

# **PROGRAM OF STUDY**

**2019-2020**

**IPSWICH HIGH SCHOOL**



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## High School Graduation Requirements

To receive a standard High School Graduation Diploma, a student must meet the following requirements:

<u>Course</u>	<u>Credits</u>
English (4 years)	20
Math (4 years)	20
Science	15
Additional Math or Science	-
Social Studies	20
Health and Wellness	2.5
Physical Education	15*
World Language	10**
Credits for Required Courses:	97.5
Unrestricted Electives:	12.5
<b>Minimum Credits Required for Graduation:</b>	<b>110</b>

\*Juniors and Seniors who are involved in an interscholastic sport during their junior or senior year may request a “sports replacement” option. Students receiving approval for sports replacement during one or both of these years will be exempt from the physical education credit requirement for the year(s) the replacement is approved.

The High School Principal is authorized to accept documented, regular participation in non-school physical activities for senior students only. These activities must be sanctioned by the International Olympics Committee or must be on a list of sanctioned activities maintained by the High School Principal and approved by the Superintendent.

\*\*The High School Principal shall have the right under extraordinary conditions to waive the World Language proficiency requirement.

As a pre-requisite for successful citizenship, Ipswich High School expects each student to make a significant contribution to the community. Community Service (giving back) embodies a core value that every good citizen embraces. All students will experience the personal rewards of serving the needs of the community's social fabric by donating their time and skills to advance worthy institutions and endeavors.

Ipswich High School expects every student to complete an **approved Community Service Project** during their high school experience. These projects will be a minimum of 25 hours in duration. Unless the organization has been pre-approved by the high school, all projects must be approved in advance by the high school principal or his designee. Project completion will be monitored by the Community Service Coordinator for completion. Projects will be graded on a Pass/Fail basis. Any student that has not completed their community service requirement by the end of their junior year will receive a grade of "F" indicating that they have not yet met this requirement. Seniors will have until the end of the first marking period of their senior year to earn a passing grade for their service requirement.

Information regarding service opportunities for students and a list of preapproved organizations can be found on the high school website: <https://ihsvolunteers.wordpress.com/>.

## GRADE POINT AVERAGE (G.P.A.)

Ipswich High School has four difficulty levels of courses (Advanced Placement, Honors, College Preparatory L2 and College Preparatory L1). We have four levels for G.P.A. computation. The weighted courses and G.P.A. provide maximum weight for grades received in A.P. courses and lesser weight for grades received in general or remedial level courses. For example, a grade of A+ in an AP course receives a weight of 5.00; in an Honors course, 4.50; in College Preparatory L2, 4.00; and in a College Preparatory L1 course, 3.50.

<u>GRADE</u>		<u>WEIGHT</u>			
		<u>A.P.</u>	<u>HONORS</u>	<u>COLLEGE PREP L2</u>	<u>COLLEGE PREP L1</u>
A+	100-97	5.00	4.50	4.00	3.50
A	96-93	4.70	4.20	3.70	3.20
A-	92-90	4.50	4.00	3.50	3.00
B+	89-87	4.30	3.80	3.30	2.80
B	86-83	4.00	3.50	3.00	2.50
B-	82-80	3.70	3.20	2.70	2.20
C+	79-77	3.40	2.90	2.40	1.90
C	76-73	3.00	2.50	2.00	1.50
C-	72-70	2.70	2.20	1.70	1.20
D+	69-67	2.40	1.90	1.40	.90
D	66-65	2.00	1.50	1.00	.50

- We offer courses at four difficulty levels so that all students may succeed in courses at their own level and earn recognition on the Honor Roll.
- Please note that students who enroll in Advanced Placement courses must take the Advanced Placement Exam in that subject in May. Advanced Placement test fees are paid by students.

# **STEM/STEAM PATHWAYS**

Ipswich High School provides a strong core curriculum designed to prepare students for a variety of post-secondary opportunities including college, technical training, and other career opportunities. While most of our students will elect to take rigorous courses in our core disciplines, other students find their passion in various elective programming. The wide variety of elective offerings provides our students an opportunity to engage in rich learning experiences, many of which have direct relevance to early career exploration or specific college/technical field related coursework. Ipswich High School has been working to identify high interest-based course sequences which we have identified as **Pathways**.

Pathways are optional opportunities, for students within certain expressed areas of interest, to experience a series of rigorous core and elective courses related to specific disciplines. To date, the high school is offering **four STEAM Pathways: Engineering, Visual Arts, Publishing, and Legal Studies**.

**Each PATHWAY is unique and provides interested students with an opportunity to learn important content and skills specific to the discipline. Each PATHWAY incorporates a Capstone experience that requires students to connect and engage in a real world experience. Pathways are anchored in Design Thinking. Design Thinking requires students to work collaboratively as they identify, propose, and implement solutions to important questions. Capstone projects will capture student thinking in a way that is visible to the entire school community.**

Students who wish to earn a pathway designation should let their guidance counselor know as soon as they are interested. Generally speaking students in grades 9 and 10 need not “declare” a Pathway interest, although careful consideration should be given to their elective choices. Students in grades 11 and 12 have more elective options available to them and will generally have developed an area of interest related to post-secondary and/or college and career planning.

**The table that follows provides an overview of each of the Pathway opportunities. Students considering earning a Pathway certificate should meet with their guidance counselor and the appropriate Pathway coordinator to review their individual options.**

Note: Students may earn a STEM or STEAM designation for successful completion of coursework within a PATHWAY. Students who earn a minimum G.P.A. within those courses will be designated an Honor’s STEM/STEAM Scholar.

<b>PATHWAY</b>	<b>Certificate designation</b>	<b>Minimum Credits</b>	<b>Qualifying courses *required courses</b>	<b>Capstone Courses</b>	<b>Pathway Coordinator</b>
<b>Engineering</b>	<b>STEM</b>	<b>20</b>	<b>TEC01 TEC02 TEC03 TEC04 TEC06 TEC07 TEC08 TEC10 *MTH05 or *MTH14 *SCI07</b>	<b>TEC05 TEC09 SCI13H</b>	<b>Mr. Mitchell</b>
<b>Publishing</b>	<b>STEAM</b>	<b>10 plus core</b>	<b>ELA11 ELA12 ELA15 ELA21</b>	<b>ELA18</b>	<b>Mr. Sidmore</b>
<b>Legal Studies</b>	<b>STEAM</b>	<b>10 plus core</b>	<b>SST03 SST04 *SST01 or SST02 or SST19</b>	<b>SST18</b>	<b>Ms. Smith</b>
<b>Visual Arts</b>	<b>STEAM</b>	<b>17.5</b>	<b>*ART01 ART02 ART03 *ART04 ART05 *ART06 ART07 ART08 ART11 ART12</b>	<b>ART09 ART10</b>	<b>Ms. Pepe</b>

# **SPECIAL EDUCATION**

## **Special Education Courses**

The Special Education Department is comprised of highly qualified staff dedicated to the education and inclusion of students with learning differences. Special Education Teachers, Teaching Assistants, Registered Behavioral Therapists, and Related Services specialists provide a wide array of services to students including, but not limited to, co-taught General Education classes, inclusion support, small group Special Education classes, curricular modifications, and consultation/collaboration with General Education staff.

The mission of the Department is to provide a safe, supportive, and equitable learning environment that meets the educational needs of the individual student in the least restrictive environment. In addition, staff provides individualized support and assistance to students with learning differences by focusing on students' unique strengths as they become competent, self-determined, and curious learners. By heightening students' perspective, introspective, and critical thinking abilities, their self-advocacy and independence will also increase. Specialized programming is also available to students through the SAIL (Students Achieving Independent Living) program and YACHT Academy (Young Adult Career/Community Home Management Training), which respectively provide more intense academic support to students with cognitive and transition programming needs.

In all programs, students access services as determined appropriate and necessary by the Team and outlined in the Individualized Education Program (IEP), working toward the ultimate goal of successful transition to appropriate post-secondary opportunities.

### **SPE04CP1 English 9**

**5 Credits**

**Prerequisite:** Recommendation from the Special Education Department

This full year course for ninth grade students integrates reading, writing, and oral communication skills development with the study of literature. A scaffolding approach is utilized throughout the curriculum to build understanding and foster independence. Students explore short stories, novels, essays, and poetry. Writing skills development works toward the independent writing of strong paragraphs with varied sentence types.

### **SPE05CP1 English 10**

**5 Credits**

**Prerequisite:** Recommendation from the Special Education Department

This full year course for sophomores integrates development of reading comprehension and essay writing skills with the study of literature. A scaffolding approach is utilized throughout the curriculum to build understanding and foster independence. Students explore short stories, novels, essays, and poetry. Students will identify the basic facts and main ideas in a text and use them as the basis for interpretation. Composition work concentrates on writing strong 5-paragraph essays that state and support a thesis.



**SPE07CP1 English 11****5 Credits****Prerequisite:** Recommendation from the Special Education Department

This full year course for juniors integrates development of reading comprehension and essay writing skills with the study of literature. A scaffolding approach is utilized throughout the curriculum to foster understanding and independence. Students will identify, analyze, and apply knowledge of theme in a literary work and provide evidence from the text to support their understanding. Composition work concentrates on writing strong essays that state and support a thesis and utilize evidence from the text effectively.

**SPE08CP1 English 12****5 Credits****Prerequisite:** Recommendation from the Special Education Department

This full year course for seniors teaches writing in response to literature. Students will develop the ability to examine and write about themes in individual pieces of literature and across genres. Specifically, students will identify, analyze, and apply knowledge of theme in a literary work and provide evidence from the text to support their understanding. Students will also have opportunities to select their texts and clarify their thinking through discussion. The course will culminate in thoughtfully crafted senior papers that showcase students' writing and critical thinking skills.

**SPE37CP1 U.S. History 1****5 Credits****Prerequisite:** Recommendation from the Special Education Department.

This full year course integrates reading, writing, vocabulary development, and engagement in various modes of communication through the study of United States History. A scaffolding approach is utilized throughout the curriculum to build understanding and to foster independence. Topics will include the origin of the British colonies in North America, their inheritance of Enlightenment ideas, and the influence of these ideas upon the founding fathers of the United States. Students continue with the development of the United States from the original thirteen colonies through the Civil War. Special attention will be given to the development and implementation of the Constitution, the first ninety years of independence, and the ideas and actions that led to early unity while at the same time driving the country towards regionalism and Civil War.

**SPE38CP1 US History II (1860-Present)****5 Credits****Prerequisite:** Recommendation from the Special Education Department

In this full year course, students will continue the study of the history of the United States from the end of the Civil War through the modern day. Topics include expansion, industrialization, American Imperialism, the World Wars, and the Cold War era to present day, ending with the attacks of September 11, 2001, and America's responses. Throughout the course emphasis is placed on the acquisition of study skills and their application to the material presented. The development of critical thinking, research, and writing skills are an integral part of the curriculum. Topics will be scaffolded and presented in an effort to encourage reflection and discussion of the multiple perspectives of our Nation's history.

