</b>	<b>Latin 4</b>	<b>1</b>
<b>80</b>	<b>265231</b>	<b>Latin Advanced Placement</b>	<b>1</b>
<b>80</b>	<b>266021</b>	<b>Latin Advanced Studies 1</b>	<b>1</b>
<b>80</b>	<b>266022</b>	<b>Latin Advanced Studies 2</b>	<b>1</b>
72	164060	Law and Society	1
72	161010	Leadership	0.5
<b>73</b>	<b>161040</b>	<b>Leadership 1</b>	<b>1</b>
<b>73</b>	<b>161020</b>	<b>Leadership 2</b>	<b>1</b>
82	565100	Learning Strategies 1	0.5
82	565050	Learning Strategies 1A	1
82	565460	Learning Strategies 1B	1
82	565110	Learning Strategies 2	0.5
82	565150	Learning Strategies 2A	1
82	565480	Learning Strategies 2B	1
82	565260	Learning Strategies 3	0.5
82	565250	Learning Strategies 3A	1
82	565500	Learning Strategies 3B	1
82	565360	Learning Strategies 4	0.5
82	565350	Learning Strategies 4A	1
82	565520	Learning Strategies 4B	1
<b>73</b>	<b>164411</b>	<b>Macroeconomics, Advanced Placement</b>	<b>1</b>
33	336040	Managing Your Personal Finances	0.5
<b>25</b>	<b>439010</b>	<b>Marching Band 1</b>	<b>1</b>
<b>25</b>	<b>439030</b>	<b>Marching Band 2</b>	<b>1</b>
<b>25</b>	<b>439050</b>	<b>Marching Band 3</b>	<b>1</b>
<b>25</b>	<b>439070</b>	<b>Marching Band 4</b>	<b>1</b>
63	160102	ML American Studies 2 and Government (Year Long)	2
63	239201	ML Math Foundations A	1
63	239202	ML Math Foundations B	1
63	563510	ML Read/Write 1	1

Page	Course Number	Course Title	Credits Awarded
63	563520	ML Read/Write 2	1
63	563530	ML Read/Write 3	1
63	563540	ML Read/Write 4	1
62	262080	ML English as a World Language 1	1
62	262090	ML English as a World Language 2	1
62	262100	ML English as a World Language 3	1
62	262110	ML English as a World Language 4	1
73	164500	Media Literacy: Understanding the Information Age	1
<b>42</b>	<b>531250</b>	<b>Medical Assisting, Administrative</b>	<b>2</b>
<b>42</b>	<b>531240</b>	<b>Medical Assisting, Clinical</b>	<b>2</b>
<b>38</b>	<b>391200</b>	<b>Medical Intervention – Project Lead the Way: Biomedical Sciences</b>	<b>1</b>
<b>44</b>	<b>531200</b>	<b>Medical Intervention – Project Lead the Way: Biomedical Sciences (CTC)</b>	<b>2</b>
<b>78</b>	<b>566710</b>	<b>Mentor/Intern Program A</b>	<b>1</b>
<b>78</b>	<b>566730</b>	<b>Mentor/Intern Program A</b>	<b>2</b>
<b>78</b>	<b>566750</b>	<b>Mentor/Intern Program A</b>	<b>3</b>
<b>78</b>	<b>566770</b>	<b>Mentor/Intern Program A</b>	<b>4</b>
<b>78</b>	<b>566800</b>	<b>Mentor/Intern Program A</b>	<b>0.5</b>
<b>78</b>	<b>566820</b>	<b>Mentor/Intern Program A</b>	<b>1.5</b>
<b>78</b>	<b>566720</b>	<b>Mentor/Intern Program B</b>	<b>1</b>
<b>78</b>	<b>566740</b>	<b>Mentor/Intern Program B</b>	<b>2</b>
<b>78</b>	<b>566760</b>	<b>Mentor/Intern Program B</b>	<b>3</b>
<b>78</b>	<b>566780</b>	<b>Mentor/Intern Program B</b>	<b>4</b>
<b>78</b>	<b>566810</b>	<b>Mentor/Intern Program B</b>	<b>0.5</b>
<b>78</b>	<b>566830</b>	<b>Mentor/Intern Program B</b>	<b>1.5</b>
<b>73</b>	<b>164311</b>	<b>Microeconomics, Advanced Placement</b>	<b>1</b>
25	439510	Mixed Chorus 1	1
25	439520	Mixed Chorus 2	1
<b>25</b>	<b>439530</b>	<b>Mixed Chorus 3</b>	<b>1</b>
<b>25</b>	<b>439540</b>	<b>Mixed Chorus 4</b>	<b>1</b>
<b>25</b>	<b>439550</b>	<b>Mixed Chorus 5</b>	<b>1</b>
<b>25</b>	<b>439560</b>	<b>Mixed Chorus 6</b>	<b>1</b>
<b>25</b>	<b>439570</b>	<b>Mixed Chorus 7</b>	<b>1</b>
<b>25</b>	<b>439580</b>	<b>Mixed Chorus 8</b>	<b>1</b>
52	136110	Modern Issues	1
73	161211	Modern World History	1
<b>73</b>	<b>161111</b>	<b>Modern World History – Honors</b>	<b>1</b>
73	164370	Money, Finance and Economics	1
26	431141	Music Listening and Literature	1
26	433130	Music Theory 1	1
26	434131	Music Theory 2	1

