PORTSMOUTH

PUBLIC SCHOOLS

Middle and High School

Course of Study Guide

SECONDARY COURSE OF STUDY

The *Secondary Course of Study Guide* is written for students and parents to outline general and specific information regarding curriculum offerings and services at the middle and high schools. The course offerings, including prerequisites and descriptions, are listed by curriculum area.

Your student's school counselor will be involved in the scheduling process to ensure that graduation requirements and testing needs for graduation and entrance into post-secondary options are complete. The scheduling of all classes listed in this guide is influenced by minimum enrollment requirements (15 students per class) and the availability of certified teachers.

PROMOTION REQUIREMENTS

Students in grades 7-8 are expected to satisfactorily pass English, mathematics, science, and social studies at their present grade level to be promoted to the next grade.

Students in grades 9-12 with 4 years on 4 X 4 schedules are expected to pass:
5 credits to be classified as a tenth grader; 10 credits to be classified as an eleventh grader; and 16 credits to be classified as a twelfth grader.

PROGRAM OF STUDIES

Aside from the required subjects, each student's program of studies may be selected to fit one's individual preferences. Any program of studies may lead to college admission providing the student selects those subjects, which meet the entrance requirements of the chosen college. College entrance requirements may be obtained from the high school counseling offices or from the student's prospective college websites.

The Portsmouth Public School division offers three different types of diplomas: a standard diploma, an advanced studies diploma, and an applied studies diploma.

In planning a high school program, students and parents should take into consideration (1) course loads, (2) sequence and levels of courses, and (3) summer school and distance learning opportunities.

SEQUENCE AND LEVEL OF COURSES

Courses should be taken in their proper sequence. For example, students will not be allowed to take English 10, until they have passed English 9. This means that students may not take English 9 and English 10 simultaneously. The same rule holds true for all subjects. The proper sequence of courses is provided in the section on Course Descriptions.

Many courses are offered at the Average, Honors, Dual Enrollment (DE) and Advanced Placement (AP) levels. Honors courses are weighted 0.5 and DE and AP Courses 1.0 towards a student's GPA. Students should challenge themselves to attempt rigorous coursework throughout their high school career.

MINIMUM GRADUATION REQUIREMENTS

The graduation requirements for Portsmouth Public Schools shall meet the requirements of the Code of Virginia and the rules and regulations of the State Board of Education, including passing the appropriate SOL tests. To graduate from high school, a student shall meet the minimum requirements as prescribed by the Portsmouth School Board. Students who are graduating from a secondary school and do not intend to continue their education shall have identifiable marketable skills.

To graduate from a Portsmouth high school, a student must:

- meet the established criteria on the high school SOL criterion referenced tests;
- take coursework for credits as indicated in the program of studies.

Diploma requirements are subject to change as approved by the Virginia Department of Education. The changes are effective with the entering ninth grade class of a particular year.

Standard Diploma Requirements for Students Entering the 9th Grade in 2018-2019 and Beyond

Subject Area	*Units of Credit*	*Verified Credit*	*Specifications*
English	4	2	
Mathematics	3	1	Courses completed to satisfy this requirement shall include at least two different course selections from among: Algebra I, Geometry, Algebra Functions and Data Analysis, Algebra II, or other mathematics courses approved by the board to satisfy this requirement.
Laboratory Science	3	1	Courses completed to satisfy this requirement shall include course selection from at least two different science disciplines: Earth Science, Biology, Chemistry, or Physics.
History and Social Sciences	3	1	Courses completed to satisfy this requirement shall include Virginia and U.S. History, Virginia and U.S. Government, and one course in either World History or Geography or both.
Health and Physical Education	2	0	N/A
World Language, Fine Arts or Career and Technical Education	2	0	Per the Standards of Quality, credits earned for this requirement shall include one credit in fine or performing arts or career and technical education. World Language may not be used for both credits.
Economics and Personal Finance	1	0	N/A
Electives	4	0	Courses to satisfy this requirement shall include at least two sequential electives as required by the Standards of Quality.
Total	22	5	N/A

Additional Requirements for Graduation:

- **Advanced Placement, Honors, or International Baccalaureate Course or Career and Technical Education Credential**
- **Virtual Learning** - Students shall successfully complete one virtual course, which may be a noncredit-bearing course, or may be a course required to earn this diploma that is offered online.
- **Training in emergency first aid, cardiopulmonary resuscitation (CPR), and the use of automated external defibrillators (AED)**
- **Demonstration of the five Cs** - critical thinking, creative thinking, collaboration, communication, and citizenship

Advanced Diploma Requirements for Students Entering the 9th Grade in 2018-2019 and Beyond

Subject Area	*Units of Credit*	*Verified Credit*	*Specifications*
English	4	2	N/A
Mathematics	4	1	Courses completed to satisfy this requirement shall include at least three different course selections from among: Algebra I, Geometry, Algebra II, or other mathematics courses above the level of Algebra II. The board shall approve courses to satisfy this requirement.
Laboratory Science	4	1	Courses completed to satisfy this requirement shall include course selections from at least three different science disciplines from among: Earth Science, Biology, Chemistry, or Physics.
History and Social Sciences	4	1	Courses completed to satisfy this requirement shall include Virginia and U.S. History, Virginia and U.S. Government, and two courses in either World History or Geography or both.
World Language	3	0	Courses completed to satisfy this requirement shall include three years of one language or two years of two languages.
Health and Physical Education	2	0	N/A
Fine Arts or Career and Technical Education	1	0	Per the Standards of Quality, a computer science course credit earned by students may be considered a career and technical credit.
Economics and Personal Finance	1	0	
Electives	3		Courses to satisfy this requirement shall include at least two sequential electives as required by the Standards of Quality.
Total	26	5	

Additional Requirements for Graduation:

- **Advanced Placement, Honors, or International Baccalaureate Course or Career and Technical Education Credential**
- **Virtual Learning** - Students shall successfully complete one virtual course, which may be a noncredit-bearing course, or may be a course required to earn this diploma that is offered online.
- **Training in emergency first aid, cardiopulmonary resuscitation (CPR), and the use of automated external defibrillators (AED)**
- **Demonstration of the five Cs** - critical thinking, creative thinking, collaboration, communication, and citizenship

Standard Diploma Requirements for Students Entering the 9th Grade in 2011-2012 to 2017-2018

Subject Area	*Units of Credit*	*Verified Credit*	*Specifications*
English	4	2	N/A
Mathematics	3	1	Courses completed to satisfy this requirement shall include at least two different course selections from among: Algebra I, Geometry, Algebra Functions and Data Analysis, Algebra II, or other mathematics courses above the level of Algebra II.
Laboratory Science	3	1	Courses completed to satisfy this requirement shall include course selections from at least two different science disciplines: Earth Science, Biology, Chemistry, or Physics.
History and Social Sciences	3	1	Courses completed to satisfy this requirement shall include U.S. and Virginia History, U.S. and Virginia Government, and one course in either World History or Geography or both.
Health and Physical Education	2	0	N/A
World Language, Fine Arts, or Career and Technical Education	2	0	Credits earned for this requirement shall include one credit in fine or performing arts or career and technical education. World Language may not be used for both credits.
Economics and Personal Finance	1	0	N/A
Electives	4	0	Courses to satisfy this requirement shall include at least two sequential electives as required by the Standards of Quality.
Student Selected Test	0	1	A student may utilize additional tests for earning verified credit in computer science, technology, career and technical education, economics or other areas as prescribed by the board in 8VAC20-131-110.
Total	22	6	

Additional Requirements for Graduation:

- **Students shall earn a career and technical education credential**
- **Virtual Learning** - Students shall successfully complete one virtual course, which may be a noncredit-bearing course, or may be a course required to earn this diploma that is offered online.
- **For students entering the ninth-grade class for the first time in 2016-2017 and beyond:** Students shall be trained in emergency first aid, cardiopulmonary resuscitation, and the use of automated external defibrillators, including hands-on practice of the skills necessary to perform cardiopulmonary resuscitation.

Advanced Diploma Requirements for Students Entering the 9th Grade in 2011-2012 to 2017-2018

Subject Area	*Units of Credit*	*Verified Credit*	*Specifications*
English	4	2	N/A
Mathematics	4	2	Courses completed to satisfy this requirement shall include at least three different course selections from among: Algebra I, Geometry, Algebra II, or other mathematics courses above the level of Algebra II. The board shall approve courses to satisfy this requirement.
Laboratory Science	4	2	Courses completed to satisfy this requirement shall include course selections from at least three different science disciplines from among: Earth Science, Biology, Chemistry, or Physics.
History and Social Sciences	4	2	Courses completed to satisfy this requirement shall include U.S. and Virginia History, U.S. and Virginia Government, and two courses in either World History or Geography or both.
World Language	3	0	Courses completed to satisfy this requirement shall include three years of one language or two years of two languages.
Health and Physical Education	2	0	N/A
Fine Arts or Career and Technical Education	1	0	Per the Standards of Quality, a computer science course credit earned by students may be considered a career and technical education course credit.
Economics and Personal Finance	1	0	N/A
Electives	3	0	N/A
Student Selected Test	0	1	A student may utilize additional tests for earning verified credit in computer science, technology, career or technical education, economics or other areas as prescribed by the board in 8VAC20-131-110.
Total	26	9	N/A

Additional Requirements for Graduation:

- **Virtual Learning** - Students shall successfully complete one virtual course, which may be a noncredit-bearing course, or may be a course required to earn this diploma that is offered online.
- **For students entering the ninth-grade class for the first time in 2016-2017 and beyond:** Students shall be trained in emergency first aid, cardiopulmonary resuscitation, and the use of automated external defibrillators, including hands-on practice of the skills necessary to perform cardiopulmonary resuscitation.

APPLIED STUDIES

The Applied Studies Diploma is a diploma option available to students identified as having a disability who complete the requirements of their individualized education programs (IEPs) and meet certain requirements prescribed by the Board of Education pursuant to regulations, but do not meet the requirements for any named diploma.

GED

Currently, the only Virginia board-approved HSE examination in Virginia is the General Educational Development (GED) test, which was developed to enable persons who have not graduated from high school to demonstrate the attainment of abilities normally associated with completion of a high school program of study. GED Testing Service is a joint venture of the American Council on Education and Pearson VUE.

The GED battery of four tests measures the skills considered to be the major outcomes of a high school education. The tests focus on the major use of skills and concepts rather than upon recall of specific facts. The questions focus on the general abilities to analyze, evaluate, and draw conclusions.

Subject Areas

- Reasoning through Language Arts
- Mathematical Reasoning
- Science
- Social Studies

HONORS AND ADVANCED PLACEMENT (AP) COURSES

Students are encouraged to take Honors and AP courses for college credit in mathematics, science, social studies, and English as well as arts and world language. Parents and students should be aware that these courses are more rigorous and challenging than average level courses. All high school students enrolled in AP classes must take the AP exams, which are given in May. The cost for each AP exam is determined by the College Board.

COOPERATIVE EDUCATION

Students who are enrolled in certain Business Education, Marketing Education, Industrial Cooperative Training (ICT), and Education for Employment classes have the opportunity to participate in a cooperative job training program where they apply the skills learned in the classroom. The students enroll in the co-op program along with the corresponding class at their high school. The coordinating teacher is responsible for placement of the student in a related job assignment. The teacher along with the employer monitors the student's progress. The student upon successful completion receives two credits, one for the classroom portion and one for the "on-the-job training."

TIDEWATER COMMUNITY COLLEGE PROGRAMS

The Dual Enrollment Academies at Tidewater Community College's Portsmouth Campus provides pathways for Portsmouth Public School students to concurrently complete a high school diploma and an Associate's Degree or college credits from TCC. Students can begin taking dual enrollment courses at each grade level based on meeting eligibility requirements. Qualifying 9th and 10th graders can work towards earning one of three Associates Degrees or an Associate of Applied Science in Maritime Technologies. Eleventh graders can work towards a Certificate in General Education or Certificate in Maritime Welding. Qualifying 12th graders are offered the opportunity to earn a minimum of 18 college credits focused on either college transfer or automotive technology.

CHANGING AND/OR DROPPING COURSES

Students are requested to select their courses each spring term for the following school year. Classes are scheduled and teachers are employed on the basis of the students' schedules. Students are, therefore, expected to follow the schedule of courses for which they register; however, it is recognized that circumstances may arise which will give valid reasons for changing a schedule. Schedule changes will only be made when, in the judgment of the principal, the reason is valid. Merely changing one's mind during the summer does not guarantee that the schedule change can be made.

Required subjects may not be dropped. An elective subject may be dropped without penalty during the first week of school provided that:

a. Dropping the subject does not result in the necessity of canceling the class for lack of demand.
b. The student has the parent's permission to drop the subject.
c. There is another class available for the student to take.

Eighth grade students who take ninth grade courses may drop these subjects to return to eighth grade courses any time during the first semester without penalty.

GRADING SCALE

The grading scale for students in grades 7-12 is as follows:

A	93-100	B-	80-82	D+	67-69
A-	90-92	C+	77-79	D	64-66
B+	87-89	C	73-76	F	0-63
B	83-86	C-	70-72		

GRADE POINT AVERAGE

To calculate a student's grade point average, a numerical value is assigned for each letter grade earned in a credit course. Certain courses are designated for a weighted grade. All honors and Advanced Placement/Dual Enrollment or First College courses are included among those to be weighted.

		REGULAR	HONORS	AP/DUAL ENROLLMENT
A	=	4	4.5	5
A-	=	3.7	4.2	4.7
B+	=	3.3	3.8	4.3
B	=	3	3.5	4
B-	=	2.7	3.2	3.7
C+	=	2.3	2.8	3.3
C	=	2	2.5	3
C-	=	1.7	2.2	2.7
D+	=	1.3	1.8	2.3
D	=	1	1.5	2
F	=	0	0	0

HONOR GRADUATES: A student is designated as an honor graduate if he/she has a cumulative average of 3.0 or better at the time of graduation.

CLASS RANK: Class Rank will be based upon all courses for which a student has attempted high school credit, including courses attempted in middle school. For the Class of 2021 and beyond, the end of the first semester of senior year will serve as the cutoff date for computation of final class rank and the awarding of Valedictorian and Salutatorian.

ARTICULATION

Program for Articulated Credit and Transfer refers to a special articulation agreement between Tidewater Community College and the Portsmouth Public Schools that help students make a smooth transition from high school to college. Students receive college credit for certain career and technical education courses successfully completed in high school.

How may students participate?

Participation begins when students enroll in a high school career and technical education course that has been coordinated with a program at Tidewater Community College. Since some of these courses may be taken in the sophomore year in high school or require a large block of time in the junior or senior years, planning a high school schedule early is very important.

What are the advantages of pursuing the Program for Articulated Credit and Transfer?

Students pursuing the Program for Articulated Credit and Transfer will:

- have the opportunity to begin fulfilling college-level educational requirements in high school;
- be better prepared to enter college with career goals in mind;
- save time in preparing for a career because they are not required to duplicate instruction received in high school; and
- have the opportunity to enrich their college program with additional advanced courses related to career or personal development.

Who is eligible?

Any student is eligible who has completed all of the following requirements:

- completion of a high school career and technical-education course that is part of the articulation agreement;
- achievement of a grade of "B" or better in the high school career and technical-education course(s); and
- enrollment in Tidewater Community College within <u>three</u> years after graduation.

How and when is college credit awarded?

Students who are eligible for college credit through this agreement must, after high school graduation, (1) have a transcript sent to the Admissions and Records Office at Tidewater Community College, and (2) complete a "Request of Evaluation of Previous Educational Experience" form, which is available through the Enrollment Services Office at TCC.

Students receive college credit for designated high school career and technical-education courses after successfully completing the equivalent of twelve semester hours of study in the articulated program area at Tidewater Community College. Student transcripts will list the courses and credit hours of the college courses that are a part of the agreement. This means students have fewer courses to take to complete a college program and more time to take additional courses for advanced skills.

What is the cost?

No tuition fee will be charged for the articulated courses for which credit is awarded by the college. This means that students enrolling at Tidewater Community College will save money by taking and successfully completing certain high school career and technical-education courses.

TECHNICAL DUAL ENROLLMENT

Students are provided the opportunity to take selected college level technical classes in Portsmouth Public Schools and on the campus of Tidewater Community College. The students must satisfy the admission requirements of TCC. Students who successfully complete the courses receive both college credit and weighted high school credits.

Graduation (Diploma) Seals of Achievement

Governor's Seal
The Governor's Seal is awarded to students who complete the requirements for an Advanced Studies Diploma with an average grade of "B" or better, and successfully complete college-level coursework that will earn the student at least nine transferable college credits in Advanced Placement (AP), International Baccalaureate (IB), Cambridge, or dual enrollment courses.

Board of Education Seal
The Board of Education Seal is awarded to students who complete the requirements for a Standard Diploma or Advanced Studies Diploma with an average grade of "A" beginning with the ninth-grade class of 2006-2007 and beyond.

Board of Education's Career & Technical Education Seal
The Board of Education's Career & Technical Education Seal is awarded to students who:

- earn a Standard or Advanced Studies Diploma and complete a prescribed sequence of courses in a career and technical education concentration or specialization that they choose and maintain a "B" or better average in those courses
- OR pass an examination or an occupational competency assessment in a career and technical education concentration or specialization that confers certification or occupational competency credential from a recognized industry, trade or professional association
- OR acquire a professional license in that career and technical education field from the Commonwealth of Virginia.

The Board of Education shall approve all professional licenses and examinations used to satisfy these requirements. See The Path to Industry Certification for the current approved licenses and examinations.

Board of Education's Diploma Seal for Science, Technology, Engineering, and Mathematics (STEM)
The Board of Education's STEM Seal shall be awarded to students who earn either a Standard Diploma or an Advanced Studies Diploma and satisfy all Math and Science requirements for the Advanced Studies diploma with a "B" average or better in all course work, and

- successfully complete a 50 hour or more work-based learning opportunity in a STEM area, and
- satisfy all requirements for a Career and Technical Education concentration. A *concentration* is a coherent sequence of two or more state-approved courses as identified in the course listing within the CTE Administrative Planning Guide, and
- pass one of the following:
  - a Board of Education CTE STEM-H credential examination, or
  - an examination approved by the Board that confers a college-level credit in a STEM field.

Board of Education's Advanced Mathematics & Technology Seal
(available for students entering high school prior to 2018-2019)
The Board of Education's Advanced Mathematics & Technology Seal is awarded to students who earn either a Standard or Advanced Studies Diploma and satisfy all of the mathematics requirements for the Advanced Studies Diploma (four units of credit including Algebra II; two verified units of credit) with a "B" average or better; and either

- pass an examination in a career and technical education field that confers certification from a recognized industry, or trade or professional association
- OR acquire a professional license in a career and technical education field from the Commonwealth of Virginia
- OR pass an examination approved by the board that confers college-level credit in a technology or computer science area.

The Board of Education shall approve all professional licenses and examinations used to satisfy these requirements. See The Path to Industry Certification for the current approved licenses and examinations.