**SPE59CP1 American Survey****5 Credits****Prerequisite:** Recommendation from the Special Education Department.

In this course, students will be provided with an overview of American history. The course will begin with the development of the Constitution and move on to the actions that drove the country toward Civil War. Students will then continue on with westward expansion, industrialization, American imperialism, and the Cold War. Students will work on skills ranging from claim building, providing support for an argument, document based essay questions and the proper use of documentation.

**SPE60CP1 Modern World History****5 Credits****Prerequisite:** Recommendation from the Special Education Department.

In this course, students will develop an awareness of historical concepts and eventually link them into a narrative while attaining fundamental study skills. The course offers students the opportunity to practice collecting information in a meaningful way, formulating cause and effect relationships, thinking critically both concrete and abstract, and relating learned material to personal experiences. Topics studied will include the development of nationalism, the World Wars, the creation of superpowers, the Cold War, and the spread of terrorism.

**SPE28CP1 American Government/Civics****5 Credits****Prerequisite:** Recommendation from the Special Education Department.

The goal of this class is to make students aware of the general functioning of government at local, state, and national levels and how students may assume an active role as citizens. Responsible citizenship, rights, and decision-making processes will be emphasized through guided activities, interviews, and opportunities to practice skills in the community.

**SPE25CP1; SPE26CP1; SPE58CP1 Integrated Math I/II/III****5 Credits****Prerequisite:** Recommendation from the Special Education Department

Integrated Math provides a full year course for students through the examination of math topics to develop and strengthen math skills. Topics include geometric concepts and algebraic concepts, such as linear equations, relationships, and area and volume formulas. Instruction in mathematical modeling as a methodology for approaching the solution to problems provides a foundation for its application. This class provides additional support through scaffolding responses to address open response questions and instruction in test taking strategies. Level II of the course focuses more on the application of these learned skills and more advanced topics within Geometry and Algebra I. Level III of the course reinforces Algebra I skills and focuses on introductory concepts of quadratic, exponential, and polynomial functions in preparation for entry into Concepts of Algebra II.

**SPE27CP1 Concepts of Algebra II****5 Credits****Prerequisite:** Recommendation from the Special Education Department

This full year class provides students with a well-balanced understanding of Algebra 2 concepts. Students explore how algebraic applications are related to life, work, and technology. This will be attained through the study of quadratic, polynomial, exponential and logarithmic functions, and an introduction to statistics. This class supports the various learning styles of each student, meeting each individual student's skill set. Learning will be reinforced through consistent practice and review. To measure mastery of learned concepts, a culminating project will be completed that incorporates the algebraic functions discussed in class.

**SPE48CP1; SPE49CP1 Learning Process I/II****1 Credit****Prerequisite:** Recommendation from the Special Education Department

The focus of Learning Process is to help freshmen and sophomore students understand their individual learning styles and develop self-advocacy skills to access successfully the general curriculum. The initial focus of this class is to address the skills and knowledge that will help students transition to the high school. In addition, direct instruction will be given in study skills and organizational skills, including previewing/reviewing new material, test-taking strategies, and planning long-term assignments.

**SPE50CP1; SPE51CP1 Applied Strategic Learning I/II****1 Credit****Prerequisite:** Recommendation from the Special Education Department

Applied Strategic Learning is a class designed for juniors and seniors to reinforce the skills covered in Learning Processes. Students are expected to self-report upcoming tests and assignments for their general curriculum classes. Individualized coaching will be provided to the students to assist them in planning, organizing, completing, and submitting assignments on time. Instruction in post-secondary options, transition planning and self-advocacy is designed to assist students in planning their future.

**SPE29CP1; SPE30CP1 Integrated Communication I/II****5 Credits****Prerequisite:** Recommendation from the Special Education Department

The focus of Integrated Communication is to assist students in continuing to develop reading, writing, and communication strategies to be an effective learner. Instruction is both individualized and highly structured to facilitate the development of reading comprehension, vocabulary, and writing skills. Students use critical thinking templates as a means of understanding concepts and organizing their ideas. Students will examine short stories, novels, essays, poetry, and expository text. A specific writing program will provide direct instruction and guided practice in writing compositions. Students will internalize the "Five Steps of Writing": brainstorming, organizing, composing, proofreading, and publishing at the single paragraph level. In conjunction, modern research strategies will be practiced as students generate expository and persuasive compositions.

**SPE31CP1; SPE32CP1 Analytical Communication I/II****5 Credits****Prerequisite:** Recommendation from the Special Education Department

In Analytical Communication, students will continue to develop reading, writing, and communication strategies to become a lifelong learner. Students will receive direct and individualized instruction in order to more effectively comprehend and internalize diverse texts of increasing complexity. Emphasis is on vocabulary development, skimming text for main ideas, highlighting important information, summarizing, and outlining information. Writing instruction includes practicing the five paragraph essay, which includes writing thesis statements, introductory paragraphs, body paragraphs that support the thesis, and concluding paragraphs. In addition, a substantial portion of the course focuses on the process of writing longer essays and formal, research-based compositions. As with previous levels, skills such as elaboration of ideas and constructing transition sentences are refined and practiced.

**SPE02CP1; SPE03CP1 Biology I/II****5 Credits****Prerequisite:** Recommendation from the Special Education Department

These Biology classes are designed to develop students' science vocabulary and provide opportunities to conduct scientific investigations. Students will explore the topics of biochemistry, cell biology, genetics, human anatomy, evolution, and ecology. Observation skills, interpretation of scientific data, and critical thinking skills will be utilized. Instructional methods include activities designed to embrace various learning styles, including interactive lectures, Cornell style note-taking, and classroom discussions with applications related to everyday life experiences.

**SPE34CP1 Transitional Math****5 Credits****Prerequisite:** Recommendation from the Special Education Department

This course is designed to enable students to apply the skills they have already learned such as addition, subtraction, multiplication, and division in real situations and challenges. Topics will cover financial awareness, saving, spending, and balancing a budget. Students will learn how to read a paycheck stub, how to interpret a checking account statement, consumer awareness, and choices, personal financial projects, personal budgeting, tracking checking and saving accounts, tax added to purchases, and completing tax returns. Additional topics may include loans and interest, credit cards, insurance, and buying and maintaining a vehicle.

**SPE10CP1; SPE11CP1; SPE12CP1; SPE13CP1 Humanities (I-IV)****5 Credits****Prerequisite:** Recommendation from the Special Education Department

These courses are designed to provide students with everyday English and grammar skills needed to succeed in life. This course is broken up into monthly units. Each unit contains reading, vocabulary, and comprehension with a variety of classroom activities and differentiated tasks to complement the lesson. The monthly reading topics each contain material in other content areas such as civics or history to enhance student learning. They also cover community and life skills topics such as job applications, voter registration, and workplace writing.

**SPE14CP1; SPE15CP1; SPE16CP1; SPE17CP1 STEM (I-IV)****5 Credits****Prerequisite:** Recommendation from the Special Education Department

Functional, practical, and real-life math and science skills, in line with state standards and individualized to meet the needs of each student, are the substance of this curriculum. There is a focus on money, time, computation, and general science skills, with an emphasis on practical application of acquired skills in real-life situations. Consumer awareness is stressed as the individual develops skills in basic money management. Throughout the course, there are numerous opportunities to practice these skills in real life settings. Problem-solving is the overarching theme throughout all units of instruction.

**SPE06CP1 Community Awareness****2.5 Credits****Prerequisite:** Recommendation from the Special Education Department

This course addresses a variety of skills necessary to enhance functioning within the general community. Community Awareness offers the student a variety of community-based learning opportunities and experiences to allow the student a greater level of confidence and independence when interacting within a community setting. The student will learn about available community resources, agencies, and opportunities, and how he or she can access them.

**SPE41CP1; SPE42CP2; SPE43CP1; SPE44CP1 Vocational I/II/III/IV****2.5 Credits****Prerequisite:** Recommendation from the Special Education Department

Our SAIL program offers vocational/job training opportunities to students with the goal of assisting our students to become active and productive members of their community, including the ability to function in the workplace after completing high school. By applying the vocational/job skill experiences obtained both within the school setting and at local businesses, they develop marketable job skills. Some of the many skills we help students develop outside of the classroom include interviewing skills, safety skills, time management, social skills, teamwork, money management, customer service, sequencing, and memory skills. This course encourages the development of self-esteem and self-confidence in their ability to obtain and succeed at a job after high school.

**SPE18CP1; SPE19CP1; SPE20CP1; SPE21CP1 Independent Living I/II/III/IV****5 Credits****Prerequisite:** Recommendation from the Special Education Department

These courses address the wide variety of skills necessary for adult living. Topics are covered in depth at the student's level of instruction and include: food management (nutrition, food safety, meal planning, shopping, and meal preparation); home management (household maintenance, cleaning plans, organizational skills, budgeting, and housing options); leisure skills (recreation activities, social skills, use of community options); social skills; and travel training on public transportation.

# ENGLISH

The IHS English program builds a strong foundation of close reading, literary analysis, and writing skills. Students will develop a balanced portfolio of work including narrative, expository, and argumentative writing and an appreciation for literature and intellectual expression. Pre-course or summer reading is required for core honors classes and encouraged for all levels, as are self-assessment portfolios. However, each level offers a different thematic focus and builds upon the skills developed in the prior year.

\*Advanced Placement English requires the approval of the English Department Chairperson.

	<u>HONORS</u>	<u>COLLEGE PREP L2</u>	<u>COLLEGE PREP L1</u>
<b>Grade 9</b>	Honors English 9	English 9	English 9
<b>Grade 10</b>	Honors English 10	English 10	English 10
<b>Grade 11</b>	Honors American Literature OR *Advanced Placement Language and Composition: American Literature	American Literature	American Literature
<b>Grade 12</b>	Honors Literature and Composition + Senior Elective Offering	Literature and Composition + Senior Elective Offering	Literature and Composition + Senior Elective Offering
	*Advanced Placement Literature and Composition		

## SUPPLEMENTARY ELECTIVES - Credit as electives only

- Introduction to Creative Writing
- Introduction to Film Studies
- Screenwriting: Writing for Film & T.V.
- Performance Poetry
- Global Citizenship
- Public Speaking
- Sports and Society
- Yearbook
- Writing Portfolio (Gr. 11 & 12)
- SAT English (Gr. 11 & 12)
- All the World's a Stage
- Science and Ethics

## **NINTH GRADE**

Freshman English classes focus on the writing process and close reading skills. While developing a foundation in argumentative writing students read various short stories, Shakespeare's Romeo and Juliet, Lord of the Flies, House on Mango Street, and A Separate Peace. Class placement is contingent upon their prior achievement, the recommendation of their eighth grade English teacher, and performance on the department placement test.