Courses shown in bold on this page are given weighted grades.

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26	433151	<b>Music Theory, Advanced Placement</b>	1
19	660451	<b>Musical Theatre Business 1</b>	.5
19	660452	<b>Musical Theatre Business 2</b>	.5
19	660401	<b>Musical Theatre History 1</b>	.5
19	660402	<b>Musical Theatre History 2</b>	.5
73	164010	National and Global Issues	1
74	164015	National and Global Issues	.5
5, 39	568810	Naval Science 1	1
5, 40	568820	Naval Science 2	1
5, 40	568830	Naval Science 3	1
6, 40	568840	Naval Science 4	1
41	531230	Nursing Assistant	2
33	335111	<b>Office Systems Management 1</b>	1
33	335121	<b>Office Systems Management 2</b>	1
33	335131	<b>Office Systems Management 3</b>	1
78	561000	Open Campus	0
39	5330960C	<b>Oral Radiology with Clinical at FCC CAH 496</b>	1
78	561160	Peer and Community Engagement Experience A	1
78	561170	Peer and Community Engagement Experience A	0.5
78	561190	Peer and Community Engagement Experience A	2
78	561360	Peer and Community Engagement Experience A	2
78	561460	Peer and Community Engagement Experience A	1
78	561470	Peer and Community Engagement Experience A	0.5
78	561180	Peer and Community Engagement Experience B	1
78	561200	Peer and Community Engagement Experience B	2
78	561260	Peer and Community Engagement Experience B	0.5
78	561370	Peer and Community Engagement Experience B	2
78	561480	Peer and Community Engagement Experience B	1
78	561560	Peer and Community Engagement Experience B	0.5
55	463330	Personal Fitness 1	1
55	463430	Personal Fitness 1A	0.5
55	463530	Personal Fitness 1B	0.5
55	464230	Personal Fitness 2	1
55	464240	Personal Fitness 3 - Independent Study	1
39	531300	<b>Pharmacy Tech</b>	1
39	531301	<b>Pharmacy Tech Allied Health Internship</b>	1
39	531302	<b>Pharmacy Tech Allied Health Internship</b>	2
74	164520	<b>Philosophy of Knowledge</b>	1
42	531275	<b>Physical Rehabilitation</b>	2
42	531271	<b>Physical Rehabilitation Internship</b>	1
42	531272	<b>Physical Rehabilitation Internship</b>	2
67	191242	Physics of Earth and Space	1
67	191241	<b>Physics of Earth and Space – Honors</b>	1