Board of Education's Excellence in Civics Education Seal
The Board of Education's Excellence in Civics Education Seal is awarded to students who meet each of the following four criteria:

- Satisfy the requirement to earn a Modified Standard Diploma, a Standard Diploma or an Advanced Studies Diploma
- Complete Virginia & United States History and Virginia & United States Government courses with a grade of "B" or higher
- Complete 50 hours of voluntary participation in community service or extracurricular activities, such as volunteering for a charitable or religious organization that provides services to the poor, sick or less fortunate; participating in Boy Scouts, Girl Scouts or similar youth organizations; participating in Junior Reserve Officer Training Corps (JROTC); participating in political campaigns, government internships, Boys State, Girls State or Model General Assembly; and participating in school-sponsored extracurricular activities that have a civics focus. Any student who enlists in the United States military prior to graduation will be deemed to have met this community service requirement.
- Have good attendance and no disciplinary infractions as determined by local school board policies.

Board of Education's Seal of Biliteracy
The Board of Education's Seal of Biliteracy is awarded to students who earn a Board of Education-approved diploma and:

- Pass all required End-of-Course Assessments in English reading and writing at the proficient or higher level
- Demonstrate proficiency at the intermediate-mid level or higher in one or more languages other than English as demonstrated through an assessment from a list approved by the Superintendent of Public Instruction. American Sign Language qualifies as a language other than English.

Board of Education's Seal for Excellence in Science and the Environment
The Board of Education's Seal for Excellence in Science and the Environment is awarded to students who enter the ninth grade for the first time in the 2018-2019 year and thereafter, and meet each of the following criteria:

- Earn either a Standard or Advanced Studies Diploma
- Complete at least three different first-level board-approved laboratory science courses and at least one rigorous advanced-level or postsecondary-level laboratory science course, each with a grade of "B" or higher
- Complete laboratory or field-science research and present that research in a formal, juried setting
- Complete at least 50 hours of voluntary participation in community service or extracurricular activities that involve the application of science such as environmental monitoring, protection, management, or restoration.

Mathematics Scheduling Guidelines

Students entering High School 2018-2019 school year and beyond

Yellow highlight indicates a student must take the SOL assessment

Option 1

GRADE LEVEL	COURSE PROGRESSION	MINIMUM REQUIREMENTS FOR NEXT COURSE PLACEMENT	
		End of Year Grade	SOL Score
7	Math 7	A-B-C	Less than 450
8	Math 8	B-C	Less than 450
9	Algebra I	A-B	400-450
10	Geometry	A-B	400-450
11	Algebra II	-----	400-450
12	Trigonometry or Probability and Statistics	-----	-----

Option 2

GRADE LEVEL	COURSE PROGRESSION	MINIMUM REQUIREMENTS FOR NEXT COURSE PLACEMENT	
		End of Year Grade	SOL Score
7	Math 7	C-D-F	Less than 400
8	Math 8	C-D-F	Less than 400
9	Foundations (Semester 1 only) **Limited to 60 students per school** Algebra 1 (Semester 2)	-----	400-450
10	Geometry Part 1 (Semester 1) Geometry Part 2 (Semester 2)	-----	-----
11	AFDA **Note: AFDA is not a prerequisite for Algebra II**	-----	-----
12	Algebra II	-----	-----

Option 3

GRADE LEVEL	COURSE PROGRESSION	MINIMUM REQUIREMENTS FOR NEXT COURSE PLACEMENT	
		End of Year Grade	SOL Score
7	Math 7	C-D	Less than 425
8	Math 8	C-D	Less than 425
9	Algebra 1A (Semester 1) Algebra 1B (Semester 2)	-----	Less than 425
10	Geometry Part 1 (Semester 1) Geometry Part 2 (Semester 2)	-----	Less than 425
11	Algebra II	-----	-----
12	Trigonometry or Probability and Statistics	-----	-----

Option 4

GRADE LEVEL	COURSE PROGRESSION	MINIMUM REQUIREMENTS FOR NEXT COURSE PLACEMENT	
		End of Year Grade	SOL Score
7	Math 7 Honors	A-B	450 or greater
8	Algebra 1	A-B	450 or greater
9	Geometry	A-B	450 or greater
10	Algebra II	-----	400 or greater
11	Trigonometry or Probability and Statistics	-----	-----
12	Math Analysis or Probability and Statistics	-----	-----

Option 5

GRADE LEVEL	COURSE PROGRESSION	MINIMUM REQUIREMENTS FOR NEXT COURSE PLACEMENT	
		End of Year Grade	SOL Score
7	Math 7	A-B	450 or greater
8	Algebra 1	C-D	400 or greater
9	Geometry Part 1 (Semester 1) Geometry Part 2 (Semester 2)	C-D	400 or greater
10	AFDA **Note: AFDA is not a prerequisite for Algebra II**	-----	-----
11	Algebra II	-----	-----
12	Trigonometry or Probability and Statistics	-----	-----

Option 6

GRADE LEVEL	COURSE PROGRESSION	MINIMUM REQUIREMENTS FOR NEXT COURSE PLACEMENT	
		End of Year Grade	SOL Score
7	Math 7	A-B	450 or greater
8	Algebra 1	C-D	400 - 450
9	Geometry Part 1 (Semester 1) Geometry Part 2 (Semester 2)	B-C	400 - 450
10	Algebra II	-----	400 or greater
11	Trigonometry or Probability and Statistics	-----	-----
12	Math Analysis	-----	-----

Option 7

GRADE LEVEL	COURSE PROGRESSION	MINIMUM REQUIREMENTS FOR NEXT COURSE PLACEMENT	
		End of Year Grade	SOL Score
7	Algebra 1	A-B	450 or greater
8	Geometry	A-B	450 or greater
9	Algebra II	A-B	400
10	Trigonometry or Probability and Statistics	-----	-----
11	Math Analysis	-----	-----
12	AP Calculus	-----	-----

Option 8

GRADE LEVEL	COURSE PROGRESSION	MINIMUM REQUIREMENTS FOR NEXT COURSE PLACEMENT	
		End of Year Grade	SOL Score
7	Algebra 1	A-B	400-450
8	Geometry	A-B	400-450
9	Algebra II	-----	-----
10	Trigonometry (Semester 1) Math Analysis (Semester 2)	-----	-----
11	AP Calculus or AP Statistics Virtual Virginia	-----	-----
12	First College	-----	-----

Option 9

GRADE LEVEL	COURSE PROGRESSION	MINIMUM REQUIREMENTS FOR NEXT COURSE PLACEMENT	
		End of Year Grade	SOL Score
7	Algebra 1	A-B	450 or greater
8	Geometry	A-B	450 or greater
9	Algebra II (Semester 1) Trigonometry (Semester 2)	-----	-----
10	Discrete Math	-----	-----
11	Math Analysis	-----	-----
12	AP Calculus or AP Statistics Virtual Virginia	-----	-----

Option 10

GRADE LEVEL	COURSE PROGRESSION	MINIMUM REQUIREMENTS FOR NEXT COURSE PLACEMENT	
		End of Year Grade	SOL Score
7	Algebra 1	C-D	-----
8	Geometry	C-D	-----
9	AFDA Note: AFDA is not a prerequisite for Algebra II	-----	-----
10	Algebra II	-----	-----
11	Trigonometry or Probability and Statistics	-----	-----
12	Teacher Recommendation	-----	-----

Secondary Science Course Offerings & Suggested Sequences

Standard Diploma
1 Verified Credit—3 Lab Sciences

Grade 9
Environmental Science (03003)

Grade 10
Biology (4310) and/or Earth Science (4210)

Grade 11
Biology II Ecology (4340)*
Earth Science II Oceanography (4250)*

STEM Grades 10-12
Principles of Technology I (9811)[t]
Principles of Technology II (9812)[t]
Earth Science II Geospatial Technology (4220H)*+
Biology II Biotechnology (4320H)*+
Biology II Anatomy & Physiology (03053H)*

* Prerequisite of either Biology or Earth Science
+ Offered only at I. C. Norcom High School. Transportation provided
t Completion of PT-I and PT-II equals a Physics credit

Advanced Diploma
1 Verified Credit—4 Lab Sciences

Grade 9
Biology Honors (4310H) and/or Earth Science Honors (4210H)

Grade 10
AP Environmental Science (42709)

Grades 11 and 12
Chemistry (4410H)
AP Biology (43709)
Physics (03151H)
AP Chemistry (44709)

STEM Grades 9-12
Experimental Design (46101H)+
Principles of Technology I (9811)[t]
Principles of Technology II (9812)[t]
Earth Science II Geospatial Technology (4220H)*+
Biology II Biotechnology (4320H)*+
Biology II Anatomy & Physiology (03053H)*

SECONDARY COURSE OFFERINGS

ART

ART EDUCATION

Middle School offers art to students in grades 7 and 8. The curriculums provide students with a cultural and historical context for investigating the visual arts. Sketchbooks are required and students employ the sketchbook as a vehicle for creative thinking, a repository of ideas, and a tool for planning and developing solutions to artistic problems. Students are exposed to a variety of media and processes that include technology. Middle school art centers on the continued development of artistic skills, aesthetic awareness, and historical and cultural knowledge in order to foster thoughtful creative expression. The establishment of a student portfolio demonstrates growth and reflects a broad range of media, styles and processes. Originality, craftsmanship and ethical practices are stressed.

The high school art curriculum centers on the continued development of artistic skills, aesthetic awareness, and historical and cultural knowledge in order to foster thoughtful creative expression. Contextual studies at each level provide opportunities to attain visual literacy, enabling students to apply criteria for making visual judgments and developing a personal aesthetic. A cumulative portfolio of selected works of art from each level demonstrates the students' individual growth and reflects a broad range of media, styles and processes. Originality, craftsmanship and ethical practices are stressed. The use of a sketchbook as a repository of creative ideas and a source of visual images is required.

ART 7 (9105)
Grade 7
Prerequisite: None

Art 7 focuses on fine arts and fine crafts. Within historical and cultural contexts, students study artists and their works. The elements and principles of 2-dimensional and 3-dimensional design are explored through sketchbook assignments, hands-on experiences and classroom critiques. Students gain skill and confidence in their personal expressions. Originality and craftsmanship are represented in the work comprising the student's portfolio.

ART 8 (9115)
Grade 8
Prerequisite None

Art 8 students maintain a sketchbook as a growing personal resource for ideas and planning. Originality and craftsmanship are stressed. Students develop their personal aesthetic as they manipulate the elements and principles of design in both 2 dimensional and 3 dimensional art processes. Emphasis is place on the visual arts as it relates to other field of study. Portfolio development focuses on the student's ability to assess quality work to produce a vehicle that reflects the student's artistic growth. Portfolios will serve as an entrée to high school and specialized art experiences.

ART I (ART FOUNDATIONS) – 1 UNIT (9120)
Prerequisite: None

This is an entry-level elective course in fine arts that is a prerequisite for all subsequent art courses. Art I instruction concentrates on the elements and principles of design and the exploration of a range of media in both 2-D and 3-D design. Art history is studied as it relates to their creative exploration. Students develop a working art vocabulary, participate in critiques, maintain a sketchbook as a personal resource in creative problem solving and develop a portfolio that illustrates artistic growth.

ART II (INTERMEDIATE ART) – 1 UNIT (9130)
Prerequisite: Art Foundations I – Fine Arts

Art II is a fine arts course. Students explore periods in art history, art processes and exemplars who mastered those techniques. Processes and techniques used in drawing, painting, graphics, ceramics, printmaking and sculpture are explored. Emphasis is placed on individual creative problem solving and portfolio development. Each student participates in peer critiques and maintains a sketchbook as personal resources for ideas and inspiration.

ART III (ADVANCED INTERMEDIATE ART) – 1 UNIT (9140)
Prerequisite: Art Foundations II – Fine Arts

Art III offers students an opportunity to select media for concentrated study. Work will indicate a growing understanding of the elements and principles. Students are required to maintain and update their portfolios and to participate in hanging shows of student work with an appropriate documentation. Independent research serves to support their area of concentration and foster a broader knowledge of art history. Each student participates in peer critiques and maintains a sketchbook as a personal resource for their independent study as they develop a personal aesthetic.

ART IV (ADVANCED ART) – 1 UNIT (9145)
Prerequisite: Art III – Fine Arts

Art IV is an advanced course designed to provide an opportunity for independent study. Work will demonstrate a high level of craftsmanship, knowledge of art history and aesthetic judgment. The focus is on building a portfolio that is designed for job and college applications. Students will each hang a one-person show, participate in peer critiques and maintain a sketchbook.

ANIMATION - 1 UNIT (05177)
Pre-requisite: Art II – Fine Arts

Animation is designed as a survey of the multiple layers involved in animation techniques and media. Students will become familiar with the history of animation and produce work that explores the evolution of the animation processes beginning with hand-drawn animation and concluding with contemporary digital computer designed animations. Students will maintain a sketchbook and an animation process book for references as they move through the animation process of creating brief stories, developing an original character, creating sets, and generating appropriate sound effects.

CERAMICS I/ 3D DESIGN – 1 UNIT (9175)
Prerequisite: Art Foundations I (Art Foundation II, strongly recommended)

This course places emphasis on the elements and principles of design as they relate to 3D construction in various media. Students will explore historical and cultural references and become familiar with materials, tools, and equipment that are process specific. A significant portion of instruction focuses on the use of clay in hand building and wheel throwing techniques to solve a range of three dimensional problems. Originality and craftsmanship are stressed in the exploration and problem solving.

CERAMICS II / 3D DESIGN – 1 UNIT (9176)
Prerequisite: Ceramics I

The skills and processes learned in the first level are the foundations of this course. Independent research involving traditional and contemporary 3D materials and processes will inform the student's decisions relative to individual design problems, developed jointly by the student and the teacher. Originality and craftsmanship are stressed in the exploration of personal themes in the execution of 3D art work.

ART

GRAPHICS DESIGN– I UNIT (9153)
Prerequisite: Art Foundations II – Fine Art

This course addresses the fundamentals of design involving text and imagery to convey an idea. The students will work with the technology currently used in advertising industry such as Photoshop and Dreamweaver. Students will produce the components of a corporate brand identity that includes a logo, a letterhead, and a business card. Other key projects will include magazine advertisements, a brochure, and a package design. Students will work as independent designers and in design teams to simulate the commercial environment. At the conclusion of the course students will have developed a professional interactive portfolio for business or application to higher education.

PHOTOGRAPHY – 1 UNIT (9193)
Prerequisite: Art Foundations II

Photography explores the historical context of photography, the mechanics of developing and printing black and white film, and the digital and graphic design aspects of photography. Student experiences photography from the pinhole camera to the digital cameras. The students participate in alternative printing techniques, such as photogram, hand tinting, solarization and toning. The student must have access to a digital camera.

IDENTITY THROUGH THE ARTS: AN INTRODUCTION TO THE HUMANITIES – 1 UNIT (2315) Offered at Churchland High School
Grades 11-12
Prerequisite – None

This course addresses the history of the humanities chronologically and through the universal themes of love, tragedy, personal identify and nature. Particular emphasis is placed on providing students with direct contact with the arts through attending concerts, creating works of art themselves and interacting with many active musicians, writers, dancers and composers working in the Hampton Roads area. Students will be exposed to many avenues of vocations supporting the arts including theater managers, arts festival directors, recording engineers, instrument repairmen, instrument case makers, and roadies for the Virginia Symphony and for area rock bands.

THE VISUAL AND PERFORMING ARTS ACADEMY
COURSES IN VISUAL ART

These visual arts classes, located at Churchland High School, are designed to prepare motivated students from any Portsmouth high school in grades 9-12 for further study in the visual arts. These classes emphasizes academic excellence, artistic development, and intensive study in visual arts. Those excepted into the academy are Art Scholars and they explore art processes, media and art history. All students will maintain a sketchbook, participate in class discussions peer critiques and student exhibitions.

Students receive intensive individualized art instruction as well as class instruction; work with state of the art technology; participate in field trips and cultural experiences; and prepare portfolios, auditions, resumes and scholarship applications.

Students may apply to enter the academy at any grade level. The application process begins in the early spring and involves a personal interview, with examples of the students work culled from class work and independent projects. Each of the visual arts courses in the academy runs a full-year and students are required to attend both the fall and spring terms. Two credits are awarded for each year.

HONORS ART HISTORY/STUDIO I H– FINE ARTS – 2 UNITS (9170H)
Prerequisite: Students interested in the taking Art Scholars classes must apply and present a portfolio of their work for review.

The first year of Art Scholars is divided into two disciplines; art production, which is weighted at 80% and art history, which is weighted at 20%. In the first semester drawing from direct observation is studied with emphasis upon spatial organization, diverse media and techniques. Also, the student is acquainted with the critique process and participates fully in class discussions. In the second semester color theory is taught and the knowledge is applied through use of paint and other color media. Print and sculpture processes are also taught in second semester. Simultaneously, the student will study the history of art. This segment of the course is the equivalent of a college-level survey course in art history. The student moves chronologically through time as social and historic context are considered. The study of art history is completed in the second year. Extra opportunities for field trips, guest speakers and workshops are integral to the student's experience.

HONORS ART HISTORY/STUDIO II H– FINE ARTS – 2 UNITS (9197H)
Prerequisite: Honors Art History/Studio I - Fine Arts
Acceptance into the Art Scholars Classes

The survey of materials and processes continues building upon the strengths of the student and identifying the weaknesses for improvement. Media exploration is encouraged as student assignments are longer in duration and emphasis is placed upon technique, craftsmanship, and the concepts that give the artwork meaning. Studio work includes drawing and painting from direct observation, printmaking, limited photography processes and sculpture. The study of art history continues from the latest semester and is weighted at 20%. Students are expected to find links between the art historical content and the studio experience. The cultural life of our community continues to be important as field trips, guest speakers, and studio visits are a part of the year's work.

HONORS ADVANCED STUDIO/RESEARCH – FINE ARTS – 2 UNITS (91980)
Prerequisite: Center for Excellence Art II /Studio II – Fine Arts

In the third year, students are given increased amounts of personal freedom to select the concepts and issues about which art production will center. Instruction will continue to build on student strengths and improve upon skill, weaknesses with the ultimate goal of a portfolio suitable to be presented for a college admissions review. The portfolio will demonstrate both breadth of experience as well as specific areas of interest by the student. Both traditional means and modern technology will be used to generate student work. All students will be expected to complete supporting research in conjunction with art production.

PORTFOLIO/RESEARCH – FINE ARTS – 2 UNITS (91990)
Prerequisite: Advanced Studio/Research – Fine Arts

Students will continue to produce increasingly sophisticated imagery with sensitivity to modern culture, cultural diversity, and formal design. A portfolio that reflects the student's breadth, skill and high level of craftsmanship remains the ultimate goal of the student, as opportunity for post-secondary study in the visual arts becomes a reality in the senior year. Independent studio and research problems will be developed between the student and the instructor.

ADVANCED PLACEMENT COURSES:

The content of these courses focuses on portfolio development and is determined by the Advanced Placement Course Description. These AP Studio Art courses are intended for highly motivated students who have a serious interest in art. It is highly recommended that students have previous training in art. Students will need to work outside of the classroom, as well as in it, and beyond scheduled periods. Maintaining a journal or sketchbook is a necessary component of instruction. All art students successfully completing AP Art Studio courses will participate in the College Board Portfolio Evaluation.

ART

Grades 11-12
Prerequisite: Art II
ADVANCED PLACEMENT ART STUDIO – 2D DESIGN - 2 UNITS (91489)
ADVANCED PLACEMENT ART STUDIO – 3D DESIGN - 2 UNITS (91499)
ADVANCED PLACEMENT DRAWING STUDIO – 2 UNITS (91509)

The content of these three courses meets the standards established by the College Board.