### **ELA01CP1 ENGLISH 9 – COLLEGE PREP L1**

**5 credits**

Designed for students with average reading and writing skills

The primary focus of College Prep L1 English is the development of reading and writing skills. Students work with high-interest fiction and non-fiction in a classroom setting that emphasizes fundamental literacy, coherent writing, and effective study habits.

### **ELA01CP2 ENGLISH 9 – COLLEGE PREP L2**

**5 credits**

Designed for students with above-average reading and writing skills

This college preparatory course emphasizes the writing process and utilizes literary models, including short stories, plays, essays, poetry, and novels.

### **ELA01H HONORS ENGLISH 9**

**5 credits**

Designed for students with high reading speed and comprehension skills and above average writing ability

This advanced course is aimed at the high achiever who is motivated to take on challenging reading and writing assignments.

## **TENTH GRADE**

The sophomore English program emphasizes reading and analysis of contemporary short fiction, contemporary and classic novels, Shakespeare's Macbeth or Julius Caesar, and various non-fiction selections. Students take courses at appropriate learning levels in accord with prior achievement and the ninth grade teacher's recommendation. The composition focus is literary analysis.

### **ELA02CP1 ENGLISH 10 – COLLEGE PREP L1**

**5 credits**

**Prerequisite:** Passing grade in ninth grade English and teacher recommendation.

The primary focus of this course is the development of reading and writing skills. Students work with high-interest fiction and non-fiction in a classroom setting that emphasizes literacy, coherent writing, and effective study skills.

### **ELA02CP2 ENGLISH 10 – COLLEGE PREP L2**

**5 credits**

**Prerequisite:** Students must pass English 9.

This course emphasizes literary analysis, composition, and research.

**ELA02H HONORS ENGLISH 10****5 credits**

**Prerequisite:** An overall grade of not less than A- in English 9 or B in Honors English 9 and the recommendation of the ninth grade English teacher.

This course, aimed at serious language arts students with proven aptitude, provides the foundation for entry into junior and senior Honors and Advanced Placement courses. It requires considerable outside reading in the classics.

**ELEVENTH GRADE****ELA04CP2 AMERICAN LITERATURE****5 credits**

Prerequisite: Passing grade in English 10.

American Literature is a survey course that offers students an enhanced understanding of our national literature and how it reflects America's cultural heritage and national identity.

**EL04H HONORS AMERICAN LITERATURE****5 credits**

Prerequisite: An overall grade of not less than A- in English 10 CP2 or B in Honors English 10 and the recommendation of the tenth grade English teacher.

Honors American Literature is a survey course that offers students an enhanced understanding of our national literature and how it reflects America's cultural heritage and national identity. The course is designed for students with very high-level language arts skills, disciplined work habits, and the motivation and ability to take on challenging assignments and a demanding pace.

**ELA16AP ADVANCED PLACEMENT ENGLISH LANGUAGE AND COMPOSITION:  
AMERICAN LITERATURE****5 credits**

Prerequisite: Enrollment by Department approval for students with a minimum of A- in Honors English 10. Students who are not selected and desire to be considered for A.P. may appeal for consideration. See the English Department Chairperson for details.

This rigorous course in rhetoric, or the art of persuasion, blends the study of American literature with an analysis of non-fiction texts and college-level writing. It is designed to challenge students to become skilled readers and writers who compose for a variety of purposes.

This course is for accomplished and industrious language arts students who seek advanced college placement. Every enrollee is required to take the A.P. examination. Multiple summer readings are required. Participation in round-table, seminar-style discussions is vital to success in the class.



## **TWELFTH GRADE**

The senior program is designed to complete our carefully planned progression of English courses at Ipswich High School.

Except for students nominated for Advanced Placement English, seniors are required to take the core course, English 12 Literature and Composition, paired with their choice of a senior elective. The two courses together constitute the Grade 12 English requirement and earn five (5) credits. The courses are heterogeneously grouped and can be taken at either the college preparatory or honors level. In order to qualify for an honors contract, students must complete American Literature CP2 with an A- or Honors American Literature with a B and have the recommendation of their Grade 11 teacher.

Seniors selected for Advanced Placement English take A.P. Literature and Composition.

**SENIOR ENGLISH CHOICES (CP2 AND HONORS LEVELS)** - See course descriptions below  
**Courses are five (5) credits.**

**ELA07CP2 ENGLISH 12 LITERATURE AND COMPOSITION/ CREATIVE WRITING:**  
**FICTION**

**ELA07H**

**ELA09CP2 ENGLISH 12 LITERATURE AND COMPOSITION/ CREATIVE WRITING:**  
**POETRY**

**ELA09H**

**ELA08CP2 ENGLISH 12 LITERATURE AND COMPOSITION/ JOURNALISM**  
**ELA08H**

**ELA06CP2 ENGLISH 12 LITERATURE AND COMPOSITION/ CONTEMPORARY**  
**LITERATURE**

**ELA06H**

### **CORE COURSE DESCRIPTION**

**ELA06CP2 ENGLISH 12 LITERATURE AND COMPOSITION:**  
**READING CRITICALLY, WRITING WELL**

**5 credits**

**ELA06H**

This course emphasizes the reading, writing, and independent thinking skills essential for academic success, active citizenship, and personal enjoyment.

Through the analysis of works by distinguished scholars and professional writers, students will refine their reading, writing and reasoning skills, broaden their world views and develop their own voices. Following all steps in the writing process students, students will write compositions for different audiences. Each course emphasizes the use and application of research in student work throughout the semester. The class environment will provide opportunities for active discussion and collaboration.

### **ELECTIVE COURSE DESCRIPTIONS**

**ELA07CP2 ENGLISH 12 CREATIVE WRITING: FICTION**  
**ELA07H**

**5 credits**

In addition to the core course requirements for English 12 Literature and Composition, this part of the

course will provide students with the opportunity to read and write fiction. Students will read and analyze the works of a wide variety of writers of literary merit and use these works as models to inspire their own writing. They will also study and practice various techniques used by writers of fiction and create original short stories. In addition, the class will also serve as the production crew for an issue of Ipswich High School's literary magazine The Chameleon.

**ELA09CP2 ENGLISH 12 CREATIVE WRITING: POETRY**  
**ELA09H**

**5 credits**

In addition to the core course requirements of English 12 Literature and Composition, this part of the course will primarily provide students with the opportunity to read and write poetry. Students will read and analyze poems by a wide variety of traditional and contemporary poets of literary merit and use these works as models to inspire their own poetry. They will also study and practice various techniques used in both free verse and structured poetry and produce a body of work of their own. In addition, the class will also serve as the production crew for an issue of Ipswich High School's literary magazine, The Chameleon.

**ELA08CP2 ENGLISH 12 JOURNALISM**  
**ELA08H**

**5 credits**

In addition to completing the core course requirements of English 12 Literature and Composition, students further develop and refine their language arts skills of reading, writing, listening, and speaking at a high level in preparation for college and the world of work. Students primarily work on these skills through the study of journalism and media. The course also includes production work on Ipswich High School's online newspaper, The Tiger Transcript.

**EL06CP2 ENGLISH 12 CONTEMPORARY LITERATURE**  
**EL06H**

**5 credits**

This courses focuses on literature published since 1950. Students choose the books they want to read and do a series of culminating projects in lieu of tests. In addition to independent novel study, the class delves into modern forms of writing such as short fiction and creative nonfiction. As part of the senior writing curriculum, students work on college essay writing and persuasive writing while experimenting with creative writing. Students have opportunities to write in the real world when we explore a contemporary art museum.

**EL05AP ADVANCED PLACEMENT ENGLISH LITERATURE AND COMPOSITION** **5 credits**

Prerequisite: Enrollment by department approval for students with 15 minimum credits and a minimum of B+ in Honors American Literature or an aggregate A- in all previous English courses  
Students who are not selected and desire to be considered for A.P. may appeal for consideration. They should see the English Department Chairperson for more details. This course is specifically designed for the gifted and industrious language arts student who seeks advanced college placement. Every enrollee is required to take the A.P. examination. Multiple summer readings are required. Participation in round-table, seminar-style discussions is vital to success in the class.

**SUPPLEMENTARY ENGLISH ELECTIVES**

These electives are enrichment courses outside the core offerings. They carry elective credit only, not English credit. Unless indicated otherwise, these courses are open to all students.

**ELA21CP2 INTRODUCTION TO CREATIVE WRITING****2.5 credits****ELA21H**

This course provides students the opportunity to explore writing in a variety of genres including short fiction and creative nonfiction. Students who already write poetry, short stories, or journal entries and want to continue to refine their craft will benefit from time to revise, share ideas, and conference with their teacher and peers. Students who want to try different kinds of writing, meet like-minded writers, or are up for a new challenge will enjoy the creative freedom to work and build their portfolio of work. All participants will create a chapbook (collection of writer's work) by the end of the class.

**ELA12CP2 SPORTS IN LITERATURE AND SOCIETY****2.5 credits****ELA12H**

Students in this course will study the history, psychology and sociology of sports in our culture. Through fiction, non-fiction, biography, and movies, students will explore the ideas of personal triumph, goal setting, teamwork, and other concepts to help them craft a personal philosophy of sports. In an effort to understand why we value sports so deeply, the class will analyze how sports heroes across the ages impact culture. Assessments will include journals, researched report, news stories, film criticism, peer interviews, and creative writing assignments.

**ELA10CP2 SAT ENGLISH PREP****2.5 credits**

**Prerequisite:** 11<sup>th</sup> and 12<sup>th</sup> graders only

This course offers intensive preparation for taking the verbal section of Evidence-Based Reading and Writing section of the SAT. It also features a writing laboratory in which students may not only create college application essays but also refine their general writing skills through practice and conferencing. This course is highly recommended for juniors and sophomores serious about attending challenging colleges.

**ELA15CP2 YEARBOOK****2.5 credits****ELA15H**

This course will teach students the fundamentals needed to plan and produce of Ipswich High School's yearbook. Students will facilitate the design process, using the latest desktop publishing and graphic design programs and assume responsibility for various sections of the book. As a result, Yearbook requires students to exhibit personal responsibility, leadership, and artistic skill. Students will hone skills in the areas of graphic design and layout, photography, business, and desktop publishing. Meeting deadlines and teamwork are essential.