Page	Course Number	Course Title	Credits Awarded
67	194301	<b>Physics 1</b>	1
67	194121	<b>Physics 2</b>	1
68	191901	<b>Physics, Algebra-Based - Honors</b>	1
68	194161	<b>Physics 1: Algebra-Based, Advanced Placement</b>	1
68	194171	<b>Physics 2: Algebra-Based, Advanced Placement</b>	1
68	194181	<b>Physics C, Advanced Placement 1: Mechanics</b>	1
68	194191	<b>Physics C, Advanced Placement 2: Electricity and Magnetism</b>	1
69	194211	Physics with Applications	1
60	233111	<b>Precalculus with Trigonometry - Honors</b>	1
60	233133	<b>Precalculus – Advanced Placement</b>	1
28	394080	Pre-Engineering Technology 1	1
37	390040	Pre-Engineering Technology 2	1
38	390050	<b>Pre-Engineering Technology 3</b>	1
29	493000	Pre-Veterinary, Large Animal Science	1
29	492000	Pre-Veterinary, Small Animal Care	1
30-32	331010	Principles of Business Management and Entrepreneurship	1
36	497000	<b>Principles of Engineering: (POE) – Project Lead the Way: Engineering</b>	1
31-33, 43	332040	<b>Principles of Finance and Accounting</b>	1
32, 43	338000	<b>Principles of Marketing</b>	1
38	395100	<b>Principles of the Biomedical Sciences – Project Lead the Way: Biomedical Sciences</b>	1
44	535100	<b>Principles of the Biomedical Sciences – Project Lead the Way: Biomedical Sciences (CTC)</b>	2
37	497001	<b>Project Lead the Way: Engineering Capstone</b>	1
74	164030	Psychology	1
74	165031	<b>Psychology, Advanced Placement</b>	1
15	292050	Publications 1	1
15	293050	Publications 2	1
15	294050	<b>Publications 3</b>	1
15	295050	<b>Publications 4</b>	1
15	296050	<b>Publications 5</b>	1
15	296060	<b>Publications 6</b>	1
52, 60	561100	SAT Preparation – English & Math	0.5
69	197100	<b>Science Mentor Intern Program 1</b>	1
69	197110	<b>Science Mentor Intern Program 2</b>	1
69	197120	<b>Science Mentor Intern Program 3</b>	1
69	197130	<b>Science Mentor Intern Program 4</b>	1
69	197051	<b>Science Mentor Intern Program 5</b>	2

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<b>69</b>	<b>197061</b>	<b>Science Mentor Intern Program 6</b>	<b>2</b>
<b>69</b>	<b>197071</b>	<b>Science Mentor Intern Program 7</b>	<b>2</b>
<b>69</b>	<b>197081</b>	<b>Science Mentor Intern Program 8</b>	<b>2</b>
69	195011	Science Research	1
69	195000	Science Research A	0.5
69	195100	Science Research B	0.5
15	291130	Sculpture 1	1
15	291151	Sculpture 2	1
26	432220	Show Choir 1	1
26	432230	Show Choir 2	1
<b>26</b>	<b>432240</b>	<b>Show Choir 3</b>	<b>1</b>
<b>26</b>	<b>432250</b>	<b>Show Choir 4</b>	<b>1</b>
53	562002	Skills Enrichment – Reading	1
61	562003	Skills Enrichment – Math – Experience 1	1
61	562007	Skills Enrichment – Math – Experience 2	1
74	164020	Sociology	1
80	261020	Spanish 1	1
80	262020	Spanish 2	1
<b>80</b>	<b>263021</b>	<b>Spanish 3</b>	<b>1</b>
<b>80</b>	<b>264021</b>	<b>Spanish 4</b>	<b>1</b>
<b>80</b>	<b>265021</b>	<b>Spanish Advanced Placement Language</b>	<b>1</b>
<b>80</b>	<b>265022</b>	<b>Spanish Advanced Placement Literature</b>	<b>1</b>
<b>80</b>	<b>266011</b>	<b>Spanish Advanced Studies 1</b>	<b>1</b>
<b>80</b>	<b>267011</b>	<b>Spanish Advanced Studies 2</b>	<b>1</b>
80	269230	Spanish APEX 1	1
80	269240	Spanish APEX 2	1
80	269250	Spanish APEX Advanced Placement	1
80	261170	Spanish for Bilingual Speakers 1	1
80	261171	Spanish for Bilingual Speakers 2	1
56	467010	Sports Medicine	1
<b>61</b>	<b>232211</b>	<b>Statistics and Probability</b>	<b>1</b>
<b>61</b>	<b>232281</b>	<b>Statistics, Advanced Placement</b>	<b>1</b>
56	462100	Strength Training/Fitness 1	1
56	462400	Strength Training/Fitness 1A	0.5
56	462500	Strength Training/Fitness 1B	0.5
56	463130	Strength Training/Fitness 2	1
56	464130	Strength Training/Fitness 3	1
56	464140	Strength Training/Fitness 4 - Independent Study	1
56	464450	Strength Training/Fitness 5 - Independent Study	1
56	464460	Strength Training/Fitness 6 - Independent Study	1
27	439610	String Orchestra 1	1