CAREER AND TECHNICAL EDUCATION

AGRICULTURAL EDUCATION

The Horticulture Program is a specialized occupational area in Agricultural Education. It is designed to assist students in developing the necessary knowledge, skills, habits, and attitudes for entry-level employment in landscape design, greenhouse operation, nursery plant production, and turf management. Courses are offered at the Career and Technical education office site.

HORTICULTURE I – 2 UNITS (8035)
(Greenhouse Operation and Management)
Grades 11-12
Prerequisite: None

Horticulture I is a one-term, double-period, occupational preparation course designed to assist students in developing the necessary knowledge, skills, habits, and attitudes for entry-level employment. Students receive instruction in using soil and other plant-growing media and in identifying, propagating, and growing horticultural plants in the greenhouse and land laboratory.

HORTICULTURE II – 2 UNITS (8036)
(Nursery and Landscape Management)
Grades 11-12
Prerequisite: Horticulture I

Horticulture II is a one-term, double-period, occupational preparation course. Units of instruction include growing greenhouse crops; producing and maintaining nursery crops; establishing, maintaining, and designing landscape planting; establishing and maintaining turf grass; and operating a flower shop and a garden center.

BUSINESS AND INFORMATION TECHNOLOGY

Business Education course offerings are designed to meet the needs of two groups of students. Courses provide basic business education including occupational orientation and exploration for all students. Occupational preparation courses are offered for students who plan to enter business and office occupations. Cooperative training may be a part of this program for an additional credit. The on-the-job experience is an extension of the classroom instruction.

KEYBOARDING EXPLORATION – 6147 (6 Weeks), 6148 (9 Weeks) and 6149 (12 Weeks)
Grades 7-8- No Credit
Prerequisite: None

Keyboarding exploration is an introductory program to the concepts of keyboarding. Emphasis is placed on the development of skills in entering alphabetic, numeric, and symbolic information on a computer. Students develop basic skills in the processes that employ keyboarding concepts as well as introductory computer functions.

Provided early in the course. Students learn to use software packages and to operate many types of equipment such as word processors, printers, copiers, and computers.

ACCOUNTING – 1 UNIT (6320)
Grades 11-12
Prerequisite: Keyboarding Applications

Accounting is a one-semester, single-period course with emphasis on accounting principles as they relate to both manual and computerized financial systems. Instruction integrates microcomputers and electronic calculators. The relationships and processes of manual and computerized accounting are presented.

BUSINESS LAW –1 UNIT (6132)
Grades 11-12
Prerequisite: None

Business Law is a half-semester, single-period course that incorporates economic and social concepts as they relate to laws affecting businesses and individuals. Course topics include: contracts; bailments; employment; property, sales, and insurance laws; business organization; commercial paper; bankruptcy; agencies and trust; and business law careers.

BUSINESS MANAGEMENT –1 UNIT (6136)
Grades 11-12
Prerequisite: None

Business Management is a half-semester, single-period course. Students are provided a general overview of national and international business and the social and economic environment of business. Topics include: business ownership, finance, communications, human resources, and management functions.

PRINCIPLES OF BUS/MARK – 1 UNIT (6116)
Grades 9-10
Prerequisite: None

Students discover the roles of business and marketing in the free enterprise system and the global economy. Basic financial concepts of banking, insurance, credit, inheritance, taxation, and investments are investigated to provide a strong background as students prepare to make sound decisions as consumers, wage earners, and citizens. The real-world impact of technology, effective communication, and interpersonal skills is evident throughout the course. This course also supports career development skills and explores career options.

CAREER & TECHNICAL

COMPUTER INFORMATION SYSTEMS – 1 UNIT (6614)
Grades 10-12
Prerequisite: Keyboarding Applications

Computer Information Systems is a one-semester, single-period course. Students apply problem-solving skills to real life situations through (a) database, spreadsheet, and word processing software; (b) charting; and (c) integrated activities. They work individually and in groups to explore data/telecommunications, operating systems, and basic networking principles.

CYBER SECURITY FUNDAMENTALS I & II (CYBR) - 1 UNIT (63020)
Grades 9-12
Prerequisite: Keyboarding Applications

The need for personal and professional cyber security skills has never been greater. The Cyber Security/Forensics infusion units are comprised of three main pieces: Cyber Security Foundations, Social Engineering and Personal Cyber Security, and Cyber Forensics. All tasks are listed as optional so that instructors may customize the units as they wish.

DIGITAL APPLICATIONS – 1 UNIT (6617)
Grades 9-10
Prerequisite: None

This course is designed for secondary school students to develop real-life, outcome-driven approach skills for digital citizenship, basic computer operations, keyboarding, application software (word processing, spreadsheets, multimedia applications, databases), and career exploration. This course promotes skills that can be applied across the curriculum and offers preparation relevant to 21st century and postsecondary education. Students who successfully complete this course may be eligible for a rigorous and relevant industry certification examination. Students skills may be enhanced by participation in work-based learning activates and/or the Future Business Leaders of America (FBLA).

ECONOMICS AND PERSONAL FINANCE – 36 WEEKS I UNIT (6120)
Grades 10-12
Prerequisite: Keyboarding Applications

Students will learn how to navigate the financial decisions they must face and make informed decisions related to career exploration, budgeting, banking, credit, insurance, spending, taxes, saving, investing, buying/leasing a vehicle, living independently, and inheritance. Development of financial literacy skills and an understanding of economic principles will provide the basis for responsible citizenship and career success. In addition to developing personal finance skills students in the 36-week course will also study basic occupational skills and concepts in preparation for entry-level employment in the field of finance. The course incorporates all economics and financial literacy objectives included in the Code of Virginia §22.1-200-03B. The cooperative education method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

LEGAL SYSTEMS ADMINISTRATION – 1 UNIT (6736)
Grades 11-12
Prerequisite: Keyboarding Applications

Legal Systems Administration is a one-semester, single period course. Students wishing to gain employment in the legal field may take this course to learn how to use legal terminology and procedures useful in preparing legal documents and in functioning effectively in a law office.

OFFICE ADMINISTRATION – 1 UNIT (6622)
Grades 10-12
Prerequisite: Keyboarding Applications

Office Administration is a one-semester, single-period course with emphasis on the development of word processing applications and office skills. Additional units of instruction include: operation of various office equipment, record and database management, human relations, oral and written communication, record keeping, information processing, and office careers orientation.

EDUCATION

VIRGINIA TEACHERS FOR TOMORROW (VTfT) - 1 UNIT (9062)
Grades 10-12
Prerequisite: None

Fosters student interest, understanding, and appreciation of the teaching profession and allows secondary students to explore careers in education. Students build a foundation for teaching; learn the history, structure and governance of teaching; apply professional teaching techniques in the VTfT classroom and field experience; and reflect on their teaching experiences. Additional educational leadership opportunities are offered through the student organization, Educators Rising.

VIRGINIA TEACHERS FOR TOMORROW II – 1 UNIT (9072)
Grades 11-12
Prerequisite: 9062

Students continue to explore careers in the Education and Training Cluster and pathways. This course provides the opportunity for students to prepare for careers in education as they research postsecondary options, learn about the process of teacher certification in Virginia, and participate in a practicum experience.

FAMILY AND CONSUMER SCIENCES

Family and Consumer Sciences programs are designed to focus and develop the occupational skills, knowledge, attitudes and work habits that prepare students for careers in the areas associated with the consumer and family field. Additionally, non-occupational courses are offered in the traditional family studies.

CULINARY ARTS I – 2 UNITS (8275)
(Wilson High School and Churchland High School)
Grades 11-12
Prerequisite: Nutrition and Wellness is recommended

Culinary Arts is a one-period, one-year class which prepares students in the art of planning, arranging, preparing, and serving food and beverages at a variety of social functions, and in preparing and packaging food products for boxed meals, parties, or other special occasions.

CAREER & TECHNICAL

CULINARY ARTS II – 2 UNITS (8276)
Grades 11-12
Prerequisite: Culinary Arts I (8275)

The Culinary Arts II curriculum provides students with continuing opportunities to acquire a comprehensive knowledge of the food service industry as well as to expand their technical skills. Students practice kitchen safety and sanitation, apply nutritional principles to food preparation and storage, perform a wide range of more advanced food-preparation techniques including garde manger and baking, refine their dining room serving skills, develop menus, perform on-site and off-site catered functions, and strengthen their business and math skills. The curriculum continues to place a strong emphasis on science and mathematics knowledge and skills.

EARLY CHILDHOOD EDUCATION EXPLORATION I - 2 UNITS (8285)
Grades 11-12
Prerequisite: Nutrition and Wellness is recommended

Students prepare to be primary providers of home, family, or institution-based child care services be focusing their study on the planning, organizing, and conducting of meaningful play and learning activities; child monitoring and supervision; record keeping; and referral procedures. Critical thinking, practical problem solving, and entrepreneurship opportunities within the field of early childhood education are emphasized. Teachers highlight the basic skills of math, science, and communication when appropriate in content.

EARLY CHILDHOOD EDUCATION EXPLORATION II (8286)
Grades 11-12
Prerequisite: Early Childhood Education I

Students prepare for positions in child care centers as child care attendants, kindergarten aides, or child care assistants; as Foster parents; or as entrepreneurs. Cooperative (on-the-job) education or work-based learning opportunities under the supervision of the instructor are an option. Critical thinking, practical problem solving, and entrepreneurship opportunities within the field of early childhood education are emphasized. Teachers highlight the basic skill of math, science, and communication when appropriate in content.

LIFE PLANNING – 1 UNIT (8226)
Grades 9-12
Prerequisite: None

Students enrolled in this one-semester, one-period class focuses on developing a life management plan; caring for self and others to ensure wellness; building and maintaining constructive relationships; building and maintaining strong families; and strategies for career planning.

COSMETOLOGY I – 2 UNITS (8745) Two Year Program
Grades 10-11
Prerequisite: None

In this introductory course, students study hair, skin, and nails and their related care. Students are grounded in theory as they prepare to practice procedures in a clinical lab setting or classroom, using manikins for manipulative skill practice. The first-year course emphasizes personal safety, professionalism, and sanitation and disinfection of equipment and facilities. Students develop skills in shampooing and conditioning hair, as well as styling and cutting hair. They are introduced to chemical texture services and develop skills in manicure and pedicure procedures.

COSMETOLOGY II – 2 UNITS (8746) Two Year Program
Grades 11-12
Prerequisite: Cosmetology I (8745/36 Weeks)

In this continuing course, students build on their theoretical foundation of general sciences and practices in cosmetology to increase proficiency in hair cutting and styling on live models, with attention to professionalism, client consultation, safety, and infection control. Students are trained in safe chemical processes related to permanent waves, relaxers, lightening, and coloring hair. In addition, students learn to care for skin, hands, and feet, developing experience in providing facials, manicures, pedicures, and nail enhancements. Students will be introduced to a business management unit with a focus on managing the salon.

NUTRITION AND WELLNESS – 1 UNIT (8228)
Grades 9-12
Prerequisite: None

Students enrolled in Nutrition and Wellness focus on making choices that promote wellness and good health; analyzing relationships between psychological and social needs and food choices; choosing foods that promote wellness; obtaining and storing food for self and family; preparing and serving nutritious meals and snacks; selecting and using equipment for food preparation and identifying strategies to promote optimal nutrition and wellness of society. Teachers highlight the basic skills of math, science, and communication when appropriate in the content.

HEALTH AND MEDICAL SCIENCES

Health Occupations Education is designed to prepare students with basic skills for employment in nursing homes, clinics, medical and dental offices, hospitals, and certain public health settings. The occupational preparation programs provide knowledge, which enables students to enter employment in the health field immediately after program completion. These courses are offered at the divisions Career and Technical Education sites.

DE MEDICAL TERMINOLOGY – 1 UNIT (8383)
Grades 10-12
Prerequisite: None

Medical Terminology is designed to help students learn common medical terms essential for safe patient care. Topics are presented in logical order, beginning with each body system's anatomy and physiology and progressing through pathology, laboratory tests and clinical procedures, therapeutic interventions, and pharmacology. Students learn concepts, terms, and abbreviations for each topic.

NURSE ASSISTANT 1 – 2 UNITS (8331)
Grades 11-12
Prerequisite: None

Nurse Aide I, offered as an occupational preparation course beginning at the 11th-grade level, emphasizes the study of nursing occupations as related to the health care system. Students study normal growth and development, simple body structure and function, and medical terminology and are introduced to microbes and disease. They receive elementary skill training in patient-nursing assistant relationships; taking and recording of vital signs; cardiopulmonary resuscitation; and bathing, feeding, dressing, and transporting of patients in hospitals and nursing homes. Limited on-the-job instruction in nursing homes and hospitals is part of the course. This course can be used as an introduction to practical nursing or to prepare the student for Nurse Aide II so that all competencies for a certified nursing assistant are met.

CAREER & TECHNICAL

NURSE ASSISTANT II – 2 UNITS (8332)
Grade 12
Prerequisite: Nurse Aide I (8360)

Nurse Aide II is an occupational preparation course, emphasizing advanced skill training in areas such as catheter care, range of motion, bowel and bladder training, care of the dying, selected procedures for maternal and infant care, and admission and discharge procedures. Students learn diseases and body systems as related to advanced clinical care of the acute medical-surgical patient, the chronically ill, and the elderly. On-the-job instruction in a licensed nursing home is part of the course. Upon completion of the nurse aide program, the student is eligible to take the nurse aide certification exam that leads to employment as a certified nurse aide in hospitals and nursing homes.

SPORTS MEDICINE/ATHLETIC TRAINING I – 1 UNIT (7660)
Grades 11-12
Prerequisite: None

This course of studies provides students with the basic concepts and skill set required for an entry-level position as a sports medicine assistant. It introduces students to topics such as injury prevention, nutrition, first aid/CPR/AED, exercise physiology, and biomechanics. Students study basic human anatomy and physiology, medical terminology, legal and ethical issues in sports medicine, and career preparation. Course competencies have been constructed so as not to go beyond the professional scope of aide/assistant level. Mastery of the material in this course would provide students with a strong background should they wish to pursue certification in areas such as first aid, CPR, AED, and/or personal trainer.

SPORTS MEDICINE/ ATHLETIC TRAINING II – 1 UNIT (7662)
Grades 11-12
Prerequisite: Sports Medicine/ Athletic Training I (7660/ 36 Weeks)

This course of studies provides students with the basic concepts and skill set required for an entry-level position as a sports medicine assistant. It introduces students to topics such as injury prevention, nutrition, first aid/CPR/AED, exercise physiology, and biomechanics. Students study basic human anatomy and physiology, medical terminology, legal and ethical issues in sports medicine, and career preparation. Course competencies have been constructed so as not to go beyond the professional scope of aide/assistant level. Mastery of the material in this course would provide students with a strong background should they wish to pursue certification in areas such as first aid, CPR, AED, and/or personal trainer.

PHARMACY TECH I – 2 UNITS (8305)
Grades 11-12
Prerequisite: None

This certificate program is designed to provide students with the basic skills and knowledge to begin work as a pharmacy technician. The coursework will fulfill the requirements of the Board of Pharmacy and prepare students to take either the state examination or the national examination administered by the Pharmacy Technician Certification Board. Trained, experienced pharmacy technicians who can demonstrate the right skills and knowledge should be able to pursue many exciting and respected career options or postsecondary study in the pharmacy field.

PHARAMCY TECH II – 2 UNITS (8306)
Grades 11-12
Prerequisite: Pharmacy Technician I (8305/36 Weeks)

This certificate program is designed to provide students with the basic skills and knowledge to begin work as a pharmacy technician. The coursework will fulfill the requirements of the Board of Pharmacy and prepare students to take either the state examination or the national examination administrated by the Pharmacy Technician Certification Board. Trained, experienced pharmacy technicians who can demonstrate the right skills and knowledge should be able to pursue many exciting and respected career options or postsecondary study in the pharmacy field.

MARKETING EDUCATION

Marketing Education prepares students for careers in the marketing of goods or services; the buying, transporting, and storing of goods; the promotion of goods and services; marketing research; and marketing management. Through classroom instruction and supervised on-the-job training, Marketing Education enables students to develop competencies that prepare them for full-time employment or for advanced educational or training programs.

PRINCIPLES OF BUSINESS AND MARKETING – 1 UNIT (8116)
Grades 9-10
Prerequisite: None

Students explore the roles of business and marketing in the free enterprise system and the global economy. Students study how the American economy operates and prepare to make decisions as consumers, wage earners, and citizens.

INTRODUCTION TO FASHION DESIGN AND MARKETING – 1 UNIT (8148)
Grades 10-12
Prerequisite: None

Students explore individual careers within the fashion design, manufacturing and marketing industry. This course will focus on the relationships that exist among all areas of the clothing industry; related global and economic issues and on the skills and characteristics necessary for success in the fashion marketing industry.

ENTREPRENEURSHIP EDUCATION – 1 UNIT (9093)
Grades 9-12
Prerequisite: None

This course introduces students to the exciting world of creating, owning, and launching their own business. Students will learn concepts and techniques for planning an innovative business and living the entrepreneurial lifestyle.

ENTREPRENEURSHIP EDUCATION ADVANCED – 1 UNIT (9094
Grades 10-12
Prerequisite: 9093

This course is designed for students who wish to concentrate on advanced strategies for entrepreneurship, building upon concepts introduced in Entrepreneurship (9093). The focus of the course is on development of a business plan and small business management. Students will establish, market, and maintain a business.

CAREER & TECHNICAL

MARKETING – 1 UNIT (8120)
Grades 11-12
Prerequisite: None

Students examine activities in marketing and business important for success in marketing employment and postsecondary education. Students will learn how products are developed, branded, and sold to businesses and consumers. Students will analyze industry trends and gain hands-on experience in the marketing of goods, services, and ideas. Topics will include professionalism in the workplace, product planning and positioning, promotion, pricing, selling, economic issues, and the impact of technology on the marketplace. This course reinforces mathematics, science, English, and history/social science Standards of Learning (SOL). Computer/technology applications and DECA activities enhance the course. DECA, the co-curricular student organization, offers opportunities in leadership, community, and competitive events.

ADVANCED MARKETING – I UNIT (8130)
Grade 12
Prerequisite: Marketing or Fashion Marketing

Students build on knowledge gained in a prior Marketing course. Students participate in supervisory and management activities focusing on the marketing mix, purchasing, financing, human resources, global marketing, pricing, and emerging technologies. Students will prepare for advancement in marketing careers and postsecondary education. This course reinforces mathematics, science, English, and history/social science Standards of Learning (SOL). Computer/technology applications and DECA activities enhance the course. DECA, the co-curricular student organization, offers opportunities in leadership, community, and competitive events.

FASHION MARKETING – 1 UNIT (8140)
Grades 11-12
Prerequisite: None

In this specialized course, students gain basic knowledge of the apparel and accessories industry and skills necessary for successful employment in apparel businesses. Students develop general marketing skills necessary for successful employment in fashion marketing, general marketing skills applicable to the apparel and accessories industry, and specialized skills unique to fashion marketing. Personal selling, sales promotion, purchasing, physical distribution, market planning, and product/service technology as well as academic skills (mathematics, science, English, and history/social science) related to the content are part of this course. Computer/technology applications supporting this course are studied.