**ELA11CP2 SCREENWRITING: WRITING FOR FILM & T.V.****2.5 credits****ELA11H**

Screenwriting is designed to equip students with the basic theory and structure of screenwriting so that they may mold their story ideas into a professional product designed for the screen. Using contemporary classics as models, students generate their own story ideas in a genre of their choice. The Screenwriting curriculum emphasizes the literary conventions of the form – character, conflict, plot, dialogue – as well as the technical elements that make scripts and screenwriting unique. Upon completion of this course,

students will have conceived, developed, and crafted their own original idea into a professional screenplay.

**ELA25CP2 GLOBAL CITIZENSHIP**  
**ELA25H**

**2.5 credits**

This course will engage students in a focused exploration of current global issues through the lenses of both fiction and nonfiction. Students will seek to understand the issues within the framework of their political, economic, socio-cultural, historical, scientific and environmental contexts. Recognizing the complexity of global issues, this course will challenge assumptions and critically analyze the nature and merit of various perspectives. Students will be encouraged to develop a sense of global responsibility and personal empowerment using thoughtfully informed positions on global issues.

**ELA32CP2 PUBLIC SPEAKING**  
**ELA32H**

**2.5 Credits**

This elective course provides students with a supportive environment in which to improve their public speaking skills and their confidence as speakers and presenters. Through activities, models, and practice, students will learn all facets of effective public speaking, including techniques of verbal and non-verbal communication, speech writing, speaking on camera, impromptu speaking, audience awareness, and conquering nerves. Students will practice speaking in a variety of settings and to a variety of audiences. The skills learned in this class will be invaluable to students in their other courses as well as in many opportunities in life. Public speaking is truly a lifelong skill.

**ELA42CP2 ALL THE WORLD’S A STAGE**

**2.5 Credits**

Exploring Identity and Community through Contemporary Theater

Students in this course will utilize a flexible schedule to explore contemporary theater by attending five performances at the Huntington Theater in Boston. The class will meet on five Sundays over the course of the academic year from Noon – 6pm to engage in pre-show activities, view the show and participate in the post-show Humanities Forum at the theater. Independent work on the shows, R block class discussions and a reflective portfolio presentation will round out our critical engagement with the plays. We are hopeful that some Ipswich community members will join us for this journey through collaboration with the Ipswich Council on Aging. Parents are also welcome to join the class for the trips to Boston. Students in the class will be asked to cover the cost of their theater tickets which is \$15 per show for a total of \$75 for the course. Financial aid is available.

**ELA24CP2 PERFORMANCE POETRY**  
**ELA24H**

**2.5 Credits**

This course respects, encourages, and teaches the careful reading and study of poetry, but it also endorses a new kind of engagement with texts, the kind described by poet Wallace Stevens when he said, “One reads with one’s nerves.” We will explore different varieties of verse from ballads to sonnets, to modern free verse, and think about them as performance pieces. In order to perform poems well, we will need to understand poems, and so we will examine meter, rhyme, sound, symbolism and other technical aspects of verse. Our goals for the class will be to make the act of reading poetry exciting and to perform not only the works of published poets, but to create original performance poems. Class activities will include a poetry slam and possibly the national Louder than a Bomb spoken word competition.

## **ELA18CP2 WRITING PORTFOLIO**

**2.5 credits**

Prerequisite: Senior or advanced junior level; Introduction to Creative Writing or Eng.12 Fiction/Poetry; and by permission of instructor. Required for Publishing Pathway Scholars

The portfolio student will participate in a writing workshop devoted to developing a comprehensive body of work in a selected genre or genres. Students enrolled in this class will demonstrate technical competency in poetry, fiction, or non-fiction. The curriculum includes interactions with working writers, research and focused study of mentor texts, and opportunities for performing and/or publishing work. By the end of the course, students will produce a body of work in their selected genres. All portfolio students will participate in a public reading of their work.

## **ELA20 CP2 INTRO TO FILM** **ELA20H**

**2.5 credits**

This course provides students with an introduction to film as an important form of art, communication, and culture. Students will learn to “read” the language of film so that they will better understand and appreciate how movies impact their audiences.

The course will offer an in-depth analysis of different kinds of films and the key technical and critical concepts used in understanding them. Students should expect to engage in critical analysis of individual scenes and whole films, as well as read and write about film. Creative independent and group projects will challenge students to interpret, and even create, their own films.

Besides being a part of our daily lives, film has become an increasingly significant part of college curriculums. This course will provide a foundation for these college courses, as well as a more general foundation for interpreting film wherever students encounter it.

## **SCI24CP2**    **SCIENCE AND ETHICS**

**2.5 credits**

Prerequisites: Successful completion of Biology and Chemistry. Open to juniors and seniors.

This is a semester-long elective course. Please note that this course does not count towards the lab requirement in Science nor the core requirement in English.

In this course, offered jointly by the Science and English departments, students will explore the ethical considerations of current scientific issues. After learning about ethical theories and how to engage in reasoned argument, students will examine case studies on scientific topics such as genetically modified organisms, genetic editing, antibiotics and vaccines, gene patents, cloning, artificial intelligence, extending the human lifespan, human enhancement, endangered species, and climate change. Students will also have the opportunity to explore areas of particular interest to them. In this course, students will build their critical and creative thinking skills as they analyze and discuss real-world scientific dilemmas from different perspectives, thereby positioning themselves to be better scientists and scientifically literate citizens. Enthusiastic participation is essential for any student taking this course.

# **WORLD LANGUAGES**

Grade 9	Spanish 1/College Prep 1 Spanish 2/College Prep 1 Honors Spanish 2	French 1/College Prep 2 Honors French 1
Grade 10/11	Spanish 2/College Prep 1 Spanish 3/College Prep 2 Honors Spanish 3	French 2/College Prep 2 Honors French 2
Grade 11/12	Spanish 4/College Prep 2 Honors Spanish 4	French 3/College Prep 2 Honors French 3
Grade 12	Spanish 5/College Prep 2 Advanced Spanish 5 Honors Culture & Society of the Spanish Speaking World	French 4/College Prep 2 Honors French 4

Two years of world language study at the high school level are required for graduation. The course of study must include consecutive study of sequential courses in the same language.

There is an emphasis in all world language courses on the development of the four essential language skills pertaining to listening, speaking, reading, and writing capabilities. This is accomplished through the study of various thematic units which are not only integral to the students' immediate world but also global in scope relative to areas where French and Spanish are spoken.

To maintain honors level status a student must achieve a B in the previous prerequisite honors course.

In order to upgrade to an honors class a student must do the following:

- Achieve at minimum semester and final exam grades of A-
- Receive a teacher recommendation for the next level course
- Commit to independent study to make up for any deficiencies in background

\*Students completing Spanish II at the College Prep 1 level will have satisfied their world language requirement for graduation and may not be eligible to enroll in a Spanish III course.

## **FRENCH**

### **WLA01CP2\_FRENCH I:**

**5 credits**

An introductory course in French taught at a moderate and appropriately challenging pace designed for learners with average reading, writing and oral communicative skills and study habits. Key concepts pertaining to language learning are addressed through the organized study of various thematic units.

**WLA01H HONORS FRENCH I:****5 credits**

An introductory course in French taught at an accelerated and challenging pace for learners who demonstrate above average reading, writing, and oral communicative skills as well as relatively independent study habits. Key concepts pertaining to language learning are addressed through the focused and in depth study of various thematic units.

**WLA02CP2 FRENCH 2:****5 credits**

This course is a continuation of introductory French with a sustained focus on learning a second language and communicating effectively in the realms of listening, speaking, reading, and writing. A review of previously learned concepts complemented with further study of thematic vocabulary and supporting grammatical structures are combined to establish a basic foundation in the French language.

**WLA02H HONORS FRENCH 2:****5 credits**

This course is a continuation of introductory French with a continued focus on learning a second language and communicating effectively in the realms of listening, speaking, reading, and writing. More in depth study of thematic vocabulary and supporting grammatical structures are integrated and applied to the students' linguistic foundation previously established in French I.

**WLA03CP2 FRENCH 3:****5 credits**

This intermediate level French course is designed for students with a good working knowledge of the French language as developed in the first two years of language study. Students continue to learn vocabulary related to particular themes and pertinent grammatical structures to help them practice and hone their listening, speaking, reading, and writing abilities in French. Cultural comparisons are also incorporated as they pertain to the larger French speaking world.

**WLA03H HONORS FRENCH 3:****5 credits**

A more advanced French course designed for students with strongly developed foundational linguistic skills as honed during the previous two years of language study. Students continue to examine thematic topics in a highly detailed and thorough manner while learning and applying more complex grammatical structures while also considering different cultural aspects of French and the French speaking world from a global perspective.

**WLA04CP2 FRENCH 4:****5 credits**

A more advanced French course designed for students who are prepared to further their understanding of the French language and related culture. Topical vocabulary pertaining to given themes and more complicated grammatical structures are introduced in conjunction with a systematic review of previously learned concepts. Students completing this course will be reasonably conversant on a variety of topics in French and will be able to apply their knowledge to some novel situations with relative fluency.

**WLA04H HONORS FRENCH 4:****5 credits**

This is a considerably advanced French course which continues to build upon the complexities of the French language through the sophisticated examination of relevant linguistic, grammatical, and cultural concepts. Students completing this rigorous course will have developed a high functional ability in French and will be able to apply their knowledge of the language and culture in meaningful ways and in varied and unique situations with a strong degree of fluency.

# **SPANISH**

## **WLA06 CP1 SPANISH 1:**

**5 credits**

A basic, introductory course in Spanish taught at a deliberate pace with continuous structured and scaffolded repetition and review built into all thematic units of study. This course is designed for students with emerging language and study skills who would benefit from a highly organized and gradual approach to language learning. Effective study strategies and methods are actively promoted to assist students in learning the basic components of the Spanish language.

## **WLA 07CP1 SPANISH 2:**

**5 credits**

This course is a continuation of College Prep level Spanish 1 with an emphasis on the practical understanding of the Spanish language. A careful review of previously taught concepts allows students to strengthen their linguistic foundation prior to the introduction of novel thematic topics of study. Pertinent vocabulary and related grammatical structures are taught using a variety of methods and at a highly structured and deliberate pace with a focus on how these new concepts relate to those more familiar in nature. Students completing this course will have satisfied their world language requirement for graduation and may only continue their language study with an appropriate teacher recommendation.

## **WLA07CP2 SPANISH 2:**

**5 credits**

This course, taught at a moderate and appropriately challenging pace, is designed for learners with average reading, writing, and oral communicative skills and study habits. It is a continuation of introductory Spanish with a sustained focus on learning a second language and communicating effectively in the realms of listening, speaking, reading, and writing. A review of previously learned concepts complemented with further study of thematic vocabulary and supporting grammatical structures are combined to establish a basic foundation in the Spanish language.