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27	439620	String Orchestra 2	1
<b>27</b>	<b>439630</b>	<b>String Orchestra 3</b>	<b>1</b>
<b>27</b>	<b>439640</b>	<b>String Orchestra 4</b>	<b>1</b>
<b>27</b>	<b>439650</b>	<b>String Orchestra 5</b>	<b>1</b>
<b>27</b>	<b>439660</b>	<b>String Orchestra 6</b>	<b>1</b>
<b>27</b>	<b>439670</b>	<b>String Orchestra 7</b>	<b>1</b>
<b>27</b>	<b>439680</b>	<b>String Orchestra 8</b>	<b>1</b>
<b>41</b>	<b>531220</b>	<b>Structure and Function of the Human Body</b>	<b>2</b>
<b>41, 42</b>	<b>531274</b>	<b>Structure and Function of the Human Body (Dental &amp; Physical Rehab options)</b>	<b>1</b>
<b>39</b>	<b>398101</b>	<b>Structure and Function of the Human Body (FHS)</b>	<b>1</b>
81	462000	Student Assistant, Aquatics	0
81	290000	Student Assistant, Art	0
81	560010	Student Assistant, Cafeteria	0
81	490000	Student Assistant, Career and Technology	0
81	340000	Student Assistant, Computer Science	0
81	561020	Student Assistant, Custodial	0
81	665005	Student Assistant, Drama/Theatre Arts/Dance	0
81	130000	Student Assistant, English	0
81	360000	Student Assistant, Family and Consumer Sciences	0
81	561030	Student Assistant, Guidance	0
81	560000	Student Assistant	0
81	230000	Student Assistant, Mathematics	0
81	561040	Student Assistant, Media	0
81	430000	Student Assistant, Music	1
81	561050	Student Assistant, Office	0
81	460000	Student Assistant, Physical Education	0
81	190000	Student Assistant, Science	0
81	160000	Student Assistant, Social Studies	0
81	390000	Student Assistant, Technology Education	0
81	260000	Student Assistant, World Language	0
<b>15</b>	<b>293141</b>	<b>Studio Art 1, Advanced Placement</b>	<b>1</b>
<b>15</b>	<b>294141</b>	<b>Studio Art 2, Advanced Placement</b>	<b>1</b>
<b>15</b>	<b>295141</b>	<b>Studio Art 3, Advanced Placement</b>	<b>1</b>
<b>15</b>	<b>296141</b>	<b>Studio Art 4, Advanced Placement</b>	<b>1</b>
<b>15</b>	<b>297141</b>	<b>Studio Art 5, Advanced Placement</b>	<b>1</b>
<b>15</b>	<b>297151</b>	<b>Studio Art 6, Advanced Placement</b>	<b>1</b>
48	532001	Teaching as a Profession	1
56	466110	Team Sports Baseball/Softball 1	1
56	466120	Team Sports Baseball/Softball 2	1
56	466130	Team Sports Baseball/Softball 3	1