ADVANCED MARKETING CO-OP – 2 UNITS (8130)
Grade 12
Prerequisite: Marketing or Fashion Marketing

Advanced Marketing is designed to provide students with (a) in-depth knowledge of the marketing functions and the supervisory and management responsibilities for those functions and (b) competencies important for successful supervisory management employment and advancement to other management positions. In addition, students receive supervised on-the-job training throughout the school year. This course requires a student to work a specific number of hours in a course-related job to receive the addition credit.

OPPORTUNITIES IN HOSPITALITY & TOURISM – 2 UNITS (8160)
Grades 11-12
Prerequisite: None

In this specialized course, students with a career interest in the field of hospitality and recreation develop skills in the areas of hotel front-office procedures, human relations, food and beverage service, purchasing, tourism, travel, and sales promotion. In addition, students obtain a thorough understanding of the hotel-motel industry and the career options available. Academic skills (mathematics, science, English, and history/social science) related to the content are part of this course. Computer/technology applications supporting this course are studied.

PRINCIPLES OR BUS/MARK – 1 UNIT (9116)
Grades 9-10
Prerequisite: None

Students discover the roles of business and marketing in the free enterprise system and the global economy. Basic financial concepts of banking, insurance, credit, inheritance, taxation, and investments are investigated to provide a strong background as students prepare to make sound decisions as consumers, wage earners, and citizens. The real-world impact of technology, effective communication, and interpersonal skills is evident throughout the course. This course also supports career development skills and explores career options.

MILITARY SCIENCE

NJROTC:	**Churchland**	**-**	**Marines**
	I.C. Norcom	**-**	**Navy**
	Wilson	**-**	**Army**

MILITARY SCIENCE I – 1 UNIT (7913)
Grades 11-12
Prerequisite: None

Students are introduced to the JROTC curriculum, and basic U.S. citizenship rights and responsibilities are established and reinforced. Students learn leadership, history, communication techniques, disciplined study habits, management skills, first aid, drug abuse prevention, map reading, physical fitness, and workplace readiness skills. Military customs and courtesies, proper uniform wear, and personal appearance guidelines are followed within the leadership lab, drill, and military ceremonies.

MILITARY SCIENCE II – 1 UNIT (7916)
Grades 9-12
Prerequisite: Military Science I (7913/36 weeks)

Students are introduced to the JROTC curriculum, and basic U.S. citizenship rights and responsibilities are established and reinforced. Students learn leadership, history, communication techniques, disciplined study habits, management skills, first aid, drug abuse prevention, map reading, physical fitness, and workplace readiness skills. Military customs and courtesies, proper uniform wear, and personal appearance guidelines are followed within the leadership lab, drill, and military ceremonies.

CAREER & TECHNICAL

MILITARY SCIENCE III – 1 UNIT (7918)
Grades 10-12
Prerequisite: Military Science II (7916/36 weeks)

Students continue to develop their leadership skills through working as command and staff leaders. Additional communication skills are developed, including methods of instruction, preparation, and proper conduct of cadet-led classes. Human relations, group dynamics, orienteering, contemporary U. S. issues, and advanced military history studies are also included.

MILITARY SCIENCE IV – 1 UNIT (7919)
Grades 10-12
Prerequisite: Military Science III (7918/36 weeks)

Students continue to develop their leadership skills through working as command and staff leaders. Additional communication skills are developed, including methods of instruction, preparation, and proper conduct of cadet-led classes. Human relations, group dynamics, orienteering, contemporary U. S. issues, and advanced military history studies are also included.

TECHNOLOGY EDUCATION

Technology Education teaches students to understand, use, and control technology. The curriculum covers the development of technology and its effect on people, the environment, and society. Students learn how to adjust to change, to deal with forces that influence their fortune, and to participate in controlling their future. In the laboratory, students develop insights into the application of technological concepts, processes, and systems. They are prepared to be active participants in controlling their future.

COMMUNICATIONS SYSTEM SYSTEMS – 1 UNIT (8418)
Grades 9-12
Prerequisite: None

Communications Systems is a one-semester, single-period course that involves students in using technology to communicate information in visual or audio formats. Communications systems are an integral part of the other technological activities involving input, processing, output, and feedback. Students develop personal interests and analyze the impact of communication systems on people, society, and culture.

GRAPHIC COMMUNICATION SYSTEMS – 1 UNIT (8494)
Grades 10-12
Prerequisite: Communications Systems

Graphic communications is a one-semester, single-period course which deals with printed images such as newspapers, books, printed T-shirts, signs, photographs, wallpaper, or stationery. Students use a variety of graphic arts equipment and processes to make visual projects with different materials. Students design, plan, and reproduce products similar to those produced by the graphic arts industry. Cameras, printing presses, and copy machines are among the many equipment items used.

COMPUTER CONTROL AND AUTOMATION – 1 UNIT (8420)
Grades 9-12
Prerequisite: Communications Systems

Computer Control and Automation is a one-semester, single-period course. Students engage in a very broad study of the technical aspects of computers and their application to production, transportation, and communication systems. Topics include computer equipment and operating systems, programming, control processing information, and social/cultural impact of computers. Problem-solving activities challenge students to plan, program, and interface devices with computer systems. Learning activities include experiences with robotics and control systems, computer-aided design, and computer-aided manufacturing.

TECHNICAL DRAWING AND DESIGN – 1 UNIT (8434)
Grades 9-12
Prerequisite: None

This is a one-semester, single-period foundation course in which students experience the basic language of industry and technology. Students design, sketch, and make technical drawings, models, or prototypes of real design problems. The course is recommended for future engineering and architecture students.

ARCHITECTURAL DRAWING AND DESIGN – 1 UNIT (8492)
Grades 10-12
Prerequisite: Technical Drawing

Architectural Drawing is a one-semester, single-period course which provides students the opportunity to learn about the principles of working drawings and construction techniques. Experiences include residential and commercial building designs, rendering, model making, structural details, and community planning. Students use computer-aided drawing and design (CADD) equipment and established standards or codes.

GEOSPATIAL – 1 UNIT (8423)
Grades 9-12
Prerequisite: None

The Geospatial Technology program provides experiences pertaining to the study and use of geographic information systems (GIS), global positioning systems (GPS), remote sensing (RS), and mobile technologies. Fundamentally, these technologies allow students to explore and analyze the natural and human-made world, from local to global and beyond. Students use various tools, processes, and techniques to create, store, access, manipulate, and revise data to solve human challenges. These experiences employ real-world spatial analysis models and guidelines for integrating, interpreting, analyzing, and synthesizing data, with a focus on both the implications and the limitations of such technologies. These experiences also include interfacing to network-based data management systems

PRODUCTION SYSTEMS – 1 UNIT (8446)
Grades 10-12
Prerequisite: None

Students in this one-semester, single-period laboratory course design, build, and test scale-model structures, working with projects that help them to understand the jobs of architects, carpenters, electricians, plumbers, surveyors, contractors, masons, design engineers, and a variety of other construction careers. (This course is a companion to Manufacturing Technology).

CAREER & TECHNICAL

MANUFACTURING SYSTEMS – 1 UNIT (8426)
Grades 10-12
Prerequisite: Production Systems

Students in this one-semester, single-period course organize and operate a manufacturing company to explore careers and work habits typical of American industry's free enterprise system. Students make projects or products in the company that can be sold, while experiencing the work of planners, designers, engineers, machine operators, personnel managers, and a variety of other manufacturing careers. (This course is a companion to Construction Technology).

TECHNOLOGY FOUNDATIONS – 1 UNIT (8402)
Grades 9-12
Prerequisite: None

In Technology Foundations, students in this one-semester, single-period course acquire a foundation of knowledge in technological material, energy, and information and apply processes associated with the technological thinker. Laboratory activities engage students in creating new ideas and innovations, building systems, and analyzing technological products to learn further how and why technology works. Working in groups, students build and control systems with engineering in the development of a technology.

TECHNOLOGY TRANSFER – 1 UNIT (8404)
Grades 10-12
Prerequisite: Technology Foundations

In Technology Transfer, students in this one-semester, single-period course work with various computers and materials on projects that combine systems such as production, energy, communications, transportation, and other technologies. Students use math, science, and communication in designing and building a computer device or an energy efficient vehicle. Thematic activities engage students in community problems where they transfer the technological method to address recycling, space exploration, and housing.

PRINCIPLES OF TECHNOLOGY I – 1 UNIT (9811)
Grades 10-12
Prerequisite: Algebra I

Students in this one-semester, single-period course apply physics and math principles through a unified systems approach for a broad knowledge base of the principles underlying modern technical systems. This course covers seven technical principles: force, work, rate, resistance, energy, power, and force transformers, emphasizing how each principle plays a unifying role in the operation of mechanical, fluid, electrical, and thermal systems in high-tech equipment.

PRINCIPLES OF TECHNOLOGY II – 1 UNIT (9812)
Grades 10-12
Prerequisite: Principles of Technology I

Students in this one-semester, single-period course build on the knowledge base developed in Principles of Technology I while applying math and physics principles of problem solving activities. They are provided a further understanding of the principles of mechanical, fluid, electrical, and thermal systems that demonstrate the basic principles of physics, dividing them into seven units: Momentum, Waves and Vibrations, Energy Converters, Transducers, Radiation, Light and Optical Systems, and Time Constants.*

* **Students who have completed two science courses prior to taking this sequence and who successfully complete both Principles of Technology I and Principles of Technology II may receive a Physics credit for Principles of Technology II. Principles of Technology I count as an elective credit.**

DE ENGINEERING & DRAWING – 5 TCC CREDITS (8493)
Grades 10-12
Prerequisite: Technical Drawing and Design (8435/36 weeks)

Students explore the engineering design process and use a graphic language for product design, technical illustration, assembly, patent, and structural drawings. They increase their understanding of drawing and the design process and techniques learned in the prerequisite course. Students use computers, calculators, and descriptive geometry and adhere to established standards to solve design problems.

TELEVISON AND MEDIA PRODUCTION I – 2 UNITS (8688)
Grades 9-12
Prerequisite – none

In this course, students will engage in hands-on digital media production while using industry-standard equipment and software. They will learn how to work as media producers and explore careers in the dynamic industry of digital media production.

TELEVISION AND MEDIA PRODUCTION II – 2 units (8689)
Grades 10-12
Prerequisite – (8688)

This course builds upon knowledge and skills from Television and Media Production I. Students will generate fiction and non-fictional media content. Students will enhance their digital media production skills by entering the studio and control room and become proficient with industry-standard equipment and software. They put their knowledge of digital media production into action with use of sophisticated tools and equipment as they begin to develop their personal portfolios

TELEVISION AND MEDIA PRODUCTION III – 2 units (8690)
Grades 11-12
Prerequisite – (8689)

This course builds upon knowledge and skills from Television and Media Production I and II. Students will demonstrate mastery of media production knowledge and skills. They will create original productions, assemble a professional digital portfolio, and investigate the dynamic media production industry. Students will research postsecondary opportunities and formulate strategies for both college and career success.

TRADE AND INDUSTRIAL EDUCATION

Trade and Industrial Education programs are designed to develop occupational skills, knowledge, attitudes, and work habits that prepare students to become employed and progress satisfactorily in the trade and industrial field as skilled or semi-skilled craftspersons.

BUILDING MANAGEMENT – 1 UNIT (8590) Disadvantaged/Disabled
Grades 9-12
Prerequisite: None

This is a one-semester, single-period course in which students learn to service a variety of structures including commercial and industrial buildings and mobile homes. Basic maintenance and repair skills related to the air conditioning, heating, plumbing, electrical, and other mechanical systems are included in the instruction.

INDUSTRIAL COOPERATIVE TRAINING – 2 UNITS (8904)
Grades 11-12
Prerequisite: None

In Industrial Cooperative Training (ICT), students in this one-semester, one-period course have the opportunity to prepare for employment related to the many fields within the areas of trade, industrial, or technical occupations. Each student receives on-the-job training and instruction related to his or her chosen trade area. The teacher-coordinator and the student's employer design a training plan to develop the student's entry-level skills using the V-Tecs Curriculum Development Program.

NAIL TECHNICIAN I - 2 UNITS (8692)
Grades 11-12
Prerequisite: None

Students learn to manicure, pedicure, install and maintain artificial nails, and apply concepts associated with bacteriology, sanitation, nail disorders, anatomy and physiology, and safety. Completion prepares students for the Virginia state licensing examination in Nail Technician

NAIL TECHNICIAN II – 2 UNITS (8693)
Grade 11-12
Prerequisite: Nail Technician I (8692)

Students learn to manicure, pedicure, install and maintain artificial nails, and apply concepts associated with bacteriology, sanitation, nail disorders, anatomy and physiology, and safety. Program completion prepares students for the Virginia state licensing examination in Nail Technician.

ENGLISH

READING LINKS
Grade 7
Prerequisite: Language Arts 6

The Reading Links course is designed to help students improve their abilities to understand what they read, improve reading fluency, and enhance critical thinking capacities. Students who did not pass the sixth grade reading SOL test or who earned a C or D in Language Arts 6 may qualify to be enrolled. Students who are weak in English 7 may be considered. This one-semester course addresses motivation, vocabulary development, fluency, and comprehension strategies that help students become highly skilled, independent readers.

ENGLISH 7 (1110)
Grade 7
Prerequisite: Language Arts 6

This course continues the integrated study of reading selections by emphasizing the literary elements appropriate for the age and maturity of seventh graders. Skills are further developed in reading, writing, critical thinking, language usage, speaking, and writing. Using the writing process, students explore a variety of writing experiences that further develop skills in creative and functional writing.

HONORS ENGLISH 7 (1110H)
Grade 7
Prerequisite: Language Arts 6

The English Seven Honors course emphasizes the recognition of story elements – plot, characterization, setting, point of view, and theme. Students will also gain experience in analyzing various literary forms of prose and poetry as they relate readings to their own experiences. Students will develop a better grasp of sentence structure, a variety of paragraph development techniques, vocabulary development, and appropriate grammatical conventions as they use the writing process. Skills will be developed through various activities requiring higher levels of listening, thinking, and speaking.

ENGLISH 8 (1120)
Grade 8
Prerequisite: English 7

English Eight is designed to help students gain increased skills and satisfaction from their reading, writing, critical thinking, speaking, and listening. The student begins to study the structure of the language and how language works. Functional literacy skills are also emphasized.

HONORS ENGLISH 8 (1120H)
Grade 8
Prerequisite: English 7

The Honors English Eight course provides opportunities for students to evaluate and relate reading and writing to their own experiences as well as to current and historical world events. The literature read will also enable students to explore and respond to contributions of literature from their own as well as from other cultures.

Students will use the process approach to writing with an emphasis on descriptive and narrative writing. Writing will also be used as a means of substantiating learning and as a means of discovering self and formulating relationships with others. The mechanics of writing will be taught through the writing process.

*** ENGLISH 9 – 1 UNIT (1130)**
Grade 9
Prerequisite: English 8

This course is designed to help students increase their skills in reading, writing, critical thinking, speaking and listening. Emphasis is placed on the development of good sentences and paragraphs through short narratives, persuasion essays, descriptive pieces, and friendly letters as a means of producing ease in expression. Reading skills are developed through the use of various types of literature offered for pleasure and appreciation. Functional literacy skills are also emphasized.

*** HONORS ENGLISH 9 – 1 UNIT (1130H)**
Grade 9
Prerequisite: English 8 for students who have passed with a grade of A or B.

The Honors English Nine course emphasizes extensive vocabulary study, basic English skills, classical mythology, and a comprehensive study of genres in literature. Vocabulary development focuses on the study of advanced word lists, analogies, roots and affixes. The writing program includes the refinement of basic composition structures and the introduction of longer essays. The mastery of standard usage and grammatical skills is acquired through the writing process. Students will write clearly and effectively and use writing as a way to learn.

*** ENGLISH 10 – 1 UNIT (1140)**
Grade 10
Prerequisite: English 9

In English Ten, in addition to sentence and paragraph development, accuracy, clarity, and logic are stressed as the student is introduced to the modes of writing with an emphasis on persuasion. Short stories, poems, drama, the novel, and non-fiction selections are included in the offerings in literature. Students will analyze literary selections based on the author's treatment of syntax, diction, point of view, figures of speech, tone, imagery and other literary elements.

*** HONORS ENGLISH 10 – 1 UNIT (1140H)**
Grade 10
Prerequisite: English 9

The Honors English Ten course will enable students to acquire a greater understanding and appreciation of the fine effects and techniques of a variety of literary genres, which illustrate beliefs of various people. Readings will also include biographical and autobiographical works. The student will also gain knowledge of vocabulary concepts related to language use and literature, including analogies, context clues, inferences, and commonly misused words.

The student will produce writings in the four forms of discourse: narration, description, exposition and with an emphasis upon persuasion. Opportunities for interactive technology and creative writing are included in the curriculum, with additional writings requiring enhanced research and literary criticism. Students will apply specific grammatical concepts to their writing: proper coordination, transitional devices, sentence structure, verbal, usage, and mechanics.

*** ENGLISH 11 – 1 UNIT (1150)**
Grade 11
Prerequisite: English 10

This course is designed to provide more advanced work in sentence and paragraph development and a greater variety of composition using critical skills with include using persuasion, research techniques and writing business letters. The literature, which traces the development of America, offers many opportunities for the development of research techniques and an appreciation for American life and literature. Students will use the elements of rhetoric, style, and modes of discourse to analyze selected works.

*** HONORS ENGLISH 11 – 1 UNIT (1150H)**
Grade 11
Prerequisite: English 10

The Honors English Eleven course is both a literary survey of American literature and a developmental program of composition with emphasis upon persuasive writing, research and writing for life. This course is based on the chronological approach to literature and enables the student to gain realistic insight into the whole picture of American literature: Colonial times to present. The study of the language embraces the writing process as students express their ideas and images creatively in a variety of media.

In order to be fully aware of the trends and characteristics of each period as reflected in the works of major writers, students will supplement the regular class work by researching, compiling, and becoming familiar with major American writers, their British counterparts, and the impact of existing trends and ideas of writers during a given period. These facts will be well documented and will serve as a supplement for future references.

*** ENGLISH 12 – 1 UNIT (1160)**
Grade 12
Prerequisite: English 11

Advanced persuasive and research based writing on this level emphasizes all previous knowledge in grammar and composition. Techniques of research papers and business writing receive emphasis. Through a survey of English literature, students develop greater skills in reading and a better understanding of life and literature. The students are able to determine how a nation's history strongly influences its writers.

*** ONLINE ENGLISH 12 – 1 UNIT (1160V)**
Grade 12
Prerequisite: English 11

The focus of the Online English 12 course is to prepare students for future academic and vocational success taught in a virtual environment. Students write in a variety of modes for a variety of audiences. As they work through the writing process, students revise and edit their work for subject/verb agreement, pronoun reference, consistent viewpoint, and correct mechanics and usage.

A Survey of British Literature helps students relate to the political, social, and philosophical perspectives of each historical period. As students preview the social, historical, and literary elements of each time period, they will begin to see how British authors and their literary contributions have influenced the lives and literature of many people.

During the course, students practice techniques for improving their own writing styles and fluency of expression while, additionally, developing advanced reading strategies. The extent of review in grammar/usage depends upon the individual's determined differentiated needs.