## **WLA07H HONORS SPANISH 2:**

**5 credits**

This Spanish course is taught at an accelerated and challenging pace for learners who demonstrate above average reading, writing, and oral communicative skills as well as relatively independent study habits. It is a continuation of introductory Spanish with a sustained focus on learning a second language and communicating effectively in the realms of listening, speaking, reading, and writing. More in depth study of thematic vocabulary and supporting structures are integrated and applied to the students' linguistic foundation previously established at the introductory level of Spanish.

## **WLA08CP2 SPANISH 3:**

**5 credits**

This intermediate level Spanish course is designed for students with a good working knowledge of the Spanish language as developed in the previous years of language study. Students continue to learn vocabulary related to particular themes and pertinent grammatical structures to help them practice and hone their listening, speaking, reading, and writing abilities in Spanish. Cultural comparisons are also incorporated as they pertain to the larger Spanish speaking world.



**WLA08H HONORS SPANISH 3:****5 credits**

A more advanced Spanish course designed for students with strongly developed foundational linguistic skills as honed during previous years of language study. Students continue to examine thematic topics in a highly detailed and thorough manner while learning and applying more complex grammatical structures while also considering different cultural aspects of Spanish and the Spanish speaking world from a global perspective.

**WLA09CP2 SPANISH 4:****5 credits**

A more advanced Spanish course designed for students who are prepared to further their understanding of the Spanish language and related culture. Topical vocabulary pertaining to given themes and more complicated grammatical structures are introduced in conjunction with a systematic review of previously learned concepts. Students completing this course will be reasonably conversant on a variety of topics in Spanish and will be able to apply their knowledge to some novel situations with relative fluency.

**WLA09H HONORS SPANISH 4:****5 credits**

This is a considerably advanced Spanish course which continues to build upon the complexities of the Spanish language through the sophisticated examination of relevant linguistic, grammatical, and cultural concepts. Students completing this rigorous course will have developed a high functional ability in Spanish and will be able to apply their knowledge of the language and culture in meaningful ways and in varied and unique situations with a strong degree of fluency.

**WLA10CP2 SPANISH 5:****5 credits**

This more advanced Spanish course promotes the continuation of learning in regards to the language and related culture of the Spanish speaking world. Topical thematic vocabulary and related grammatical structures that are more sophisticated in composition are combined and integrated with previously learned concepts. Through this course of study students will ultimately complete their high school world language experience with the knowledge and skills to be reasonably competent in the realms of listening, speaking, reading, and writing in Spanish.

**WLA10 ADVANCED SPANISH 5 HONORS:****5 credits**

This in depth study of the intricacies of the Spanish language is designed for students who have consistently achieved high levels of success in all prior honors level Spanish courses and are committed to perfecting their ability to thoughtfully listen, speak, read, and write in Spanish. Students must be able to work independently using a variety of materials and resources and exhibit the ability to accept ownership of their learning. Prior approval from a language instructor(s) is necessary for enrollment in this demanding course.

**WLA14CP2 CULTURE & SOCIETY OF THE SPANISH SPEAKING WORLD****5 credits**

**Prerequisite:** Spanish 3 or higher

This elective course offers students a broad linguistic, social, and cultural perspective regarding the Spanish language and influence in our world today. Practical conversational skills will also be honed, particularly as they relate to navigating one's way through common, daily scenarios in the Spanish speaking world. Opportunities for trans-disciplinary studies within the Humanities will be presented in

order to promote and highlight the vast connections between the Spanish language and culture now and throughout history to areas including but not limited to art, music, film, literature, architecture, geography, and cuisine.

**WLA05CP2/WLA05H MUCH LATIN, LESS GREEK**

**2.5 credits**

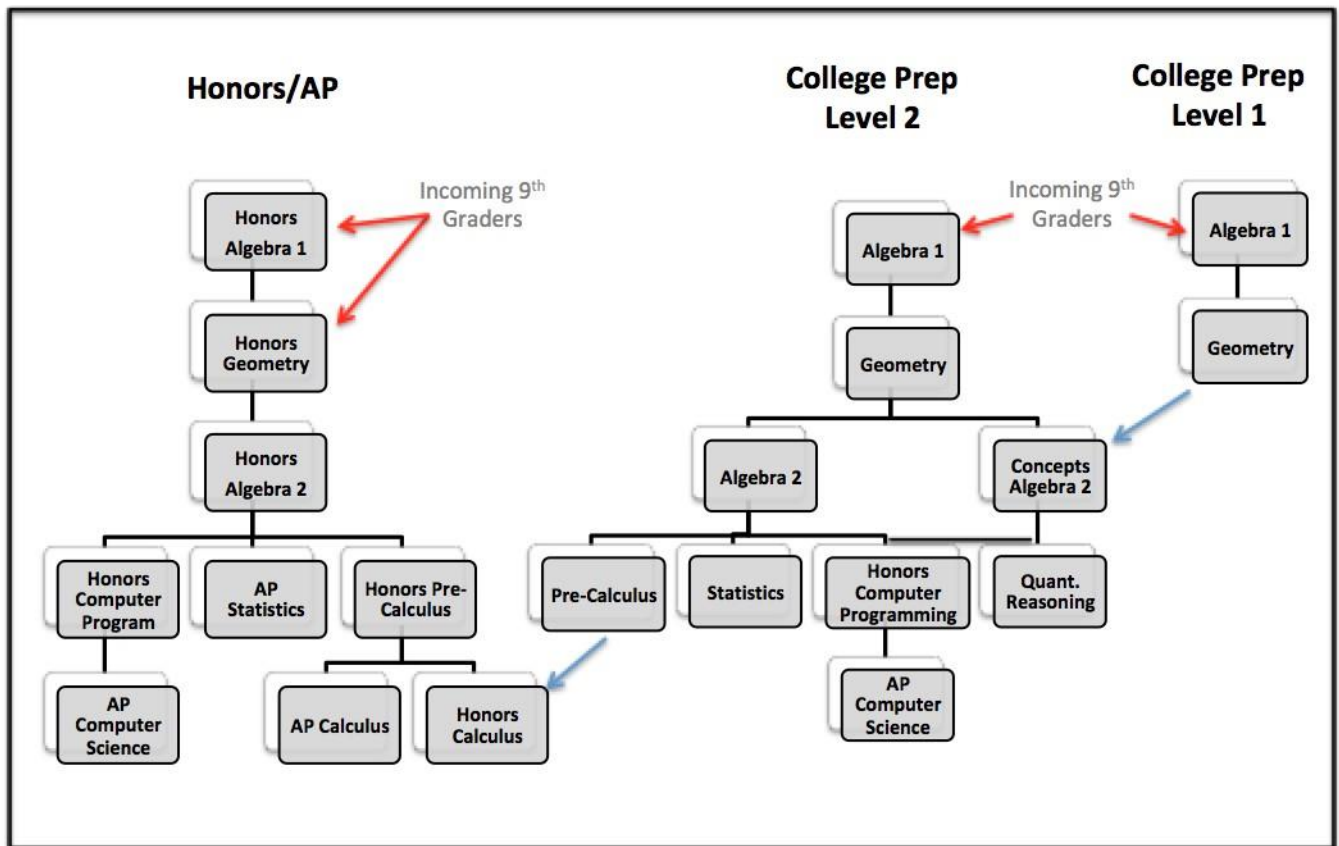
This elective course is an interesting, engaging, and unique study of the many aspects of the English language and vocabulary through a close examination of Latin and Greek and their far-reaching influence on the development of the English words we use today. A variety of etymological, linguistic, historical, mythological, cultural, and social topics are examined as the roots and origins of the English language are uncovered in surprising ways.

# MATHEMATICS

The goal of the Ipswich High School Math Department is to enhance the ability of all students to solve problems and reason quantitatively. Through a coordinated program that emphasizes application, critical thinking, logic, and mathematical communication, IHS students develop the quantitative skills they need for college and career readiness.

Core mathematics courses are differentiated by level of difficulty. Movement between levels is encouraged and placement in each level is determined by prior performance in math classes and/or teacher recommendation.

## Core Math Sequences:



**Electives:** The following courses offer students the opportunity to apply mathematical concepts, but are not counted towards the core mathematics requirement for graduation

- **Personal Finance** – open to all students in grades 10 and above
- **Business and Entrepreneurship** – open to all students in grades 10 and above
- **Banking Internship** – open to students in grade 11 and 12; enrollment dependent on successful interview with Personal Finance teacher
- **ACT, SAT and Math Placement Test Preparation** – open to all students in grades 10 and above
- **Introduction to Android App Development** – open to all students
- **AP Computer Science Principals** – open to students in grades 10-12 who meet the prerequisites

**MTH01CP1 ALGEBRA 1 – COLLEGE PREP L1****5 credits****Prerequisite:** recommendation of Grade 8 teacher.

Algebra 1 CP1 reinforces the algebraic skills acquired previously and connects this knowledge to new topics. In this CP1 level course, students gain fluency in solving linear equations and linear systems and are introduced to quadratic and exponential functions. They develop their ability to represent real-life phenomena with mathematical models. Models used include linear, quadratic, and exponential functions. Where appropriate, students use writing, hands-on activities, and technology to develop conceptual understanding.

**MTH01CP2 ALGEBRA 1 – COLLEGE PREP L2****5 credits****Prerequisite:** recommendation of Grade 8 teacher.

Algebra 1 CP2 extends the algebraic concepts acquired in previous courses. Students develop fluency in writing, interpreting, and translating among various representations of functions, including linear, quadratic, and exponential functions. Arithmetic and geometric sequences are introduced and explored. Students strengthen their ability to model with mathematics and see structure in linear, quadratic and exponential expressions. Appropriate use of technology will be modeled throughout the course.

**MTH01H ALGEBRA 1 – HONORS****5 credits****Prerequisite:** recommendation of Grade 8 teacher.

Honors Algebra 1 extends the algebraic concepts acquired in previous courses and introduces students to the concept of algebraic proof. Only students who have excelled in eighth grade mathematics and have obtained the recommendation of their 8th grade teacher should be enrolled in Algebra 1 at the honors level. In this course, students develop fluency writing, interpreting, and translating among various forms of linear, quadratic, and exponential functions. Arithmetic and geometric sequences are introduced and explored. Students strengthen their ability to model with mathematics and see structure in linear, quadratic and exponential expressions. Appropriate use of technology will be modeled throughout the course.

**MTH02CP1 GEOMETRY – COLLEGE PREP L1****5 credits****Prerequisite:** CP1 Algebra 1 (passing grade) or CP2 Algebra 1 (passing grade)

The topics explored in Geometry CP1 include probability, the transformation of figures, congruence and similarity of triangles and quadrilaterals, and theorems involving circles, arcs, chords and tangents. Students learn to construct figures, prove triangles congruent or similar, use trigonometric ratios and identities to solve problems, and determine the probability of compound events. Concepts presented in CP1 Algebra 1 involving parabolas and lines are reinforced to prepare students for success in Algebra 2.