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56	466131	Team Sports Baseball/Softball 4	1
56	466132	Team Sports Baseball/Softball 5	1
56	466133	Team Sports Baseball/Softball 6	1
56	466140	Team Sports Basketball 1	1
56	466150	Team Sports Basketball 2	1
56	466160	Team Sports Basketball 3	1
56	466161	Team Sports Basketball 4	1
56	466162	Team Sports Basketball 5	1
56	466163	Team Sports Basketball 6	1
56	466170	Team Sports Field Hockey 1	1
56	466180	Team Sports Field Hockey 2	1
56	466190	Team Sports Field Hockey 3	1
56	466191	Team Sports Field Hockey 4	1
56	466192	Team Sports Field Hockey 5	1
56	466193	Team Sports Field Hockey 6	1
56	466200	Team Sports Football 1	1
56	466210	Team Sports Football 2	1
56	466220	Team Sports Football 3	1
56	466221	Team Sports Football 4	1
56	466222	Team Sports Football 5	1
56	466223	Team Sports Football 6	1
56	462110	Team Sports General 1	1
56	462210	Team Sports General 1A	0.5
56	462310	Team Sports General 1B	0.5
56	462220	Team Sports General 2	1
56	462250	Team Sports General 3	1
56	462280	Team Sports General 4 - Independent Study	1
56	462290	Team Sports General 5	1
56	462360	Team Sports General 6	1
56	462370	Team Sports General 7	1
56	466230	Team Sports Lacrosse 1	1
56	466240	Team Sports Lacrosse 2	1
56	466250	Team Sports Lacrosse 3	1
56	466251	Team Sports Lacrosse 4	1
56	466252	Team Sports Lacrosse 5	1
56	466253	Team Sports Lacrosse 6	1
56	466260	Team Sports Soccer 1	1
56	466270	Team Sports Soccer 2	1
56	466280	Team Sports Soccer 3	1
56	466281	Team Sports Soccer 4	1
56	466282	Team Sports Soccer 5	1
56	466283	Team Sports Soccer 6	1

Page	Course Number	Course Title	Credits Awarded
56	466290	Team Sports Volleyball 1	1
56	466300	Team Sports Volleyball 2	1
56	466310	Team Sports Volleyball 3	1
56	466311	Team Sports Volleyball 4	1
56	466312	Team Sports Volleyball 5	1
56	466313	Team Sports Volleyball 6	1
19	662150	Technical Theatre 1	1
19	662160	Technical Theatre 2	1
<b>19</b>	<b>663220</b>	<b>Technical Theatre 3</b>	<b>1</b>
<b>19</b>	<b>663230</b>	<b>Technical Theatre 4</b>	<b>1</b>
<b>19</b>	<b>663240</b>	<b>Technical Theatre 5</b>	<b>1</b>
<b>19</b>	<b>663250</b>	<b>Technical Theatre 6</b>	<b>1</b>
49	531024	Television/Multimedia Production 1A	2
49	531025	Television/Multimedia Production 1B	2
49	531044	Television/Multimedia Production 2A	2
<b>49</b>	<b>531051</b>	<b>Television/Multimedia Production 2B</b>	<b>2</b>
78	562030	Temporary Administrative Attendance Waiver	0
19	665180	Theatre (Advanced) 2	1
<b>19</b>	<b>665190</b>	<b>Theatre (Advanced) 3</b>	<b>1</b>
<b>19</b>	<b>665194</b>	<b>Theatre (Advanced) 4</b>	<b>1</b>
<b>19</b>	<b>665195</b>	<b>Theatre (Advanced) 5</b>	<b>1</b>
<b>19</b>	<b>665196</b>	<b>Theatre (Advanced) 6</b>	<b>1</b>
<b>20</b>	<b>660050</b>	<b>Theatre Business 1</b>	<b>.5</b>
<b>20</b>	<b>660060</b>	<b>Theatre Business 2</b>	<b>.5</b>
<b>20</b>	<b>660010</b>	<b>Theatrical Literacy, History and Criticism 1A</b>	<b>1</b>
<b>20</b>	<b>660020</b>	<b>Theatrical Literacy, History and Criticism 1B</b>	<b>1</b>
<b>20</b>	<b>660030</b>	<b>Theatrical Literacy, History and Criticism 2A</b>	<b>1</b>
<b>20</b>	<b>660040</b>	<b>Theatrical Literacy, History and Criticism 2B</b>	<b>1</b>
16	298000	Unified Art	1
16	298002	Unified Art 2	1
16	298003	Unified Art 3	1
16	298004	Unified Art 4	1
20	666000	Unified Dance	1
57	461040	Unified Physical Activity and Leadership 1	1
57	461042	Unified Physical Activity and Leadership 2	1
57	461043	Unified Physical Activity and Leadership 3	1
57	461044	Unified Physical Activity and Leadership 4	1
74	167020	United States, 1945 to the Present	1
<b>74</b>	<b>164101</b>	<b>United States History, Advanced Placement (10th – 12th grade only)</b>	<b>1</b>
<b>74</b>	<b>164141</b>	<b>United States History, Advanced Placement and Seminar (9th – 12th grade)</b>	<b>1</b>