*** ADVANCED PLACEMENT ENGLISH 12 – 2 UNITS (11969)**
Grade 12
Prerequisite: English 11 & Teacher Recommendation

The purpose of the Advanced Placement course in English is to develop students who are proficient at reading and analyzing literary works in various genres. Students will be expected to respond in oral and written communication to a discussion of the various rhetorical elements in a critical and analytical way. These experiences with literary masterpieces and opportunities to respond to them should amply prepare students in the Advanced Placement English class to be successful when they take the AP examination. The Literature and Composition Test will be given.

JOURNALISM I – 1 UNIT (1200)
Grades 9-12
Prerequisite: None

Journalism stresses individual expression through the study and application of techniques needed for journalistic writing. This course also serves as a laboratory for the production of the school newspaper. Any student interested in enrolling in the journalism class should a strong English background, and have the approval of the journalism instructor before signing up for the course. This is primarily a course for students in the eleventh and twelfth grades, but students in the ninth and tenth grades are accepted.

JOURNALISM II – 1 UNIT (1210)
Grades 10-12
Prerequisite: Journalism I

This course reinforces the journalistic skills taught in Journalism I and provides numerous opportunities for students to apply these skills in school and community writing and media projects. Students will discover how journalistic skills enhance the other content areas. Students will apply these skills in the production of works which will reflect the content, tone, and design techniques of proficient students of journalism.

MASS MEDIA – 1 UNIT (1220)
Grades 9-12
Prerequisite: None

This course will stress analysis of the various aspects of the print as well as the electronic media, while analyzing the influence of the mass media on our society. Students will analyze attitudes, biases, propaganda, law and ethics of mass media. The media strand will also be included as students engage in creating products in both print and electronic media.

CREATIVE WRITING – 1 UNIT (1171)
Grades 10-12
Prerequisite: None

Through the study of various types of writing and the application of varied techniques, students learn to develop proficiency in writing skills and are encouraged to develop creativity through the use of the writing process.

HEALTH AND PHYSICAL EDUCATION

Health and Physical Education Courses are offered in each middle and high school in the city. Two units of credit and Health and Physical education are required for graduation and are taught in grades nine and ten. Regularly scheduled classes in Health and Physical Education helps student acquire the knowledge, processes, and skills needed to engage in meaningful physical, activity both in the present and for a lifetime. The State Board of Education encourages an equal focus (50% health and 50% physical education) on the health SOL and the physical education SOL. Students participating in physical education are required to wear appropriate attire for activity but not required to purchase a specific school gym uniform. Special populations are mainstreamed into the regular physical education and health program whenever appropriate. *Indicates courses that satisfy graduation requirements.

HEALTH AND PHYSICAL EDUCATION 7 (7120)
Grade 7
Prerequisite: None

Students in grade seven generate and choose positive alternatives to risky behaviors. They use skills to resist peer pressure and manage stress and anxiety. Students are able to relate health choices to alertness, feelings, and performance at school or during physical activity. Students exhibit a healthy lifestyle, interpret health information, and promote good health. Family Life Education is included in the health education curriculum.

Students in grade seven continue to develop competence in modified versions of various game/sport, rhythmic, and recreational activities. They vary movement during dynamic and unpredictable game situations. Recreational pursuits, broadening lifelong physical activity options. The ability to analyze skill performance through observing and understanding critical elements (small, isolated parts of the whole skill or movement) is increasingly apparent, as is the application of basic scientific principles of anatomical structures, movement principles, energy balance, and personal fitness. Students relate the importance of physical activity to health, focusing particularly on obesity and stress. Students achieve and maintain personal fitness standards and create plans by setting reasonable and appropriate goals for improvement or maintenance of health-related fitness. Students continue to develop social skills and cooperative behaviors by demonstrating problem solving, conflict resolution, communication skills, appropriate etiquette, integrity, and respect for others. Students may participate in various activities such as: Ultimate, Pillo Polo, Frisbee and Frisbee golf, Orienteering, Tchoukball, and Socci, Rhythmic activities, skill development and sport lead-up games.

HEALTH AND PHYSICAL EDUCATION 8 (7200)
Grade 8
Prerequisite: None

Students in grade eight have an understanding of the origins and causes of diseases, including the relationship between family history and certain health risks. They begin to relate short- and long-term consequences of health choices and apply health skills to specific personal, family, and community health concerns. Students can discern relationships among all components of health and wellness and knowledgeably use consumer information. Family Life Education is included in the health education curriculum.

Students in grade eight demonstrate competence in skillful movement in modified, dynamic game/sport situations and in a variety of rhythmic and recreational activities. They transition from modified versions of movement forms to more complex applications across all types of activities. The grade-eight student applies knowledge of major body structures to explain how body systems interact with and respond to physical activity and how structures help the body create movement. Students will explain the relationship between nutrition, activity, and body composition to deepen understanding of energy balance. They will demonstrate socially responsible behavior as they show respect for others, make reasoned and appropriate choices, resist negative peer pressure, and exhibit integrity and fair play to achieve individual and group goals in the physical activity setting. Students are able to set goals, track progress, and

participate in physical activities to improve health-related fitness. They have a repertoire of abilities across a variety of game/sport, dance, and recreational pursuits and begin to develop competence in specialized versions of lifelong game/sport activities. Students may participate in but are not limited to various activities such as: Socci, GeoMotion, Speed Stacking, Ping Pong, Team Dodgeball, Frisbee and Frisbee golf, Orienteering, Tchoukball, Pickleball, Bocce Ball, Rhythmic activities, skill development and sport lead-up games.

HEALTH & MEDICAL SCIENCES EXPLORATORY – 18 WEEKS (8370)
Grade 8 – No Credit
Prerequisite: None

Pre-Med is an exploratory course that covers all aspects of the medical field. Students who have an interest in medicine will be involved in activities that range from the very basics of first aid to the skills required of a surgeon. Lessons cover information with such varied topics as forensics and requirements for licensure. Students learn CPR and explore microbiology as they make decisions regarding their futures.

HEALTH AND PHYSICAL EDUCATION 9 ONLINE- 1 UNIT (7300)
Grade 9
Prerequisite: None

In this online course, students will gain an understanding of health through media-rich interactivities, videos, collaborative discussions hands-on applications, and real-world projects. The topics of study may include the following: nutrition principles, decision- making process, violence prevention, time management, conflict resolution, avoiding risky behaviors, community health, world issues, principles of fitness, CPR/AED/First Aid and physical activities that promote wellness. Along the way students will learn some terminology and concepts that are specific to health and physical education.

Physical education in grade 9 focuses on the following areas of study: competence in at least two self-selected, lifelong skill-related physical activities from individual, dual or team games/sport, dance and recreational activities, apply movement principles and concepts, personal fitness, apply FITT Principle, and demonstrate appropriate behaviors during physical activity settings. Students may participate in but are not limited to various activities such as: aerobic dance, badminton, basketball, orienteering, soccer, speedball, Wii, table tennis, volleyball, bowling, basketball, tennis, the use of pedometers and heart rate monitors.

*** HEALTH AND PHYSICAL EDUCATION 10 1 UNIT (7405)**
Grade 10
Prerequisite: Health and Physical Education 9 (7300)

Thirty-six (36) hours of the classroom phase of driver education are included in the health instruction program. Students will use knowledge, processes, and skills learned in driver education, and receive guided practice from their parents to become competent users of the highway transportation system. Emphasis is placed on linking visual search skills, space management, and balanced vehicle movement to risk-reducing driving strategies. Significant attention is given to risk awareness, driver alertness, and responsible actions relative to occupant protection devices, positive interactions with other roadway users and the physical and psychological conditions that affect driver performance. Family Life Education is included in the health education curriculum.

Students in grade 10 physical education are engaging in fundamental movement skills and skill combinations and are working toward becoming competent in self-selected physical activities that they are likely to pursue throughout life including outdoor pursuits, fitness activities, dance and rhythmic activities, aquatics, selected individual performance activities, and net/wall and target games. They understand and apply concepts and principles of mechanics and anatomy in relation to human movement and apply the concepts and principles of the

body's metabolic response to short-term and long-term physical activity. Students learn to become good leaders and good followers; they respect others, and anticipate and avoid unsafe physical activity situations. Students will develop the ability to understand and anticipate how physical activity interests and abilities change across a lifetime. Students demonstrate competency in lifelong physical activities and plan, implement, self-assess, and modify a personal fitness plan. Students are prepared to lead a physically active lifestyle. Students may participate in but are not limited to various activities such as: aerobic dance, badminton, basketball, orienteering, soccer, speedball, Wii, table tennis, volleyball, bowling, basketball, tennis, the use of pedometers and heart rate monitors.

PERSONAL FITNESS I/II (elective) 1 UNIT (7510)
Prerequisite: Completed Physical Education 9 (7300) and 10 (7405)

Personal Fitness is an elective physical education course that focuses on fitness, strength training, physical conditioning, and lifetime health concepts, activities and knowledge to promote health and wellness. This course is structured to develop individualized knowledge of weight training and physical conditioning for the beginning student and the advanced student. The course requires mastery of training principles and thorough understanding of fitness center safety rules prior to participation in weight room laboratory experiences. The course content is presented so that teachers may select strategies and instructional techniques designed to improve muscular strength and endurance, flexibility, and cardiorespiratory endurance. Students will gain the necessary information and skills to plan and implement a personal fitness and conditioning program that includes skill- and health-related fitness components to achieve and maintain a health-enhancing level of physical fitness for a lifetime. Various training models will be presented that allow flexibility of instruction among diverse student needs. Students will continue to implement and modify personal fitness and conditioning programs.

GRADE 11/12 (elective) 1 UNIT (7640)
Prerequisite: H & PE 9 and 10

Elective advanced physical education courses provide students with the opportunity to participate in physical activities for specific purposes. Students in elective physical education demonstrate the knowledge and understanding necessary to analyze movement performance in an activity of choice using scientific principles, and implement effective practice procedures for skillful performance in specialized movement forms. Students apply advanced movement-specific information so that they develop the ability to learn, self-assess, and improve movement skills independently. Options for offering specialized-movement courses can be configured by quarter, by semester, or on a full-year basis. Students should be offered the opportunity to self-select an activity throughout the course. Students will select areas of concentration to study. Examples of activity choices: aerobics, dance, individual sports, lifelong activities, outdoor pursuits, team sports, weight management, weight training/conditioning.

MATHEMATICS

* Indicates courses that satisfy the mathematics requirement for graduation.

Course offerings in mathematics may vary slightly between schools, but each school offers a comprehensive program which provides the opportunity for college and/or technical preparation. Students capable of achieving success in a college preparatory program should arrange to take advanced mathematics courses. The recommended sequence in which the courses should be taken is: Algebra I, Geometry, Algebra II, Advanced Algebra/Trigonometry, followed by Mathematical Analysis or Advanced Placement Calculus. Also, depending upon the student's interest and plans for further study, consideration should be given to taking Computer Mathematics and/or Advanced Placement Statistics.

In all mathematics courses, the emphasis is on developing problem solving and reasoning skills, connecting mathematics to the real world, and communicating mathematically. Calculator and computer technologies are an integral part of the content of each course. However, facility in the use of technology shall not be regarded as a substitute for a student's understanding of quantitative concepts and relationships or for proficiency in basic computations.

MATHEMATICS 7 (3111)
Grade 7
Prerequisite: Sixth Grade Mathematics

This course is designed to expand students' knowledge of numeration and number theory with emphasis on the application of the concepts of ratio and proportions. It includes computation, estimation, measurement, geometry, statistics, probability, patterns and functions, and the fundamental concepts of algebra. Problem solving is emphasized as a method of inquiry and application. Students will also identify real-life applications of the mathematical principles they are learning that can be applied to science and other disciplines.

MATHEMATICS 7 HONORS (3111H)
Grade 7
Prerequisite:

The Mathematics 7H course is designed to prepare students to take Algebra I in the eighth grade. This course covers all Mathematics 7 and Mathematics 8 content during the seventh grade year. This is a mathematics course of general topics such as number systems, an introduction to algebra, and informal geometry. New concepts include solving multi-step equations, graphing linear equations, applying transformations to geometric figures, and using matrices to organize and interpret data. Students will also apply concepts learned to science and other disciplines. A foundation is provided to take Algebra I in the eighth grade and an opportunity for greater understanding of mathematical skills.. Problem solving is emphasized as a method of inquiry and application.

MATHEMATICS 8 (3112)
Grade 8
Prerequisite: Seventh Grade Mathematics

This is a mathematics course of general topics such as number systems, an introduction to algebra, and informal geometry. New concepts include solving multi-step equations, graphing linear equations, applying transformations to geometric figures, and using matrices to organize and interpret data. Students will also apply concepts learned to science and other disciplines. A foundation is provided to take algebra and an opportunity for greater understanding of mathematical skills is given. Problem solving is emphasized as a method of inquiry and application.

ALGEBRA FUNDAMENTALS (31961)
Grades 9-12
Prerequisite: Math Eight

This course combines a traditional and innovative approach to teaching skills necessary for success in Algebra I. Additionally, it encourages students' conceptual understanding of key mathematical ideas that underlie high school mathematics. This course will prepare students for one semester Algebra I following successful completion

ALGEBRA I – 1 UNIT (3130)
Grades 7+
Prerequisite: Sixth, Seventh and/or Eighth Grade Mathematics

A modern treatment of basic ideas and the structure of algebra is offered including the number line, sets, variables, open sentences, positive and negative numbers, absolute value, equations, inequalities, polynomials, factoring algebraic expressions, coordinates in a plane, graphing of truth sets of equations and inequalities, irrational numbers, and the real number variation and quadratics. Students will use algebra as a tool for solving problems. Tables and graphs will be used to interpret and analyze concepts. Matrices will be used to organize and manipulate data. Calculators, computers, spreadsheets, and graphing utilities (graphing calculators or computer graphing simulators) will be used as tools to assist in problem solving.

*** ALGEBRA I-A– (3131)**
Grades 9-11
Prerequisite: Sixth, Seventh and/or Eighth Grade Mathematics

This is the first semester of a two-semester Algebra I course. It is designed for those students who need additional concrete experiences in developing essential mathematical skills. This course emphasizes an integrated, laboratory, activity-based approach to the study of algebra. The topics studied within the framework of the real number system include order of operations, evaluating expressions and formulas, factoring, operations with polynomials, solving equations, inequalities, matrices and graphing. Calculators, computers, and graphing utilities (graphing calculators, computer graphing simulators) will be used.

(Note: Students must successfully complete the second semester of this course, Algebra I-B, in order to meet the requirement for Algebra I credit.

*** ALGEBRA I-B – (3132)**
Grades 9-11
Prerequisite: Algebra 1-A

This is the second year of a two-year Algebra I course. It completes the study of Algebra I emphasizing an integrated, laboratory, activity-based approach. Algebra as a tool for problem solving is also emphasized. The topics studied include solving systems of equations and inequalities, operations with polynomials, functions, irrational numbers, quadratics, and graphing. Calculators, computers, and graphing utilities (graphing calculators, computer graphing simulators) will be used.

(Note: Students must successfully complete Algebra IA and this course in order to meet the requirement for Algebra I credit.)

MATHEMATICS

*** GEOMETRY – 1 UNIT (3143)**
Grades 8+
Prerequisite: Algebra I or Algebra I-A and Algebra I-B

This course emphasizes an integrated, inductive/intuitive approach to the study of geometry. Students investigate properties of figures in plane and space using constructions with compass, straightedge, paper folding, direct comparisons, and measurement. Topics studied include properties of congruent and similar figures, transformations, tessellations, area, and volume. The deductive axiomatic method of proof is used. However, many of the usual theorems of geometry and their consequences will be verified by methods other than formal proofs. Throughout the course, concepts and processes of geometry and measurement will be applied to modeling real world situations and to solving problems. Calculators, computers, and graphing utilities (graphing calculators, computer graphing simulators) will be used.

*** GEOMETRY PART I – (3144)**
Grades 9-12
Prerequisite: Algebra I, Algebra I-A and/or Algebra I-B

This is the first semester of a two-semester Geometry course. It is designed for those students needing additional concrete experiences in developing skills in algebraic reasoning required for mastering geometric concepts. The content includes that found in the first term of Geometry. Students investigate and solve problems with emphasis on an integrated, inductive approach, modeling real world situations.

(Note: Students must successfully complete the second semester of this course, Geometry, Part II, in order to meet the requirement for Geometry credit.)

*** GEOMETRY PART II – 1 UNIT (3145)**
Grades 9-12
Prerequisite: Geometry, Part I

This is the second year of a two-year Geometry course. The content includes that found in the second term of Geometry and completes the study of Geometry. Elements of plane, solid and coordinate geometry are studied. Manipulative's and appropriate technologies will be used.

(Note: Students must successfully complete Geometry Part 1 and this course in order to meet the requirement for geometry credit.)

***ALGEBRA, FUNCTIONS AND DATA ANALYSIS – 1 UNIT (3134)**
Prerequisite: Geometry **Note: This course cannot be taken after Algebra II**

Through the investigation of mathematical models, this course is designed for students to strengthen conceptual understandings in mathematics and further develop connections between algebra and statistics. Within the context of mathematical modeling and data analysis, students will study functions and their behaviors, systems of inequalities, probability, experimental design and implementation, and analysis of data. Data is generated by practical applications from science, business, and finance. Problems will require the formulation of linear, quadratic, exponential, logarithmic equations, or a system of equations. The infusion of technology (graphing calculator, computer software) in the course will assist in modeling and investigating functions and data analysis.

* **ALGEBRA II – 1 UNIT (3135)**
Grades 9-12
Prerequisite: Geometry

This course is designed to provide a comprehensive study of advanced algebraic concepts. Topics include the study of functions, polynomials, rational expressions, complex numbers, matrices, sequences, and series. Many topics are introduced and/or developed that are key factors in further study of mathematics. Emphasis is placed on practical applications, modeling, oral and written communications concerning the language of algebra, logic of procedures, and interpretation of results. Graphing utilities and spreadsheets will be used by teachers and students.

***TRIGONOMETRY – 1 UNIT (3150H)**
Grades 10-12
Prerequisite: Algebra II

A thorough treatment of trigonometry will be provided through the study of trigonometric definitions, applications, graphing, and solving trigonometric equations and inequalities. Emphasis should also be placed on using connections between right triangle ratios, trigonometric functions, and circular functions. In addition, applications and modeling should be included throughout the course of study. Emphasis should also be placed on oral and written communication concerning the language of mathematics, logic of procedure, and interpretation of results.

Graphing calculators, computers, and other appropriate technology tools will be used to assist in teaching and learning. Graphing utilities enhance the understanding of realistic applications through modeling and aid in the investigation of trigonometric functions and their inverses. They also provide a powerful tool for solving and verifying solutions to trigonometric equations and inequalities.