**MTH02CP2 GEOMETRY – COLLEGE PREP L2****5 credits**

Prerequisite: CP2 Algebra 1 (73 or above) or CP1 Algebra 1 (93 or above)

Geometry CP2 explores congruence, similarity, transformations and properties of triangles, polygons and circles. Algebraic connections are made as students apply geometric concepts in solving for unknown values. Students use trigonometric ratios to solve for unknown sides and angles of right triangles and to model real-life situations. Logical reasoning is developed as students use postulates and theorems to develop formal proofs. Students expand their ability to compute and interpret theoretical and experimental probabilities for compound events.

**MTH02H HONORS GEOMETRY****5 credits**

Prerequisite: recommendation of Grade 8 teacher or Honors Algebra 1 (87 or above) or CP2 Algebra (95 or above)

In Honors Geometry, students explore congruence, similarity, transformations and properties of triangles, polygons and circles. Algebraic connections are made as students apply geometric concepts in solving for unknown values. Students use trigonometric ratios to solve for unknown sides and angles of triangles and model real-life situations. Logical reasoning is developed as students use postulates and theorems to develop formal proofs based on complex and three-dimensional diagrams. Coordinate proofs using variables allows students to generalize their findings and write proofs based on deductive reasoning. Students expand their ability to compute and interpret theoretical and experimental probabilities for compound events.

**MTH04CP2 CONCEPTS OF ALGEBRA 2 – COLLEGE PREP L2****5 credits**

Prerequisite: Geometry CP1 (65 or above) or Geometry CP2 (65 or above) AND Algebra 1 CP1 (65 or above) or Algebra 1 CP2 (65 or above)

In Concepts of Algebra 2, students create and solve equations, graph functions (including polynomial, rational, radical and exponential) and apply the concept of functions to solve problems. As students refine and expand their algebraic skills, they draw analogies between the operations and properties of real numbers and those of complex numbers and algebraic expressions. The course begins with a review of functions studied in previous algebra courses and then moves on to new function types. Students make connections between verbal, numeric, algebraic, and graphical representations of functions, and apply this knowledge as they create equations and inequalities that can be used to model and solve mathematical and real world problems. Throughout the course, students use technology, where appropriate, to support problem solving and conceptual understanding.

**MTH03CP2 ALGEBRA 2 – COLLEGE PREP L2****5 credits**

Prerequisite: Geometry CP2 (73 or above) or Geometry CP1 (93 or above) AND Algebra 1 CP2 (73 or above) or Algebra 1 CP1 (93 or above)

In Algebra 2, students gain skills and conceptual understanding of functions, polynomial, rational and radical expressions, periodic phenomenon, data collection and analysis. The course begins with a review of linear, quadratic and exponential functions to solidify a foundation for learning about new function types. Students make connections between verbal, numeric, algebraic, and graphical representations of

functions, and apply this knowledge as they create equations and inequalities that can be used to model and solve mathematical and real world problems. Building on earlier training in statistics and probability, students learn to describe data sets and draw conclusions from sample surveys, experiments and observational studies.

### **MTH03H HONORS ALGEBRA 2**

**5 credits**

**Prerequisite:** Honors Geometry (83 or above) OR Geometry CP2 (93 or above) and Honors Algebra 1 (87 or above) OR Algebra 1 CP2 (95 or above)

In Honors Algebra 2, students develop fluency and conceptual understanding of functions, polynomial, rational and radical expressions, periodic phenomenon, data collection and analysis. In addition, honors students are introduced to algebraic proof and number theory concepts. Students make connections between verbal, numeric, algebraic, and graphical representations of functions, and apply this knowledge as they create equations and inequalities that can be used to model and solve mathematical and real world problems. Building on earlier training in statistics and probability, students learn to describe data sets and draw conclusions from sample surveys, experiments and observational studies.

### **MTH05CP2 PRE-CALCULUS – COLLEGE PREP L2**

**5 credits**

**Prerequisite:** CP2 Algebra 2 (73 or above) OR Concepts of Algebra 2 and Quantitative Reasoning (93 or above in both)

The goals of Pre-calculus are to strengthen students' reasoning and problem solving skills and provide the mathematical background necessary for the study of calculus. The course will cover advanced work with complex numbers and logarithms and multi-step applications of exponential, polynomial and rational functions. An introduction to vectors and matrices will be included in this course. Students will engage in mathematical tasks that connect concepts learned in their study of algebra, trigonometry and geometry. In addition, students will begin a study of limits in preparation for calculus.

### **MTH05H HONORS PRE-CALCULUS**

**5 credits**

**Prerequisite:** Honors Algebra 2 (83 or above) OR Algebra 2 CP2 (93 or above) and Honors Geometry (83 or above) OR Geometry CP2 (93 or above)

The goals of Honors Pre-calculus are to strengthen students' reasoning and problem solving skills and provide the mathematical background necessary for the study of calculus. Students advance their understanding of trigonometry, asymptotic behavior of functions, vectors and matrices. In addition, they are introduced to the concepts of a limit in preparation for calculus. Students engage in advanced problem solving and mathematical tasks that connect concepts learned in their study of algebra and geometry.

### **MTH17CP2 QUANTITATIVE REASONING – COLLEGE PREP L2** **MTH17H**

**5 credits**

**Prerequisite:** Algebra 2 (passing grade) or Concepts of Algebra 2 (passing grade)

Quantitative Reasoning is offered to students who have completed Algebra 1, Geometry and Algebra 2. Hands-on materials and data collection are used to demonstrate how the mathematical concepts students have learned throughout their schooling can be applied to solve problems they are likely to encounter in

their professional and personal lives. In this course, students will learn to analyze information, model relationships mathematically and solve complex problems. Concepts from Trigonometry, Statistics and Probability will be incorporated. As a project-based course, students are expected to work with others, share ideas, make presentations and do their highest quality work.

**MTH14CP2 STATISTICS – COLLEGE PREPL2**  
**MTH14H**

**5 credits**

Prerequisite: Algebra 2 (passing grade) or Concepts of Algebra 2 (83 or higher)

This course is designed for juniors and seniors who have completed Algebra 2 and want to learn more about applied statistics. In this course, students will collect, analyze, present and interpret data. In this course we will explore the introductory concepts of Statistics to build a foundation for further study and application.

**MTH14AP ADVANCED PLACEMENT STATISTICS**

**5 credits**

Prerequisite: Honors Algebra 2 (87 or above) and department recommendation

This course follows the Advanced Placement syllabus issued by the College Board. The purpose of the course is to introduce students to the major concepts and tools for collecting, analyzing and drawing conclusions from data. Students will be exposed to four broad conceptual themes: describing data patterns and departures from patterns, planning and conducting a study; exploring random phenomena using probability and simulation, and using sample data to draw inferences about a population. All students who take AP Statistics are required to take the AP exam in May.

**MTH06H HONORS CALCULUS**

**5 credits**

Prerequisite: Honors Pre-Calculus (83 or above) or Pre-Calculus (93 or above)

In Honors Calculus, students develop an intuitive understanding of the three main concepts of calculus: the limit, the derivative, and the integral. A brief review of pre-calculus topics is followed by the study of limits and differentiation. Integration techniques will be explored and applied in the final unit of the course. Emphasis throughout the course is on the student's ability to use calculus as a tool for solving a variety of problems from fields such as economics, physics, chemistry and biology.

**TH06AP ADVANCED PLACEMENT CALCULUS AB**

**5 credits**

**Prerequisite:** Honors Pre-Calculus (93 or above) and department recommendation

This course follows the Advanced Placement syllabus issued by the College Board. Students who enroll in this course must have a strong Honors Algebra 2 and Honors Pre-Calculus background, excellent abstract reasoning skills, and study habits commensurate with the rigorous expectations of this course. In AP Calculus, students develop the skills and conceptual understandings acquired in a college-level Calculus 1 course. An intensive study of limits, derivatives, techniques of integration and the Fundamental Theorem of Calculus is combined with applications of these topics. All students who take AP Calculus AB are required to take the AP exam in May.

**MTH07CP2 COMPUTER SCIENCE DISCOVERIES**  
**MTH07H**

**2.5 credits**

Computer Science Discoveries (CS Discoveries) is an introductory computer science course that empowers students to complete projects aligned with their interests and engage with computer science as a medium for creativity, communication, problem solving, and fun. Students will learn basic programming concepts as they create webpages, event-driven applications (APPS) and games in HTML/CSS and JavaScript. They will explore the role of computer science in devices as they write code to integrate with sensors and other hardware. Students will additionally learn the interplay between computer science and product development, intellectual property ownership and electronic security. This course will help students understand how computer science can be used to entertain, inform and solve problems.

**MTH08H HONORS COMPUTER PROGRAMMING**

**5 credits**

Prerequisites: Completed Geometry CP2 (B or above) and English 9 (B or above).

This course provides students with an introductory experience in computer programming using the Java language. Students will examine object-oriented principles (abstraction, encapsulation, inheritance and polymorphism), basic data structures, arrays, searching, sorting, and Boolean logic. An introduction into building graphical user interfaces using Java AWT and Swing packages completes the course. This course prepares students who intend to take the AP Computer Science course.

**MTH09AP AP COMPUTER SCIENCE**

**5 credits**

Prerequisite: MTH08H Honors Computer Programming or equivalent course, or permission of the instructor.

This course follows the Advanced Placement© syllabus issued by the College Board each year and is implemented in the Java language. Current topics include object-oriented principles (abstraction, encapsulation, inheritance and polymorphism), arrays, searching, sorting, and recursion. Themes include communicating through documentation, re-usability of code, and socio-ethical aspects of computing. As time permits, students may explore applets, GUIs, and additional data structures.

**MTH16AP AP COMPUTER SCIENCE PRINCIPLES**

**5 credits**

**Elective Course:** Open to students in grades 10-12

**Prerequisite:** 88 or above in both Honors Algebra 1 and Honors Geometry, and permission of the instructor.

AP Computer Science Principles offers a multidisciplinary approach to the underlying principles of computational thinking. Students are introduced to computational problem solving, abstractions, algorithms, large data sets, the internet, cybersecurity, basic programming, and the creative aspects of computer science; AP Computer Science Principles gives students the opportunity to use technology to solve problems of interest to the student. This course incorporates a great deal of independent work and collaboration with peers, so academic maturity is essential for success. No prior knowledge of computer science is required.



**MTH10CP2 BUSINESS AND ENTREPRENEURSHIP**  
**MTH10H**

**2.5 credits**

**Elective Course:** Open to students in grades 10-12

In this course, students learn the skills, attitudes, characteristics, and techniques necessary to become successful business owners or entrepreneurs. They explore the process of starting a business and learn about the operational issues and financial risks. Students will gain an understanding of business plans, start-up capital, and bookkeeping methods. Finally, students identify the risks, returns, and other aspects of entrepreneurship as a potential career.