Courses shown in bold on this page are given weighted grades.

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<b>74</b>	<b>164140</b>	<b>United States History, Advanced Placement and Seminar (9th – 12th grade)</b>	<b>1</b>
<b>75</b>	<b>167030</b>	<b>United States Women’s History</b>	<b>1</b>
<b>16</b>	<b>297120</b>	<b>Visual Arts First Year Thesis</b>	<b>1</b>
<b>16</b>	<b>297130</b>	<b>Visual Arts Second Year Thesis</b>	<b>1</b>
<b>16</b>	<b>297140</b>	<b>Visual Arts Third Year Thesis</b>	<b>1</b>
<b>10</b>	<b>297140</b>	<b>Visual Arts Thesis 3 (Visual Arts Focus AFA)</b>	<b>1</b>
<b>20</b>	<b>660421</b>	<b>Vocal Technique and Performance 1</b>	<b>1</b>
<b>20</b>	<b>660422</b>	<b>Vocal Technique and Performance 2</b>	<b>1</b>
<b>21</b>	<b>660110</b>	<b>Voice and Movement 1</b>	<b>.5</b>
<b>21</b>	<b>660120</b>	<b>Voice and Movement 2</b>	<b>.5</b>
27	439710	Voice Ensemble 1	1
27	439720	Voice Ensemble 2	1
<b>27</b>	<b>439730</b>	<b>Voice Ensemble 3</b>	<b>1</b>
<b>27</b>	<b>439740</b>	<b>Voice Ensemble 4</b>	<b>1</b>
<b>27</b>	<b>439750</b>	<b>Voice Ensemble 5</b>	<b>1</b>
<b>27</b>	<b>439760</b>	<b>Voice Ensemble 6</b>	<b>1</b>
<b>27</b>	<b>439770</b>	<b>Voice Ensemble 7</b>	<b>1</b>
<b>27</b>	<b>439780</b>	<b>Voice Ensemble 8</b>	<b>1</b>
16	293121	Western Art History	1
30	491210	Wood and Metal Structures	1
36	496120	Wood, Design, and Applications 1	1
36	496220	Wood, Design, and Applications 2	1
36	496321	Wood, Design, and Applications 3	1
36	496421	Wood, Design, and Applications 4	1

Page	Course Number	Course Title	Credits Awarded
77	495560	Work Study 1	1
77	495570	Work Study 2	2
77	495580	Work Study 3	3
77	494410	Work Study A	1
77	494430	Work Study A	3
77	494450	Work Study A	4
77	494470	Work Study A	0.5
77	494490	Work Study A	1.5
77	494500	Work Study A	2
77	494420	Work Study B	1
77	494400	Work Study B	1.5
77	494440	Work Study B	3
77	494460	Work Study B	4
77	494480	Work Study B	0.5
77	494520	Work Study B	2
<b>75</b>	<b>165151</b>	<b>World History: AP Modern</b>	<b>1</b>
75	169220	World Religions	1
75	164510	World War 2	1
<b>21</b>	<b>660070</b>	<b>Writing For Stage and Film 1</b>	<b>.5</b>
<b>21</b>	<b>660080</b>	<b>Writing For Stage and Film 2</b>	<b>.5</b>

Courses shown in bold on this page are given weighted grades.