***DISCRETE MATHEMATICS – 1 UNIT (3154H)**
Grades 11-12
Prerequisite: Algebra II

Discrete mathematics may be described as the study of mathematical properties of sets and systems that have a countable (discrete) number of elements. This course is designed to make connections and build relationships among algebra, geometry and probability and statistics. It is the study of finite mathematical systems allowing for solving problems of real world situations in economics, the natural and physical sciences. Topics include social choice as a mathematical application, matrices and their uses, graph theory and its applications, counting and finite probability, as well as the processes of optimization, existence, and algorithm construction. The main focus is problem solving in a discrete setting. As students solve problems, they will analyze and determine whether or not a solution exists(existence problems), investigate how many solutions exist (counting problems), and focus on finding the best solution (optimization problems). The importance of discrete mathematics has been influenced by computers. Modern technology (graphing calculators and/or computers) will be an integral component of this course.

* **MATHEMATICAL ANALYSIS – 1 UNIT (3162H)**
Grades 11-12
Prerequisite: Advanced Algebra/Trigonometry

Mathematical Analysis is designed to present principles of higher mathematics while reviewing traditional material. Mathematical Analysis is a study of functions, complex number systems, set notation, number theory, and computer applications. Work with limits, derivations, and integrals is emphasized to prepare students for calculus. Graphing utilities (graphing calculators or computer graphing simulators) will be used by students and teachers.

*** ADVANCED PLACEMENT CALCULUS AB – 2 UNITS (31779)**
Grade 12
Prerequisite: Advanced Algebra/Trigonometry or Mathematical Analysis

Advanced Placement Calculus AB is a course designed for students who have a thorough knowledge of algebra, geometry, and trigonometry. Topics taught include properties of functions, limits, derivations, definite/indefinite integrals and their applications in problem solving. Elementary differential equations, sequences and series are also studied. This course content is determined by the Advanced Placement Course Description Syllabus published by the College Board. Students successfully completing AP Calculus will take the College Board Advanced Placement Examination. As mandated by the College Board, graphing calculators are required for this course.

* **ADVANCED PLACEMENT STATISTICS – 1 UNIT (31929)**
Grades 10-12
Prerequisite: Algebra II

The purpose of the Advanced Placement Statistics course is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: (1) Exploring Data – observing patterns and departures from patterns, (2) Planning a Study – deciding what and how to measure, (3) Anticipating Patterns in Advance – producing models using probability and simulation, (4) Statistical Inference – confirming models. The fundamental tool of data analysis is the computer. Therefore, students and teachers will utilize the computer with an appropriate software package for work in and outside the classroom. Graphing calculators will also be used. Students successfully completing this course will take the College Board Advanced Placement Examination.

COLLEGE SEMINAR – (3136)
Grade 12
Prerequisite: Completion of Geometry

This course is designed for students who have not been enrolled in a mathematics course for a least one school year. This course will integrate college and career-ready performance expectations. The focus of this course will be investigations of mathematics in a real world setting. Successful completion of this course will prepare students for college placement tests in mathematics or career licensure examinations. Graphing calculators and computers will be a component of this course.

MUSIC

PERFORMING ARTS

DANCE EDUCATION

General Dance (9319), Fall or Spring Semester (1 unit each semester)
Prerequisite: *None*

The student will be introduced to the basic principles of movement which includes the following: Isolation of body parts, proper body alignment, balance, elevation, fall and recovery, and moving through space while maintaining proper body alignment. Basic dance techniques knowledge (including Ballroom dance), terminology, general anatomy, kinesiology, movement history, and nutrition will also be addressed. This semester long course will introduce students to Pilates, Yoga, Cardio, and Strengthening movement techniques. Any Portsmouth Public School division high school student may take this course.

Performing Arts Academy: Dance Program

Any Portsmouth Public School division high school student may apply for admission to the Dance Program. The program is housed at Churchland High School. Acceptance into the program is achieved through the submission of a completed written application, a successful audition and interview, and the program facilitator recommendation. Students selected for the program who reside outside of the Churchland High School zone must receive a zone waiver.

This four year sequential progressive program consists of Levels 1, 2, 3 and 4 and is designed for exceptionally talented students who are willing to make a serious and dedicated commitment to dance education. The major goal is to develop dance skills. Dance students will engage in a thorough study of dance history, musculoskeletal anatomy, kinesiology, physiology, health and nutrition, injury prevention, technique, choreography, and performance techniques. Students will perform as a solo performer and as a member of an ensemble in and/or outside of the classroom. Participation expectations include in-school and after-school rehearsals and performances.

Performing Arts Academy: Dance I (9321), Fall and Spring Semester Participation Required (2 units per school year)
Prerequisite: *Submission of a completed written application and zone waiver (if applicable), teacher recommendations, the successful completion of an audition and interview, and the program facilitator recommendation.*

The student will explore various dance knowledge and skills at the beginner's level. Student learning includes the development of kinesthetic awareness; knowledge of proper body alignment, physical strength, flexibility, and endurance; and the awareness of and proper use of appropriate dance terminology. The student will gain knowledge of choreographic and performance principles. The foundations of dance elements and skills will be addressed along with proper execution of various movements for optimal performance and injury prevention. The student will gain an awareness of the general anatomical make of the human body and how it functions. The importance of hydration and healthy eating habits will be explored. The student will engage in various forms of assessment.

Performing Arts Academy: Dance II (9323), Fall and Spring Semester Participation Required (2 units per school year)
Prerequisite: *Successful Completion of PAA Dance I & the recommendation of the program facilitator.*

The student will review beginning level dance concepts, techniques, and literature. The student will progress to an intermediate level exploration of the skeletal and muscular systems. The student will apply health and nutritional information. The student will engage in various forms of assessment.

Performing Arts Academy: Dance III (9325), Fall and Spring Semester Participation Required (2 units per school year)
Prerequisite: Successful Completion of CEVPA Dance II & the recommendation of the program facilitator.

The student will review intermediate level dance concepts, techniques, and literature. The student will progress to an advance level of dance. More advanced study of the skeletal system (including bony landmarks) and the muscular system (including origin and insertion of each individual muscle in the body) will occur. The student will review health and nutritional information. The student will gain audition and knowledge and skills. The student will engage in various forms of assessment.

Performing Arts Academy: Dance IV (9307), Fall and Spring Semester Participation Required {Unless an "Early Graduate"} (2 units per school year – 1 unit per semester)
Prerequisite: *Successful Completion of CEVPA Dance III & the recommendation of the program facilitator.*

The student will review advance level dance concepts, techniques, and literature. The student will progress to mastery level dance knowledge, techniques, and performance. A complete understanding of the musculoskeletal anatomy, its' functions, and how to manipulate the body for maximum performance will be achieved. The student will demonstrate on an advanced level comprehension in kinesthetic awareness, proper body alignment, physical strength, flexibility, endurance, and terminology. The student will display an awareness of and application of nutritional information. The student will create a personal Dance Portfolio. The student will engage in a variety of assessments.

MUSIC EDUCATION

Two types of music classes are offered in the secondary schools: ***performing and non-performing classes.***

Secondary music performance classes are Beginning/Intermediate/Advanced/Artist Band, Chorus, and Orchestra. The course levels are identified as follows: Level I—Beginning, Level II—Intermediate, Level III—Advanced, Level IV—Artist. Levels are graded as follows: Beginning—Grades 1 and 2, Intermediate—Grades 3 and 4, Advanced—Grades 5 and some 6, Artist—Grade 6 only. Students develop competence skills through the study and performance of quality literature representative of a variety of musical styles. To benefit fully from the performance classes, the student needs to enroll in and make a commitment to the respective program throughout his/her high school career. Students are encouraged to maintain an above average or better level of academic achievement.

BEGINNING BAND (92320) –Level I, Grades 1 and 2 music; Fall and Spring Term participation required
Prerequisite: None

Beginning Band – Level I is open to all students interested in entering the band program. After consultation with the band director, students are recommended to study a particular instrument. A mandatory instrument/program information meeting for the students and parent/guardian is held prior to the first class meeting.

Beginning Band Level I can be a composite concert band class or a class of specific instrumentation (i.e., all brass, all woodwinds, all percussion). Students study music of various historical periods and styles; develop tone quality, embouchure, and articulation techniques; are introduced to scales and fingering as well as drumming rudiments;

and perform in concert band ensembles. As an integral part of all band classes, sight reading and ear training are emphasized. School division-owned wind instruments, as available, may be rented at the cost of $25 annually. All percussion students are required to pay the annual fee as well. The student must purchase a methods book as well as applicable consumables such as reeds and valve oil. After-school rehearsals and performances are to be expected along with participation in Virginia Music Educators Association (VMEA) sponsored events such as district festival and All-City events.

INTERMEDIATE BAND (92330) – Level II, Grades 3 and 4 music; Fall and Spring Term participation required (1 unit each semester)
Prerequisite: Must have passed Beginning Band, completed summer band, or acquired the band director's recommendation.

Building on Level I objectives, Level II objectives are studied using a variety of more challenging music. Intermediate Band – Level II can be a composite band class or a class of specific instruments (i.e., all brass, all woodwinds, all percussion). The building of technique and the refinement of musical concert performance are emphasized. School division-owned wind instruments, as available, may be rented at the cost of $25 annually. All percussion students are required to pay the annual fee as well. The student must purchase a methods book as well as applicable consumables such as reeds and valve oil. After-school rehearsals and performances are to be expected along with participation in Virginia Music Educators Association (VMEA) sponsored events such as district festival and All-City events.

ADVANCED BAND (92340) –Level III, Grades 5 and some 6 music; Fall and Spring Term participation required (1 unit each semester)
Prerequisite: Audition and/or by band director's recommendation.

Advanced band is the formal study of all facets of band instruction including concert, jazz, pep, and marching. Instruction is based on the continuation of study of Level I and Level II objectives. New concepts and skills are introduced and mastered through the study of quality repertoire. The student must have a solid background in music fundamentals and the technique required for his/her respective instrument. Emphasis is placed on playing scales in all keys, performing all drumming rudiments, performing difficult rhythm patterns, sight reading challenging musical excerpts, and understanding and applying the performance style required by various types of music. School division-owned wind instruments, as available, may be rented at the cost of $25 annually. All percussion students are required to pay the annual fee as well.

Marching, jazz, and pep band skills are outgrowths of the concert band program. These styles, when taught within the concert band class, are classified as extracurricular activities. In marching band, marching style is taught in addition to ensemble playing. Jazz band within the concert band class affords students the opportunity to experience activities that foster the development of improvisation skills through the exploration of a variety of jazz literature. Pep band supports school functions such as athletic events.

While marching, jazz, and pep band are important facets of band instruction at this level, the primary emphasis is concert band musicianship and artistic performance. Participation in after school rehearsals, weekend festivals, division, state and national-level activities, outside concerts, competitions, Virginia Music Educators Association (VMEA) sponsored events, and parades are expected.

MUSIC

BEGINNING ORCHESTRA (92370) – Level I, Grades 1 and 2 music; Fall and Spring Term participation required
Prerequisite: None

Beginning Orchestra - Level I is open to all students interested in entering the strings program. After consultation with the orchestra director, students are recommended to study a particular instrument. A mandatory instrument/program information meeting for the students and parents/guardians is held prior to the first class meeting. School division-owned wind instruments, as available, may be rented at the cost of $25 annually. The student must purchase a methods book as well as applicable consumables such as rosin and strings.
This course is a composite orchestra class where skills and techniques in bowing, fingering, and instrument care are taught. Sight reading and ear training are emphasized. After-school rehearsals and school and division performances are to be expected along with participation in All City and Virginia Music Educators Association (VMEA) sponsored events such as district festival.

INTERMEDIATE ORCHESTRA (92380) – Level II, Grades 3 and 4 music; Fall and Spring Term participation required, (1 unit each semester)
Prerequisite: Must have passed Beginning Orchestra, or completed summer orchestra, or acquired the orchestra director's recommendation.

Building on Level I objectives, Level II objectives are studied using a variety of more challenging music and mastering concepts and skills presented in the methods book. The building of technique and the refinement of musical performance are emphasized. Intermediate Orchestra – Level II can be a composite strings class. The building of technique and the refinement of musical performance are emphasized. School division-owned wind instruments, as available, may be rented at the cost of $25 annually. The student must purchase a methods book as well as applicable consumables such as rosin and strings. After-school rehearsals and performances are to be expected along with participation in Virginia Music Educators Association (VMEA) sponsored events such as district festival.

ADVANCED ORCHESTRA (92390) – Level -III, Grades 5 and some 6 music, Fall and Spring Term participation required (1 unit each semester)
Prerequisite: Must have passed Intermediate Orchestra or acquired the orchestra director's recommendation

Building on Levels I and Level II objectives, Level III objectives are addressed using more challenging music. The building of technique and the refinement of musical performance are emphasized. The student should have a solid background in music fundamentals and in the special technique required for the instrument being studied. Emphasis will be placed on the student's ability to play scales in all major keys, six minor key arpeggios, and specific chromatic scales. Additionally, the student will sight read challenging music excerpts and demonstrate through performance string nuances (i.e. vibrate, intonation, slurring, pizzicato.) Participation in after-school rehearsals, weekend festivals, division, state and national-level activities, outside concerts, competitions, and Virginia Music Educators Association (VMEA) sponsored events are expected. School division-owned wind instruments, as available, may be rented at the cost of $25 annually.

BEGINNING CHORUS (92600) – Level I, Grades 1 and 2 music, Fall and Spring Term participation required
Prerequisite: None

Beginning Chorus- Level I is open to all students interested in entering the choral program. As an entry-level course, students will be introduced to basic vocal fundamentals with emphasis on group techniques for building diaphragmatic breathing and choral tone. Basic music reading and ear training skills will be taught. Student knowledge of his/her own vocal behavior, especially characteristics of the changing voice (*cambiata)*, is emphasized. The student will sing in an ensemble, age appropriate music from traditional choral repertoire (unison, two-part, and three-part music). Participation in after-school rehearsals, outside concerts, festivals, division, state and national-level activities such as All-City, and Virginia Music Educators Association (VMEA) sponsored events is expected.

INTERMEDIATE CHORUS (92850) – Level II, Grades 3 and 4 music, Fall and Spring Term participation required (1unit each semester)
Prerequisite: Must have passed Beginning Chorus or choral director's recommendation

Intermediate Chorus-Level II is a continuation of the study of vocal fundamentals and music reading and ear training skills introduced at Level I. It is the continuation of the objectives of Level I with the study of more challenging music. This level of study emphasizes the building of technique and the refinement of musical performance. The student will sing in an ensemble age appropriate music from traditional choral repertoire (unison, two-part, three-part, and four-part music). Participation in after-school rehearsals, outside concerts, festivals, division-level activities such as All-City, and Virginia Music Educators Association (VMEA) sponsored events is expected.

ADVANCED CHORUS (92890) – Level III, Grades 5 and some 6 music, Fall and Spring Term participation required (1 unit each semester)
Prerequisite: Successful completion of Level II, audition, and/or audition/recommendation by choral director

The advanced chorus student performs music of a difficult nature from the medieval period to contemporary choral literature. A high degree of performance ability and the mastery of vocal and choral concepts, artistic expression, and sight-reading and ear training proficiency are expected. Participation in after-school rehearsals, outside concerts, festivals, division, state and national events such as All-City, and Virginia Music Educators Association (VMEA) sponsored events is expected.

THEATRE ARTS PROGRAM

Students will experience a "tactile" approach to theatre in the areas of dramatic interpretation, play analysis, technical construction, play production and evaluation. Elements of theatre that are studied include scenic design, voice and diction, improvisation, and kinesics. A high level of commitment and personal maturity are required. The program fosters a cohesive and supportive atmosphere for intellectual personal, and artistic, growth.

DRAMATICS – 1 UNIT (1410)
Grades 10-12
Prerequisite: None

Dramatics stresses aesthetic appreciation and individual expression through its introduction to the fundamentals of drama: history, play production, acting, directing, criticism, and the mass media. It serves as a workshop for dramatic productions in the school.

ADVANCED DRAMATICS – 1 UNIT (1440)
Grades 11-12
Prerequisite: Dramatics or Successful Audition

Advanced dramatics is provided for the students who wish to pursue the study of drama in more depth. Emphasis is on acting, character creation, costuming, make-up, directing, and theater management.

SCIENCE EDUCATION

* Indicates courses that satisfy the science requirement for graduation. The science program in grades 7-12 is a coordinated part of an overall K-12 sequential program. The major goal of the laboratory-oriented program is to develop scientifically literate individuals. Scientific literacy involves the mastery of science concepts and skills along with the development of attitudes and interests that are necessary to meet the general goals of all education.

The courses at each level are designed to provide opportunities for students to experiment, investigate, participate, and explore in many areas of study consistent with their abilities, needs, and interests. The courses are also designed to benefit those students who plan to terminate their education at the high school level, as well as for those who will further their education.

For graduation from high school, each student is required to complete three or four years of laboratory science beyond the eighth grade. School counselors can provide assistance with scheduling of courses.

LIFE SCIENCE (4115)
Seventh Grade
Prerequisite: None

Life Science serves as an introduction to the basic principles of biology. Through the use of laboratory activities and experiments, scientific principles are reinforced, and students solve problems concerning the biosphere.

PHYSICAL SCIENCE (4125)
Eighth Grade
Prerequisite: None

This course is an introduction to the basic principles of chemistry and physics. Through the use of laboratory activities and experiments, scientific principles are reinforced, and students solve problems concerning the physical environment.

EXPERIMENTAL DESIGN – STEM STUDENTS – 1 UNIT (46101H) – Elective credit
Ninth grade - I. C. Norcom High School ONLY; AC-13 course*: Application process*
Prerequisite: Students who have completed the middle school STEM program

Experimental Design/Science Skills is a laboratory course that includes strategies to identify the independent and dependent variables, controls, constants, and cause-effect relationships, as well as laboratory techniques and safety, precise measurement, data collection, data analysis, and graphing techniques are stressed. The course is problem-based with an emphasis on research and design.

*** ENVIRONMENTAL SCIENCE – 1 UNIT (03003)**
Ninth Grade
Prerequisite: NONE

This fundamental course is designed to continue the student investigations that began in grades K-8. The course focus is on scientific investigations of the local environment, the physical world, the living environment, resource conservation, human impact on the environment, and legal and civic responsibilities. Instruction will focus on student data collection and analysis through laboratory experience and field work.

*** BIOLOGY – 1 UNIT (4310)**
Tenth Grade
Prerequisite: Algebra I, English 9

This course utilizes a systematic approach to the study of biology. It is designed to aid the student in the understanding of major life processes and the diversity of living things through a variety of activities and laboratory investigations.

*** HONORS BIOLOGY – 1 UNIT (4310H)**
Ninth Grade
Prerequisite: Algebra 1, English 9, Honors Earth Science (4120H) and meets the district guidelines for Honors Classes

Honors Biology is a rigorous laboratory-oriented course that is designed to give an overview of basic concepts, processes, and general principles of biology. It involves topics, such as cellular biology, genetics, taxonomy, comparative invertebrate and vertebrate anatomy, ecology, and botany. Historical information, contributions of scientists, career information, lab techniques and safety will be stressed throughout the course. Successful completion of the honors biology course will prepare any interested students to enter related fields of science, health, and medicine. ***Students must successfully complete 3 Honors laboratories***

* **EARTH SCIENCE – 1 UNIT (4210)**
Eleventh Grade
Prerequisite: Algebra 1, Biology (4310)

This course is devoted to an investigation of the planet Earth – its features, its forces, its place in the solar system, and its place in the universe. Some of the major topics covered in the course include: the history of the earth; the geology and chemistry of the crust; forces that change the Earth's surface; the Earth in space; weather; and oceanography.