**MTH12CP2 PERSONAL FINANCE**  
**MTH12H**

**2.5 credits**

**Elective Course:** Open to students in grades 10-12

**Prerequisite:** Passing grade in Algebra 1 (any level)

Personal Finance provides students with many of the tools necessary to become financially responsible adults. Students will learn about the importance of setting financial goals, the power of compound interest, responsible use of credit and bank accounts, and how to budget and save money. The basics of taxes, investing, insurance, and how to evaluate a benefits package at work will also be explored. Personal Finance is highly recommended for all students who have completed Algebra 1.

**MTH13CP2 BANKING INTERNSHIP**

**2.5 credits**

**Elective Course:** Open to students in grades 11-12

**Prerequisite:** Approval of Personal Finance teacher

The banking internship is a work-study program that takes place in the school bank each day. This is an opportunity to gain work experience and learn about how banks operate. Interns will learn how to handle cash, record transactions, balance a cash drawer, and use banking software. They will learn about the Federal Reserve System, products and services offered by banks, and regulations related to banking. A small number of students will be allowed to participate in the banking internship during each semester that it is offered. Final selection of these students will be based on an interview with the school bank coordinator.

**MTH15CP2 ACT, SAT and MATH PLACEMENT TEST PREPARATION**

**2.5 credits**

**Elective Course:** Open to students in grades 10-12

This is a semester course of intensive preparation for the math section of the ACT, SAT, and college placement tests. Students will work at their own pace to review key concepts in arithmetic, algebra, geometry and data analysis. The class will take place in a “blended learning” environment, in which students use on-line tools and test prep materials to assess their current strengths and weaknesses and develop a strategy for improving their performance on the SAT. The teacher will act as a coach, helping students set and achieve their personal goals for test-taking success. This course is recommended for college-bound sophomores, juniors and seniors who want to improve their standardized test scores.

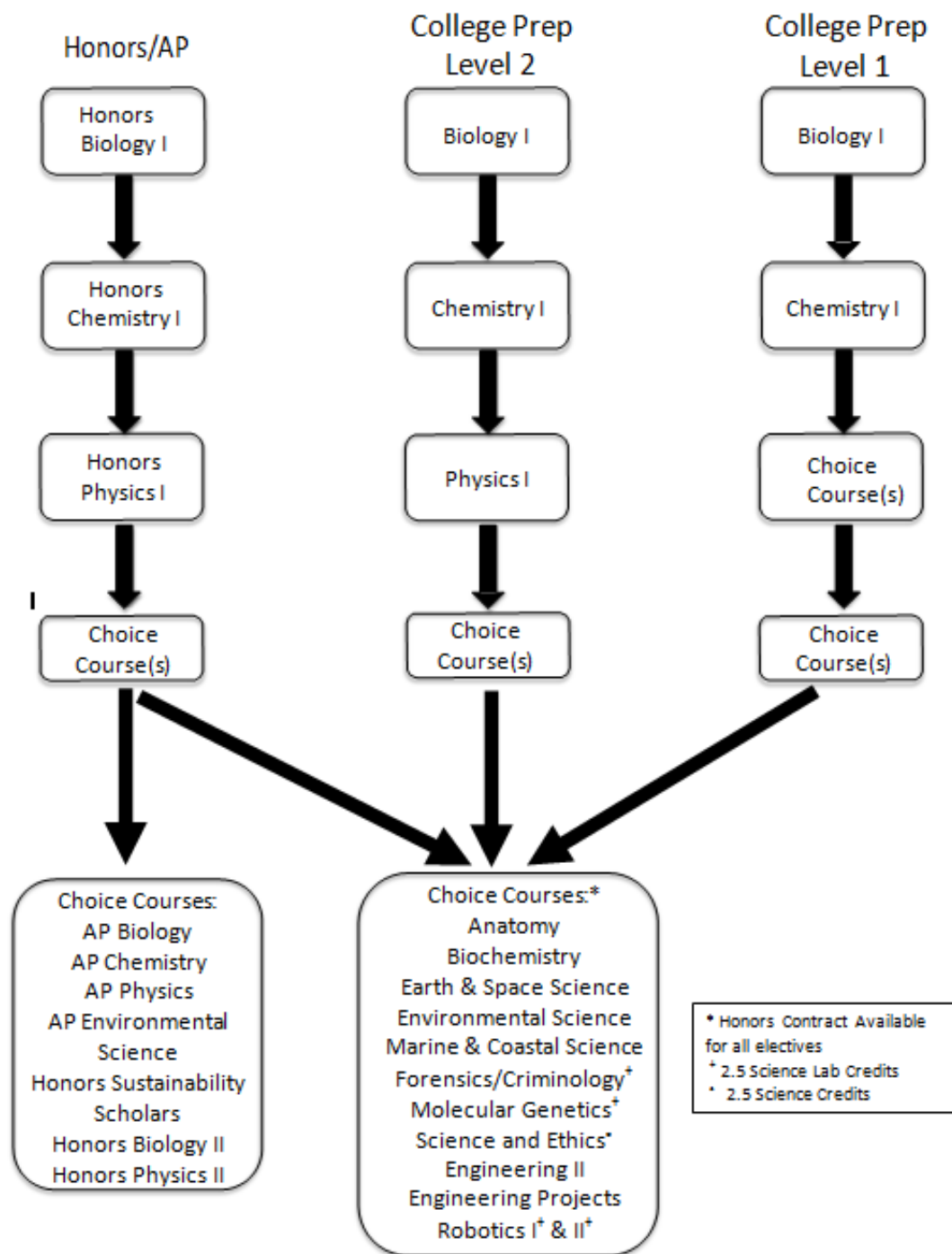
MTH30PC1 Algebra Enriched

2.5 credits

Elective Course: Open to students in grades 9-10 by teacher invitation only

Algebra Enriched reinforces the algebraic skills necessary for success in both the core IHS mathematics sequence and standardized tests. Students in this course will be supported in working with variables solving equations, graphing functions, and solving applied algebra and geometry problems. Special attention will be devoted to working with quadratic expressions, functions and equations. Ninth and tenth grade students who could benefit from support in developing their algebraic thinking skills will be invited to enroll in this semester course concurrently with their core Algebra 1 or Geometry course. Please note the elective credit will be awarded for Algebra Enriched and this course may not be used to replace any course in the core mathematics sequence.

# SCIENCE



**SCI01CP1 BIOLOGY I - COLLEGE PREP L1 (LAB)****5 credits**

This is a basic college preparatory biology lab science course developed to address the following topics: the chemistry of life, cell biology, genetics, human anatomy & physiology, evolution, & ecology. The textbook reading level and the pacing of the topics, activities, and lab experiences in this course are designed to help students to develop independent study skills. Students will understand the most essential concepts of biology as determined by state standards. Opportunities to apply these concepts will be provided throughout the learning experience.

**SCI01CP2 BIOLOGY I - COLLEGE PREP L2 (LAB)****5 credits**

This is a college preparatory biology lab science course developed to address the following topics: the chemistry of life, cell biology, genetics, human anatomy & physiology, evolution, & ecology. The textbook reading level and the pacing of the topics, activities, and lab experiences in this course are designed to foster independent study skills. Students will understand the most essential concepts of biology as determined by state standards. Opportunities to apply these concepts will be provided throughout the learning experience.

**SCI01H BIOLOGY I HONORS (LAB)****5 credits**

**Prerequisites:** approval by grade eight teacher/team, student has demonstrated the ability to use independent study skills.

This is an advanced college preparatory biology lab science course developed to address the following topics: the chemistry of life, cell biology, genetics, human anatomy & physiology, evolution, & ecology. The textbook reading level and the pacing of the topics, activities, and lab experiences in this course are designed for students who have developed independent study skills. Students will understand and apply the most essential concepts of biology as determined by state standards.

**SCI02H HONORS BIOLOGY II (LAB)****5 credits**

**Prerequisites:** Honors Biology and Honors Chemistry with a B or better, or with CP Biology and Chemistry with an A- or better.

This is an advanced biology course that emphasizes independent science inquiry and lab research skills. This course will address selected topics from the following areas: biochemistry, metabolism, cellular processes, heredity, molecular genetics, animal behavior, ecology, and evolution. The content will be selected to support the lab work. Students will choose a topic and conduct an independent science investigation that expands on one of the topics addressed in this course. Students will organize their work and present it to their peers for review. A formal lab report will also be written to document the work of each project.

**SCI03AP ADVANCED PLACEMENT (LAB) BIOLOGY™****5 credits**

**Prerequisites:** Honors Biology and Chemistry with a B or better, or CP Biology and Chemistry with an A- or better, and department approval.

This course is the equivalent to an Introduction to Biology course taken in the first year of college. The curriculum addresses the new standards as outlined by the College Board and includes the following units: animal behavior and ecology; atoms, molecules and organelles; cells and cell processes; cellular

energetics; evolution and genetics. Four big ideas are used thematically to help students make important connections across the curriculum. Additionally, there are seven scientific practices emphasized that require students to design and carry out lab activities, analyze data, and make graphical and statistical representations of data.

Students taking AP Biology will complete a self-directed unit of study during the summer and are required to take the AP examination in Biology in May.

### **SCI04CP1 CHEMISTRY I – COLLEGE PREP L1 (LAB)**

**5 credits**

**Prerequisites:** Biology I and departmental approval

In this course students will develop a basic understanding of chemistry. Course topics include scientific measurements, states of matter, structure of the atom, the periodic table, bonding, naming compounds, formula writing, chemical reactions, the mole, and an introduction to stoichiometry. Hands-on laboratory experiments will help students understand chemistry concepts and build proper laboratory techniques. Students will also work on developing problem solving skills.

### **SCI04CP2 CHEMISTRY I – COLLEGE PREP L2 (LAB)**

**5 credits**

**Prerequisites:** Biology I

In this course students will develop a foundational understanding of chemistry. Course topics include scientific measurements, states of matter, structure of the atom, the periodic table, bonding, naming compounds, formula writing, chemical reactions, the mole, and stoichiometry. Hands-on laboratory experiments will help students understand and begin to apply chemistry concepts and to build proper laboratory techniques. Students will also work on fostering problem solving skills and communicating their laboratory findings.

### **SCI04H HONORS CHEMISTRY I (LAB)**

**5 credits**

**Prerequisites:** Honors Biology with a B+ or better, or CP2 Biology with an A, completion of Honors Algebra I with an A or better **AND** departmental approval.