*** HONORS EARTH SCIENCE – 1 UNIT (4210H)**
Tenth Grade
Prerequisite: Algebra I and meets the district guidelines for Honors classes

The Honors Earth Science student will accurately apply appropriate Earth Science concepts, methods, principles, laws, theories, and environmental concerns to the four branches of Earth Science: geology, oceanography, meteorology, and astronomy. Using both independent and cooperative instructional methods, students will be involved in hands-on activities. Student involvement will foster an understanding of the interrelationships of Earth science and technology, and their application in a multicultural environment. **Students must successfully complete 3 Honors laboratories**

*** BIOLOGY II – ECOLOGY – 1 UNIT (4340)**
Eleventh – Twelfth Grades
Prerequisites: Biology (4310)

Biology II - Ecology is will allow the student to explore the local environment as well as current environment issues. Students will collect and interpret real world data through laboratory and field activities. Topics will include a general exploration of the ecology of marine, wetland and terrestrial environments and the Chesapeake Bay. The impact of Global Warming, populations and environmental laws will also be explored.

Biology II – Advanced Survey of Biology Topics in Biotechnology Foundations – 1 UNIT (4320H)
Tenth – Twelfth Grades; I. C. Norcom High School ONLY: AC-13 course
Prerequisite: Overall GPA of 2.0, successful completion of Algebra II, successful completion of Chemistry

This is a skills course with a primary focus on various techniques used in the field of biotechnology. Student activities range from bio-processing and genetic engineering to medicine, biomechanical systems, and the environment. Students gain insight and understanding about biotechnology career fields.

BIOLOGY II – ANATOMY AND PHYSIOLOGY – 1 UNIT (03053)
Eleventh – Twelfth Grades
Prerequisite: Biology Honors (4310H)

Anatomy and Physiology is an Honors course that will enable students to develop an understanding of the relationships between the structures and functions of the human body. Students will also learn the mechanisms for maintaining homeostasis within the human body; body functions in the healthy and diseased states; blood typing; muscle action; nerve functioning; and bioethics. Laboratories will provide experiences in the physical laboratory and via zSpace virtual reality.

*** EARTH SCIENCE II - OCEANOGRAPHY – 1 UNIT (4250)**
Eleventh-Twelfth Grades
Prerequisites: Earth Science (4210)

This science course provides an in-depth treatment of physical and biological concepts of oceanography. The student collects and interprets oceanographic data through laboratory, field, and research activities. Topics include historical, geological, chemical, and biological aspects of the oceans, their resources, and the future of Oceanography.

Earth Science II: Advanced Survey of Earth Science Topics using Geospatial Technology – 1 UNIT (4220H)
Eleventh – Twelfth Grades; I. C. Norcom High School ONLY: AC-13 course
Prerequisite: Overall GPA of 2.0; successful completion of Honors Earth Science and one additional laboratory science.

The growing use of geospatial technologies has created new applications for historical and current data collection systems. Students will examine the development of geospatial technologies from remote sensing, to the data collection structure of the Global Positioning system (GPS), and the applications of Geographic Information System (GIS) modeling software. Students will analyze real-world problem-based scenarios to construct models for the effective public communication of data. This interdisciplinary course makes use of many academic interests that have decision-making applications in government, business, and research.

*** CHEMISTRY – 1 UNIT (4410H)**
Eleventh – Twelfth Grades
Prerequisite: Algebra I, Geometry, Honors Earth Science (4120H), Honors Biology (4310H)

The Chemistry course is a first year course in chemistry. Enrollment is open to all students who are willing to meet the challenge of an academic course. The intent of the honors chemistry curriculum is to provide students the opportunity to become actively involved in the process of investigation, and to develop knowledge and appreciation of important chemical concepts. Emphasis is placed upon use of mathematical concepts and skills in problem solving, experimentation that develops laboratory skills and the ability to analyze and evaluate data, application of atomic and molecular theory to explain chemical bonding, molecular structure, and chemical reactions, and exploration of chemical principles in various environmental, technological, and occupational areas. Honors chemistry will be taught as a laboratory science that incorporates specific readings, writings and project assignments. ***Chemistry is taught as a laboratory science that incorporates specific readings, writings and project assignment.***

*** PHYSICS – 1 UNIT (4510H)**
Eleventh – Twelfth Grades
Prerequisites: Algebra II and meets the district guidelines for Honors Classes

Honors Physics is a college preparatory course that involves lecture, problem solving, demonstration of technology principles, and laboratory experimental projects. Teamwork in lab problem solving activities is stressed as a reflection of what is going on in the real world. The first semester of the course emphasizes topics in mechanics, and the second semester primarily emphasizes electricity and magnetism. Other topics include heat, sound, wave motion, and light.

PRINCIPLES OF TECHNOLOGY I – 1 UNIT (9811)
Grades 10-12
Prerequisite: Algebra I

Students in this one-semester, single-period course apply physics and math principles through a unified systems approach for a broad knowledge base of the principles underlying modern technical systems. This course covers seven technical principles: force, work, rate, resistance, energy, power, and force transformers, emphasizing how each principle plays a unifying role in the operation of mechanical, fluid, electrical, and thermal systems in high-tech equipment.

PRINCIPLES OF TECHNOLOGY II – 1 UNIT (9812)
Grades 10-12
Prerequisite: Principles of Technology I

Students in this one-semester, single-period course build on the knowledge base developed in Principles of Technology I while applying math and physics principles of problem solving activities. They are provided a further understanding of the principles of mechanical, fluid, electrical, and thermal systems that demonstrate the basic principles of physics, dividing them into seven units: Momentum, Waves and Vibrations, Energy Converters, Transducers, Radiation, Light and Optical Systems, and Time Constants.*

* **Students who have completed two science courses prior to taking this sequence and who successfully complete both Principles of Technology I and Principles of Technology II may receive a Physics credit for Principles of Technology II. Principles of Technology I count as an elective credit.**

*** ADVANCED PLACEMENT BIOLOGY – 2 UNITS (43709)**
Eleventh – Twelfth Grades
Prerequisites: Algebra II, Chemistry (4410H)

This course provides the student an opportunity to meet the objectives of a general biology course at the college level. The living organism is studied from the molecular and cellular point of view with emphasis upon the required laboratory experiences. The pace and depth of the course are intensive. **Students are expected to take the Advanced Placement Exam.**

*** ADVANCED PLACEMENT CHEMISTRY – 2 UNITS (44709) – Norcom High School only**
Eleventh – Twelfth Grades
Prerequisites: Algebra II, Chemistry (4410H)

This course provides the student an opportunity to meet the objectives of a general chemistry course at the college level. Topics and laboratory activities included in this course reflect structure and the states of matter, reactions, and description chemistry. The pace and depth of the course are intensive. **Students are expected to take the Advanced Placement Exam**

SCIENCE

ADVANCED PLACEMENT ENVIRONMENTAL SCIENCE – 2 UNITS (42709)
Tenth – Twelfth Grades
Prerequisites: Algebra II, Earth Science Honors (4210H), Biology Honors (4310H)

This course provides the student an opportunity to meet the objectives of a general Environmental Science course at the college level. The goal of the AP Environmental Science course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them.. **Students are expected to take the Advanced Placement Exam.**

SOCIAL STUDIES EDUCATION

* Indicates courses that satisfy the social studies requirement for graduation. Social Studies courses are designed to help students understand and appreciate our history, our system of government, our economic system, and cultural heritage. One unit of United States and Virginia History, one in United States and Virginia Government, and one in either World History I and Geography or World History II and Geography is required for graduation in a standard diploma program. One unit of United States and Virginia History, one in United States and Virginia Government, and two in World History I and Geography and World History II and Geography are required for graduation in an advanced studies program. World Cultures I and II fulfill graduation requirements at Wilson High School. World Cultures is offered only at Wilson High School as part of the International Studies Center of Excellence program.

UNITED STATES HISTORY: 1865 TO THE PRESENT (2354)
Grade 7
Prerequisite: None

This course encompasses the development of American ideals, eras, and personalities from Reconstruction to the present. It is designed to present United States involvement in world affairs and its evolution as a world leader. Social, economic, and political events are discussed and compared to others of that time period, as well as the present. The use of writing and thinking skills, charts, graphs, cartoons and other data interpretation activities is emphasized. Specific themes include Reconstruction, Imperialism, Progressive Movement, World War I, the Great Depression, World War II, the Korean War, the Cold War, and the decades of the sixties through the present.

CIVICS AND ECONOMICS (2357)
Grade 8
Prerequisite: None

Students will explore the role of a citizen in the American political and economic systems. Emphasis is placed on the rights, duties, and responsibilities of American citizenship. Students will focus on the U. S. and Virginia Constitutions and the structure and functions of government institutions at all levels. This course also examines the basic principles, structure, and operation of the American economy. The American systems and institutions will be compared with systems and institutions of the global community.

* **WORLD HISTORY AND GEOGRAPHY: TO 1500 A.D. – 1 UNIT (2215)**
Grades 9-12
Prerequisite: None

Students explore the historical development of people, places, and patterns of life from ancient times. The contributions of varied civilizations in the areas of art, literature, science, government, and culture are studied. The geography of these regions, as well as the impact of geographical features are also studied.

*** HONORS WORLD HISTORY AND GEOGRAPHY: TO 1500 A.D. – 1 UNIT (2215H)**
Grades 9-12
Prerequisite: None

Students explore the historical development of people, places and patterns of life from ancient times to 1500. The contributions of varied civilizations in the areas of art, literature, science, government, and culture are studied. The geography of these regions, as well as the impact of geographical features are also studied. Additional emphasis is given to research, writing, analysis, and critical thinking skills.

WORLD HISTORY AND GEOGRAPHY: 1500 A.D. TO THE PRESENT – 1 UNIT (2216)
Grades 9-12
Prerequisite: World History and Geography to 1500 A.D.

This course expands the students' thinking and understanding of history from the middle ages to the present. Geographical influences on regions and history continue to be explored, with increasing attention to the development of political boundaries, scientific revolutions, and changing economic, social, and political conditions. Contemporary issues are also studied.

*** HONORS WORLD HISTORY AND GEOGRAPHY: 1500 A.D. TO THE PRESENT – 1 UNIT (2216H)**
Grades 9-12
Prerequisite: World History and Geography to 1500 A.D.

This course expands the students' thinking and understanding of history from the 1500s to the present. Geographical influences on regions and history continue to be explored, with increasing attention to the development of political boundaries, scientific revolutions, and changing economic, social, and political conditions. Contemporary issues are also studied. Additional emphasis is given to research, writing, analysis, and critical thinking skills.

*** VIRGINIA AND UNITED STATES HISTORY – 1 UNIT (2360)**
Grade 11
Prerequisite: World History and Geography to 1500 A.D. or World History and Geography 1500 A.D. to the Present, World Cultures I or II (Wilson High School)

This course covers the historical development of American ideas and institutions from the age of exploration to the present. While focusing on political and economic history, the standards provide students with a basic knowledge of American culture through a chronological survey of major issues, movements, people, and events in United States and Virginia history. This course is required of all students for graduation.

*** HONORS VIRGINIA AND UNITED STATES HISTORY – 1 UNIT (2360H)**
Grade 11
Prerequisite: World History and Geography to 1500 A.D. or World History and Geography 1500 A.D. to the Present, World Cultures I or II (Wilson High School)

The course covers the historical development of American ideas and institutions from the age of exploration to the present. This course is designed to help students to acquire a knowledge of the nation's past, to enable them to think and write critically, and to analyze both primary and secondary sources. The program is intended to challenge those students to work independently to enrich their understanding of their role as citizens in their community and nation, and to appreciate the cultural diversity of its people.

SOCIAL STUDIES

*** ADVANCED PLACEMENT UNITED STATES HISTORY – 2 UNITS (23199)**

Grade 11

Prerequisite: World History and Geography to 1500 A.D. or World History and Geography 1500 A.D. to the Present, World Cultures I or II (Wilson High School)

This course covers this country's history from early explorers to the present. Upon successful completion of this course, and a satisfactory score on the AP exam, students may receive college-level credit. Emphasis is also placed on the economic growth of the country and its rise to world power.

AP U.S. History is taught for 2 terms for 2 units of credit.

*** VIRGINIA AND UNITED STATES GOVERNMENT – 1 UNIT (2440)**

Grade 12

Prerequisites: World History and Geography to 1500 A.D. or World History and Geography 1500 A.D. to the Present, and United States and Virginia History, World Cultures I or II (Wilson High School)

This course examines the basic structure of governments. The decision-making processes at the local, state, national and international levels are emphasized. Powers inherent to each branch of government are examined through the study of the Constitution of the United States and its Amendments, other historical documents, the State Constitution, and local governing bodies. Democratic values and citizen participation are stressed throughout the course. Student participation in the community should be encouraged. This course is required of all students for graduation.

*** HONORS VIRGINIA AND UNITED STATES GOVERNMENT – 1 UNIT (2440H)**

Grade 12

Prerequisites: World History and Geography to 1500 A.D. or World History and Geography 1500 A.D. to the Present, and United States and Virginia History, World Cultures I or II (at Wilson High School)

This course will take a comprehensive look at current economic, political, and social systems of the world. The U.S. Federal system of government will be explored with a focus on the separation of powers, functions of the three branches of government, and the impact of interest groups and political parties on the governmental process. The structure of state and local government will be examined in terms of the Virginia Constitution and the Portsmouth City Charter. The use of current events and primary sources will facilitate the students' ability to make decisions on political, economic, and social issues. Community services, volunteerism, and civic responsibility will be emphasized throughout the curriculum. The requirements of this course demand the successful completion of the course objectives as well as the specified honors components.

ONLINE GOVERNMENT – 1 UNIT (2440V)

Grade 12

Prerequisite: World History and Geography to 1500 A.D. or World History and Geography 1500 A.D. to the Present, and United States and Virginia History, World Cultures I or II (Wilson High School)

Government online is designed for students to work independently and focuses on the ways in which society and government interact to form policies for the United States. The course follows the prescribed Virginia Standards of Learning for Government. Upon completion of the course students will be able to:

- understand how historical ideas of democracy hold a valid place in contemporary American society
- evaluate the performance of government officials at all levels of government
- evaluate the effectiveness of government policies issued at all levels of government
- make educated voting decisions
- understand the role of the media in influencing the public

- defend their opinion on contemporary issues using logical reasoning and facts
- understand that the American government is a complex system and not perfect

Students will be instructed through media-rich activities, videos, discussions, and project based learning. Students are expected to have computer access.

HONORS GLOBAL AFFAIRS – 1 UNIT (2810)
(Wilson High School)
Grades 11-12
Prerequisite: Be enrolled in the International Studies Center for Excellence or approved course waiver (for Wilson students).

The focus of this course is on the interdependence of nations in the world today. Global developments are studied extensively on a regional and world basis followed by analysis of many critical topics including nuclear proliferation, human rights and terrorism. Substantial instruction is devoted to new patterns in world business and trade, including corporate enterprise and globalization. Attention is given to the rapid changes in technology and science affecting our world today.

*** HONORS WORLD CULTURES I – 1 UNIT (2351H)**
(Wilson High School)
Grades 9-11
Prerequisite: Entry into or currently enrolled in the International Studies Center of Excellence or approved course waiver.

Students explore the historical development of people, places, and patterns of life from ancient times until 1500 A.D. (C.E.) in terms of the impact on Western Civilization. Emphasis is on the culture, economic, political and geographical development of the Western Hemisphere. Geography is incorporated as a means to better understand its impact on historical development. A focus is given to how the interdependent relationship of nations first developed. Research, writing, analysis, and critical thinking skills are stressed in the course. Outside reading will be required for successful completion of the course.

HONORS WORLD CULTURES II – 1 UNIT (2375H)
(Wilson High School)
Grades 9-10
Prerequisite: Entry into or currently enrolled in the International Studies Center of Excellence or approved course waiver

World Cultures II is the primary social studies course for the second year International Studies Center of Excellence student. Emphasis is on the cultural, economic, political, and geographical development of the Eastern Hemisphere and the Middle East. There is a continued focus on the evolution of the interdependent relationship of nations due to both geographical and societal changes. Essay writing (AP writing format) and technology skills are emphasized at this level of the program. Critical thinking and problem solving activities along with class participation are essential components of the course.

AFRICAN AMERICAN HISTORY – 1 UNIT (2371)
Grades 11-12
Prerequisite: None

This course is a study of the African American's involvement in this country's history. A variety of materials, and media resources is used to study varying opinions and accounts of historical events, problems, achievements, and contributions in the arts, humanities, sciences, and government.

WORLD LANGUAGES

As the world continues to open its boundaries both academically and physically to its global neighbors, it becomes even more important for students to enrich their lives by learning at least one language in addition to their own. The knowledge acquired from a world language will reinforce and expand their learning in other subject areas, enable students to interact effectively with others and increase access to information across the world.

Five (5) years of French, Spanish, and Latin are offered in Portsmouth Public Schools. One or two years of second language study provides some benefits. With four years of language, students achieving a proficiency level would enable them to understand, speak, read authentic documents, and respond appropriately in a written and oral context. Through the study of a second language, a student also gains an understanding of the language and an appreciation for the culture of the targeted language. The world language program is continuous as each level allows student to build upon previous learning. All languages listed here are offered in the high schools. The middle schools provide access to Spanish for all students as exploratory or high school credit.

FRENCH 1 – 1 UNIT (5110)
Grades 9-12
Prerequisite: None

Students will learn to interact and survive linguistically in French in the classroom, primarily using memorized materials and functions that recur on a daily basis. They will develop listening, speaking, reading, and writing skills to react, in a limited way, in social situations.

FRENCH 2 – 1 UNIT (5120)
Grades 9-12
Prerequisite: French I

With French II, students will continue to develop their communicative and cultural competence by interacting with others in this target language. Students will possess the listening, speaking, reading, and writing skills that are necessary to handle simple everyday survival tasks in the target culture.

FRENCH 3 – 1 UNIT (5130)
Grades 9-12
Prerequisite: French 2

Students will carry out the functions of level two but will experience a higher degree of competency in the content area. Going beyond the linguistic focus of primarily personal welfare and survival skills of level two, students will begin to discuss other people, places, and external events. Students will begin to describe and narrate in past, present, and future time.

FRENCH 4 – 1 UNIT (5140)
Grades 10-12
Prerequisite: French 3

At this level, students will have become active communicators. They will be able to express main ideas and details coherently orally and in writing. They will understand and interpret the meaning of main points, and most details, in familiar and unfamiliar oral or written communications such as: interviews, short lectures, news items, and radio and television reports. They will understand written texts such as: simple short stories, news items, biographical information, short social and business correspondence, and simple journal and magazine articles. Students will write narratives and descriptions in length on familiar topics. They will communicate primarily in the target language increasing oral proficiency.

FRENCH 5 – 1 UNIT (5150)
Grades 11-12
Prerequisite: French 4

At this level, students will be able to deal with minor complications in realistic situations. They will narrate and describe with appropriate reference to general time frames (past, present, future), and participate actively in a wide variety of everyday conversations. Students will examine and analyze present and past contributions to society, through the arts and literature, and through other forms of communication. They will communicate primarily in the target language increasing oral proficiency.

LATIN 1 – 1 UNIT (5310)
Grades 9-12
Prerequisite: None

This course emphasizes Latin grammar, but reading lessons are selected to promote the student's achievement of a better understanding of English words and of Roman life and mythology.

LATIN 2 – 1 UNIT (5320)
Grades 9-12
Prerequisite: Latin 1

An emphasis is placed on the translation of stories about Roman life, mythology, and history. The study of grammar and derivatives of Latin words is continued.

LATIN 3 – 1 UNIT (5330)
Grades 10-12
Prerequisite: Latin 2

Latin 3 emphasizes the translation of Caesar's Gallic Wars and the history of his time. Mythology is studied in its original form through the Metamorphoses of Ovid. Culture and advanced grammar are taught as an aid to translation.

LATIN 4 – 1 UNIT (5340)
Grades 10-12
Prerequisite: Latin 3

This course emphasizes the translation of Virgil's Aeneid and the study of its purpose, its place in literature, its poetic beauty, and its verification. Review exercises in translating from English into Latin are provided.

LATIN 5 – 1 UNIT (5350)
Grades 11-12
Prerequisite: Latin 4

Latin 5 emphasizes translation of the poetry of Catullus and Horace. Poems that deal with romance, humor, and philosophy are discussed in relation to modern morals and conventions.

WORLD LANGUAGE

SPANISH 1 – 1 UNIT (5510)
Grades 9-12
Prerequisite: None

Students will learn to interact and survive linguistically in Spanish in the classroom, primarily using memorized materials and functions that recur on a daily basis. They will develop listening, speaking, reading, and writing skills to react as a novice language student, in social situations.

SPANISH 2 – 1 UNIT (5520)
Grades 9-12
Prerequisite: Spanish 1

By the end of this level, students will possess the listening, speaking, reading, and writing skills that are necessary to handle simple everyday survival tasks in the target culture.

SPANISH 3 – 1 UNIT (5530)
Grades 9-12
Prerequisite: Spanish 2

At this level students will carry out the functions of level 2 but will experience a higher degree of competency in the course. With an emphasis on oral communication that goes beyond the linguistic focus of primarily personal welfare and survival of level two, students will begin to discuss other people, places, and external events. Students will begin to narrate in past, present, and future time.

SPANISH 4 – 1 UNIT (5540)
Grades 10-12
Prerequisite: Spanish 3

At this level, students will have become interesting communicators. They will be able to express main ideas and details coherently, both orally and in writing. They will understand and interpret the meaning of main points, and most details, in familiar and unfamiliar oral or written communications such as: interviews, short lectures, news items, and radio and television reports. They will understand written texts such as: simple short stories, news items, biographical information, short social and business correspondence, and simple journal and magazine articles. Students will write narratives and descriptions in length on familiar topics. They will communicate primarily in the target language increasing oral proficiency.

SPANISH 5 – 1 UNIT (5550)
Grades 11-12
Prerequisite: Spanish 4

At this level students will be able to deal with minor complications in realistic situations. They will narrate and describe with appropriate reference to general time frames (past, present, future), and participate actively in a wide variety of everyday conversations. Students will be able to draw upon their knowledge to examine and analyze present and past contributions to society, through the arts and literature, and through other forms of communication They will communicate primarily in the target language increasing oral proficiency.

DUAL ENROLLMENT COURSES

Courses Offered by Tidewater Community College and
Taught in Portsmouth Public High Schools
(contingent upon the availability of teachers)

The following course descriptions are taken from the Tidewater Community College course catalogue:

ENGLISH

ENGLISH COMPOSITION I, II – (ENG. 111, 112) – 1 UNIT (11609)
Prerequisites: Placement Test, English 11 (1150) & Teacher Recommendation

Students develop writing ability for study, work, and other areas of writing based on experience, observation, research, and reading of selected literature. Students learn writing as a process: gain understanding of audience and purpose, explore ideas and information, compose, revise, and edit. Students write by integrating experience in thinking, reading, listening, and speaking. English 111 and 112 are required courses in the TCC/PPS First College Program.

WORLD LANGUAGES

HONORS FRENCH 5 – (FRENCH 203, 204) – 1 UNIT (5110H)
Grades 11-12
Prerequisite: French 4, Placement Test

At this level students will be able to deal with minor complications in realistic situations. They will narrate and describe, with appropriate reference to general time frames (past, present, future), and participate actively in a wide variety of everyday conversations. Students will be able to draw upon their knowledge to examine and analyze present and past contributions to society, through the arts and literature, and through other forms of communication.

HONORS SPANISH 5 – (SPANISH 203, 204) – 1 UNIT (5550H)
Grades 11-12
Prerequisite: Spanish 4, Placement Test

At this level students will be able to deal with minor complications in realistic situations. They will narrate and describe with appropriate reference to general time frames (past, present, future), and participate actively in a wide variety of everyday conversations. Students will be able to draw upon their knowledge to examine and analyze present and past contributions to society, through the arts and literature, and through other forms of communications.

CAREER AND TECHNICAL EDUCATION

AIR CONDITIONING AND REFRIGERATION

DE HVAC I – (AIR 121) – 1 UNIT (8503)
Prerequisite: Placement Test; Principles of Technology (9811)

The course studies refrigeration theory, tools and equipment, soldering, brazing, refrigeration systems, system components, compressors, evaporators, metering devices. It provides laboratory application of refrigerators and freezers. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

DE HVAC II – (AIR 122) – 1 UNIT (8504)
Prerequisite: AIR 121

The course presents operations of commercial refrigeration systems, ice machines, design, installation and service, air conditioning and heat pumps. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

MARINE ELECTRICAL – 1 UNIT (8533)
Prerequisite: Placement Test

Students upon one semester will receive 6 TCC credits. Course develops skills in installation, operation, maintenance, and repair of industrial electrical systems. Also, covered are basic electrical circuits and theories of operation common to maritime vessel electrical systems. Fundamentals of AC power plants, electrical and lighting circuits, protective devices, and all other primary power circuits are developed.

ENGINEERING DRAWING AND DESIGN – 1 UNIT (8493)
Grades 10-12
Prerequisite: Technical Drawing

This one-semester, single-period advanced drawing and design course enables students to use a graphic language for product design, technical illustration, assembly, patent, and aeronautical drawings. Students use computers, calculators, and descriptive geometry and adhere to established standards to solve design problems.

TRADE AND INDUSTRY

MARINE WELDING – (WEL 117) – 1 UNIT (8672)

The course introduces history of oxyacetylene welding, principles of welding and cutting, nomenclature of the puddle, running flat beads, and butt-welding in different positions. It also, explains brazing, silver and soft soldering, heat-treating of small tools, and safety procedures in the use of tools and equipment. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

DUAL ENROLLMENT ACADEMIES
Courses Offered by Tidewater Community College and
Taught at Tidewater Community College

EARLY COLLEGE ACADEMY

The dual enrollment program at Tidewater Community College Portsmouth Campus provides pathways for high school students to concurrently complete a high school diploma and an associate degree from TCC.

- Associate of Science Degree in Social Sciences
- Associate of Science Degree in General Studies
- Associate of Science Degree in Science
- Career Studies Certificate in Maritime Welding

FIRST COLLEGE SCHOLARS GRADUATE ACADEMY

The dual enrollment program at Tidewater Community College Portsmouth Campus provides pathways for high school students to concurrently complete a high school diploma and general education certificate from TCC.

- Certificate in General Education

FIRST COLLEGE ACADEMY

Through an initiative made possible by the State Council of Higher Education (SCHEV), seniors can earn up to 19 semester hours of college credit. Courses offered in the Program are based on those identified by the State Council of Higher Education and are known as "Commonwealth College Course Collaborative (CCCC). "Public colleges and universities in Virginia have agreed to accept CCCC course credits as meeting part of the college's general education requirements on a credit for credit basis. Courses identified as first College Courses are noted under the First College Course offerings.

WHO IS ELIGIBLE

High school seniors who plan to attend a college or university after graduation are eligible to participate in First College. Interested students must pass the Tidewater Community College admissions test by the spring of their junior year, successfully pass English 111-112 with a grade of "C" or better, and should have completed all courses required for graduation by the end of the first semester of their senior year.

WHAT ARE THE ADVANTAGES

- Earn transferable college credits while still in high school
- Full time college students at TCC
- Reduce number of credits needed for graduation from a four-year institution
- Smaller classes with greater interaction with faculty
- Cost
- Shorter school week

TUITION AND TEXTBOOKS

In partnership with the Beasley Foundation students that are accepted into the program, may be eligible for free or half tuition. Portsmouth Public Schools (PPS), in accordance with the TCC/First College Agreement, will pay the remaining balance. Portsmouth Public Schools will purchase textbooks for the First College courses and loan them to students. Textbooks will be issued from the students high schools and collected at the end of the semester. Students who fail to return books will be required to pay the full purchase price before graduating. Parents and students who are interested in buying any of the course textbooks will have the option of purchasing them.

GRADING

All First College dual enrollment courses will be weighted in accordance with PPS grading guidelines. Grades will be factored into the overall high-school grade point average (GPA) and calculated accordingly. The TCC mid-semester status report will be provided to PPS in March and then used to determine class rankings.

TRANSPORTATION

Portsmouth Public Schools will provide free transportation to and from the TCC Portsmouth Campus, Monday through Friday. Students requiring transportation are expected to arrive at their zone high schools each morning. Students will be transported to TCC each morning and will be returned prior to the end of the school day. **In the event of inclement weather, students will follow TCC's schedule. If Portsmouth Public Schools are closed due to weather and TCC has classes, students must provide own transportation.**

FIRST COLLEGE ACADEMY COURSE(S)
****These courses are subject to change****

ART 101-102 | 3 credits each
History and Appreciation of Art I-II Presents the history and interpretation of architecture, sculpture, and painting. Begins with prehistoric art and follows the development of western civilization to the present. **Lecture 3 hours per week.**

AUT 101 | 3 credits
Introduction to Automotive Systems Introduces fundamental systems of the automobile: the engine fuel, exhaust, electric, ignition, lubrication, cooling, transmission, steering, brake and suspension systems. Teaches theory and function of each system. Demonstrates operation. **Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week**.

AUT 149 | 5 credits
Basic Automotive Electrical Diagnostics Introduces basic automotive electrical concepts, including theory and practical application. Provides instruction on using circuit wiring diagrams to accurately diagnose, troubleshoot, and repair simple electric circuits. Covers basic electrical principles, electrical terminology, and how to use electrical testing equipment. This course provides preparation for the Automotive Service Excellence (ASE) A6 Electrical/Electronic Systems ASE Certification examination**. Lecture 2 hours. Laboratory 6 hours.**

AUT 155 | 5 credits
Basic Automotive Engine Performance Diagnostics Introduces basic engine performance concepts, including theory and practical application. Covers vehicle communications, scan-tool diagnostics, basic engine mechanical tests, and diagnosing and repairing vehicle drivability issues. Provides preparation for the Automotive Service Excellence (ASE) A8 Engine Performance ASE Certification examination**. Prerequisite: AUT 149. Lecture 2 hours. Laboratory 6 hours. Total 8 hours per week. al 8 hours per week.**

BIO 101 | 4 credits
General Biology I focuses on foundations in cellular structure, metabolism, and genetics in an evolutionary context. Explores the core concepts of evolution; structure and function; information flow, storage and exchange; pathways and transformations of energy and matter; and systems biology. Emphasizes process of science, interdisciplinary approach, and relevance of biology to society. Part I of a two-course sequence**. Prerequisites: Placement into ENG 111 and MTE 3 or Qualifying Placement Test score. Lecture 3 hours. Recitation and laboratory 3 hours. Total 6 hours per week.**

CHM 111-112 | 4 credits each College Chemistry I-II
Explores the fundamental laws, theories, and mathematical concepts of chemistry. Designed primarily for science and engineering majors. Requires a strong background in mathematics. **Prerequisite for CHM 112: CHM 111. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.**

CST 100 | 3 credits
Principles of Public Speaking Applies theory and principles of public address with emphasis on preparation and delivery. **Lecture 3 hours per week.**

ECO 201 | 3 credits
Principles of Macroeconomics Introduces macroeconomics including the study of Keynesian, classical, monetarist principles and theories, the study of national economic growth, inflation, recession, unemployment, financial markets, money and banking, the role of government spending and taxation, along with international trade and investments. **Lecture 3 hours per week**

ENG 210 | 3 credits
Advanced Composition Helps students refine skills in writing non-fiction prose. Guides development of individual voice and style. Introduces procedures for publication. **Prerequisite: ENG 112 or divisional approval. Lecture 3 hours per week.**

HIS 101-102 | 3 credits each
History of Western Civilization I-II Examines the development of western civilization from ancient times to the present**. Prerequisite: Placement into ENG 111. Lecture 3 hours per week.**

HIS 111-112 | 3 credits each
History of World Civilization I-II Surveys Asian, African, Latin American, and European civilizations from the ancient period to the present**. Prerequisite: Placement into ENG 111. Lecture 3 hours per week.**

HIS 121-122 | 3 credits each
United States History I-II Surveys United States history from its beginning to the present. **Prerequisite: Placement into ENG 111. Lecture 3 hours per week.**

HUM 201 | 3 credits
Survey of Western Culture I Studies thought, values, and arts of Western culture, integrating major developments in art, architecture, literature, music, and philosophy. Covers the following periods: Ancient and Classical, Early Christian and Byzantine, Medieval, and Early Renaissance. **Lecture 3 hours per week.**

MTH 163 | 3 credits
Pre-calculus I Presents college algebra, matrices, and algebraic, exponential, and logarithmic functions. (Credit will not be awarded for both MTH 163 and MTH 166.) **Prerequisite: Qualifying Placement Test score, MTE 1-9 or equivalent. Lecture 3 hours per week.**

MTH 173 | 5 credits
Calculus with Analytic Geometry I Presents analytic geometry and the calculus of algebraic and transcendental functions including the study of limits, derivatives, differentials, and introduction to integration along with their applications. Designed for mathematical, physical, and engineering science programs. (Credit will not be awarded for more than one of MTH 173, MTH 175 or MTH 273**.) Prerequisite: Qualifying Placement Test score, MTH 164 or MTH 166. Lecture 5 hours per week**

MTH 174 | 4 credits
Calculus with Analytic Geometry II Continues the study of analytic geometry and the calculus of algebraic and transcendental functions including rectangular, polar, and parametric graphing, indefinite and definite integrals, methods of integration, and power series along with applications. Designed for mathematical, physical, and engineering science programs. (Credit will not be awarded for more than one of MTH 174, MTH 176 or MTH 274**.) Prerequisite: MTH 173 or equivalent. Lecture 4 hours per week.**

MUS 121-122 | 3 credits each
Music Appreciation I-II Increases the variety and depth of the student's interest, knowledge, and involvement in music and related cultural activities. Acquaints the student with traditional and twentieth century music literature, emphasizing the relationship music has as an art form with man and society. Increases the student's awareness of the composers and performers of all eras through listening and concert experiences**. Lecture 3 hours per week.**

PSY 200 | 3 credits
Principles of Psychology Surveys the basic concepts of psychology. Covers the scientific study of behavior and mental processes, research methods and measurement, theoretical perspectives, and application. Includes biological bases of behavior, learning, social interactions, memory, and personality; and other topics such as sensation, perception, consciousness, thinking, intelligence, language, motivation, emotion, health, development, psychological disorders, and therapy. **Prerequisite: Placement into ENG 111. Lecture 3 hours per week.**

SOC 201-202 | 3 credits each
Introduction to Sociology I-II Introduces basic concepts and methods of sociology. Presents significant research and theory in areas such as socialization, group dynamics, gender roles, minority group relations, and stratification, deviance, culture, and community studies. Includes population, social change, and social institutions (family, education, religion, political system, economic system). **Lecture 3 hours per week.**

SPA 101-102 | 4 credits each
Beginning Spanish I-II Introduces understanding, speaking, reading, and writing skills and emphasizes basic Spanish sentence structure. May include an additional hour of oral drill and practice per week**. Prerequisite for SPA 102: SPA 101 or 2 years of high school Spanish. Lecture 4 hours per week.**
SDV 100 | 1 credit
College Success Skills Assists students in transition to college. Provides overviews of college policies, procedures, and curricular offerings. Encourages contacts with other students and staff. Assists students toward college success through information regarding effective study habits, career and academic planning, and other college resources available to students. May include English and Math placement testing. Strongly recommended for beginning students. Required for graduation. **Lecture 1 hour per week.**

ART 201 (HISTORY OF ART 1) – 1 UNIT
Grades 11-12
Prerequisite: None

This course studies the historical context of art of the ancient, medieval, Renaissance and modern worlds. Course includes research paper.

ART 202 (HISTORY OF ART II) – 1 UNIT
Grades 11-12
Prerequisite: None

This course studies the historical context of art of the ancient, medieval, Renaissance and modern worlds. Course includes research paper.

***Art 201 and 202 can be taken in any order. Field Trips and Projects may be required for these courses.**

ENGLISH COMPOSITION I, II – (ENG. 111, 112) – 1 UNIT (11609)
Prerequisites: Placement Test, English 11 (1150) & Teacher Recommendation

Students develop writing ability for study, work, and other areas of writing based on experience, observation, research, and reading of selected literature. Students learn writing as a process: gain understanding of audience and purpose, explore ideas and information, compose, revise, and edit. Students write by integrating experience in thinking, reading, listening, and speaking. English 111 and 112 are required courses in the TCC/PPS First College Program.

VIRGINIA AND U.S. GOVERNMENT (PLS 211-212) – 1 UNIT (24409)
Prerequisite: Placement Test, World History and Geography to 1500 A.D. or World History and Geography 1500 to the Present, Virginia and United States History, World Cultures I or II (Wilson High School), and English 10 (1140)

The course teaches structure, operation, and processes of national, state, and local governments. It includes in-depth study of the three branches of the government and public policy. Students study how the American government system was created, how it operates, how people affect it, and how the system affects people.

CALCULUS (31779) – 5 UNITS
(MTH 173 – Calculus with Analytic Geometry I)
Twelfth Grade
Prerequisite: Advanced Algebra/Trigonometry and placement recommendations.

This course is designed for mathematical, physical, and engineering science programs. It presents analytic geometry and the calculus of algebraic and transcendental functions including the study of limits, derivatives, differentials, and introduction to integration along with their applications.

INTRODUCTION TO PSYCHOLOGY (29019)
Prerequisite: Placement Test, Completion of high school credits

Examines human and animal behavior, relating experimental studies to practical problems. Includes topics such as sensations/perception, learning, memory, motivation, emotion, stress development, intelligence, personality, psychopathology therapy, and social psychology. Lecture 2 hours per week.

BIOLOGY 101 (43709)
Prerequisite: Placement Test, Completion of high school credits

Explores fundamental characteristics of living matter from the molecular level to the ecological community with emphasis on general biological principles. Introduces the diversity of living organisms, their structure, function and evolution. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

CHEMISTRY 111 (47009)
Prerequisite: Placement Test, Completion of high school credits

Explores the fundamental laws, theories, and mathematical concepts of chemistry. Designed primarily for science and engineering majors. Requires a strong background in mathematics. Part 1 of II. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

Examines human and animal behavior, relating experimental studies to practical problems. Includes topics such as sensations/perception, learning, memory, motivation, emotion, stress development, intelligence, personality, psychopathology therapy, and social psychology. Lecture 2 hours per week.