This course is more mathematical and moves at a faster pace than Chemistry I. Strong writing, mathematical and analytical skills are required. Algebraic concepts will be applied extensively. Topics presented throughout the course will include atomic structure, states and composition of matter, Periodic Table trends, formula writing and chemical bonding, chemical reactions, moles, stoichiometry and gas laws.

### **SCI05CP2 BIOCHEMISTRY (LAB)**

**5 credits**

#### **SCI05H**

**Prerequisites:** Completion of Biology CP2 with a B or Honors Biology with a B- **AND** completion of Chemistry CP2 with a B or Honors Chemistry with a B-

Do you love biology and chemistry? This course will show you how they work together. We will begin with organic chemistry of the fundamental structures and reactions found in biological systems. We will then survey the fundamentals of the chemistry of living systems including the structure, function and metabolism of proteins, carbohydrates, lipids and nucleic acids. We will also discuss concepts in cell structure, replication and growth and metabolic regulation. Biotechnology, such as DNA fingerprinting,

use of restriction enzymes, bacterial transformation and protein purification will be explored.

This course requires skill in basic calculations associated with chemistry, reading complex texts and scientific journals, scientific writing associated with completing lab reports and technical reviews of scientific articles.

An Honors contract is available with approval of the teacher.

**SCI06AP ADVANCED PLACEMENT CHEMISTRY™ (LAB)**

**5 credits**

Prerequisites: Honors Biology and Honors Chemistry I with a test average of A- or better AND departmental approval.

This course is the equivalent of a general course in chemistry taken in the first year of college. The course deals with complex topics in chemistry according to standards established by the College Board, with an emphasis on data analysis, problem solving and advanced inquiry and reasoning skills. Topics include bonding and intermolecular forces, thermochemistry, kinetics, equilibrium, acid/base reactions, electrochemistry, and introduction to organic chemistry and laboratory techniques. Students are required to take the AP examination in Chemistry in May.

**SST04CP2 FORENSIC SCIENCE/CRIMINOLOGY CP2 (2.5 Lab)**

**5 credits**

**SST04H**

Dual listing as Science and Social Studies Department (2.5 credits from each department)

Prerequisites: Successful completion of chemistry with C. Open to Juniors and Seniors. Please note that this course does not count towards the core requirement in science or social studies.

In this course, offered jointly by the Social Studies and Science Departments, students will explore criminal justice theories and examine forensic science. Utilizing statistics, characteristics of criminal behavior, chemistry, biology and other scientific fields of study, students will apply the core knowledge of the course to actual criminal cases. Students will become skilled at such analytical methods as securing crime scenes, collecting and preserving evidence, fingerprinting and DNA analysis. This course will cover the various biological, psychological and sociological aspects of crime in U.S. society. Students will be provided with an ability to perform basic forensic techniques and use appropriate scientific procedures that follow established guidelines for admissible evidence. Students will document results and draw conclusions employing criminology and forensic terminology. Students will explore such topics as juvenile justice and capital punishment. Within a lab setting, students will gain hands-on experience in the use of current investigative techniques. Participating in a mock crime scene and trial will be the capstone project for the course.

An Honors contract is available with approval of the teachers. Students who have taken Criminal Justice are also eligible to enroll.

**SCI07CP2 PHYSICS 1 CP2 (LAB)****5 credits**

Prerequisites: Biology and Chemistry with a C or better and Geometry and Algebra 1 with a C or better.

Physics 1 is designed for juniors and seniors interested in pursuing a challenging college preparatory curriculum. The course concentrates on a systemic understanding of fundamental physics and physical processes. A strong emphasis is placed on laboratory investigations and analytical thinking through conceptual and mathematical modeling. Topics covered are classical mechanics including kinematics, dynamics (forces), work, energy, momentum, rotational dynamics, waves, electrostatics, and electric circuits.

**SCI07H HONORS PHYSICS 1 (LAB)****5 credits**

Prerequisites: Honors Biology and Honors Chemistry with a B+ or better and Honors Geometry and Honors Algebra 2 with a B+ or better.

Honors Physics 1 is an in-depth physics class recommended for juniors and seniors interested in pursuing a challenging college preparatory curriculum, and considering a curriculum of science, mathematics, or engineering in college. The course concentrates on a systemic understanding of fundamental physics and physical processes. Independent learning is a cornerstone of the course with students being required to demonstrate strong reasoning and writing skills. Emphasis is placed on laboratory investigations and analytical thinking through conceptual and mathematical modeling. Topics covered are classical mechanics including kinematics, dynamics (forces), work, energy, momentum, rotational dynamics, waves, electrostatics, and electric circuits.

**SCI08H HONORS PHYSICS 2 (LAB)****5 credits**

**Prerequisites:** B or better in Honors Physics 1 or A- or better in Physics 1.

This is an intensive project-based course in Physics which requires students to use the scientific method and apply their knowledge of physics to solutions that will benefit society. Students will choose to deepen their experience in a specific area of physics.

**SCI09AP ADVANCED PLACEMENT PHYSICS (LAB)**<sup>TM</sup>**5 credits**

**Prerequisites:** Honors Biology and Honors Chemistry with a B+ or better and Science Department approval.

A.P. Physics 1 is an algebra-based college-level course open to juniors and seniors meeting the prerequisites. The course focuses on the big ideas typically included in the first semester of algebra-based, introductory college-level physics sequence and provides students with enduring understandings to support future advanced course work in the sciences. Through inquiry-based learning, students will develop critical thinking and reasoning skills, as defined by the A.P. Science Practices. A minimum of 25% of instruction time involves laboratory investigations. Topics covered are kinematics, dynamics (forces), work, energy, momentum, rotational dynamics, mechanical waves, sound, electrostatics, and electric circuits.

**SCI10CP2 EARTH AND SPACE SCIENCE (LAB)****5 credits****SCI10H**

Prerequisites: Biology and Chemistry (Honors contract is available for students who have passed honors classes with a B-, or college level with a B and department approval).

This course is designed to examine the workings of the universe and the earth. Students will become aware that the various “spheres” are always interacting. Students will also investigate advances in earth and planetary exploration and examine the findings to develop understandings of how the earth works. The course will involve students in hands on activities, independent work, group work, and presentations. Course topics include: geology, oceanography, astronomy, climate change and meteorology.

**SCI11CP2 MARINE AND COASTAL SCIENCE (Lab)****5 credits****SCI11H**

**Prerequisites:** Biology and Chemistry (Honors contract is available for students who have passed honors classes with a B-, or college level with a B and department approval).

This course is designed for students who have an interest in the marine world and its interactions with the coast. Students will learn about topics in the four main branches of oceanography: geological, chemical, physical, and biological. Through discussions, readings, and hands on activities in and out of the classroom, students will gain perspectives into how the systems of the ocean influence each other and life on land. Topics will include the formation of the ocean, currents, winds, tides, plankton, marine plants, invertebrates, fish, large marine vertebrates, and human impact.

**SCI12CP2 ANATOMY(LAB)****5 credits****SCI12H**

**Prerequisites:** Honors Biology and Honors Chemistry with a B- or better, or Biology CP2 and Chemistry CP2 with a B or better and Department approval.

This course will give students an understanding of the structure and function of the human body. Units will cover levels of organization, chemistry of life, cells and tissues, homeostasis, skeletal system, muscular system, nervous system, endocrine system, circulatory system, respiratory system, digestive system, metabolism, urinary system, integumentary system, and reproductive system, including reference and research skills. Fetal Pig dissections are also a part of this course.

**SCI14CP2 ENVIRONMENTAL SCIENCE (LAB)****5 credits****SCI14H**

Prerequisites: Biology and Chemistry (Honors contract is available for students who have passed honors classes with a B-, or college level with a B and department approval).

This course will study human impact on the environment through examining the topics of aquatics, ecology, populations, energy resources and consumption, pollution, and global change. Students will identify and analyze environmental problems through hands-on investigations both in the classroom and in our local ecosystems. They will apply scientific processes and concepts in order to better understand our natural systems and to critically think about environmental issues and potential solutions.



**SCI13H HONORS SUSTAINABILITY SCHOLARS (LAB)****5 credits**

Prerequisites: Honors Biology and Chemistry with a B or better or Biology and Chemistry with an A- or better and department approval.

Scholars work individually or in groups to complete a project which addresses an environmental sustainability issue and fills a need in the school district or greater community. This class places the power and responsibility for creating community-based solutions to environmental challenges in the hands of the students. While implementing their solutions, students learn project management skills such as defining goals, determining budgets and time-lines, problem solving, and continual improvement processes. Scholars often collaborate with a community partner as well as their teacher to identify issues and work to make positive change happen. Scholars are given an extremely high level of responsibility and require a great amount of self-discipline.

**SCI24CP2 SCIENCE AND ETHICS****2.5 credits**

**Prerequisites:** Successful completion of Biology and Chemistry. Open to juniors and seniors. Semester-long elective course, please note that this course does not count towards the lab requirement in Science nor the core requirement in English

In this course, offered jointly by the Science and English departments, students will explore the ethical considerations of current scientific issues. After learning about ethical theories and how to engage in reasoned argument, students will examine case studies on scientific topics such as genetically modified organisms, genetic editing, antibiotics and vaccines, gene patents, cloning, artificial intelligence, extending the human lifespan, human enhancement, endangered species, and climate change. Students will also have the opportunity to explore areas of particular interest to them. In this course, students will build their critical and creative thinking skills as they analyze and discuss real-world scientific dilemmas from different perspectives, thereby positioning themselves to be better scientists and scientifically literate citizens. Enthusiastic participation is essential for any student taking this course.

**SCI25CP2 MOLECULAR GENETICS (Lab)****2.5 credits**

**Prerequisites:** B or better in CP Biology and CP Chemistry, C+ or better in Honors Biology and Honors Chemistry. This course will be a one semester elective science course worth 2.5 science credits. When taken in conjunction with Forensics, it will fulfill one year of a lab science requirement.

The rise of personal genomic sequencing services, such as 23andme, and the promise of individualized genomic medicines to cure illness and disease have made it increasingly important for people to have a deeper understanding of genetics and genomic research. In this course, students will be introduced to recent advances in genetics, building on their understanding of Mendelian genetics (e.g. dominant/recessive Punnett square analysis). Students will learn about the DNA tools researchers' use, such as DNA sequencing and SNPs, the role that epigenetics and gene control play on genetic expression, and how genetic sequences and frequencies can be used to study populations. Students will conduct hands-on activities and labs to isolate, amplify, analyze, and interpret DNA sequence data.

**SCI28AP AP ENVIRONMENTAL SCIENCE****5 credits**

Prerequisites: Honors Biology and Honors Chemistry with a B+ or better AND departmental approval.

This class is equivalent to a first-year college-level course that incorporates both physical and ecological sciences in the study of environment. Topics addressed in the APES course outlined by the College Board

include Ecology, Evolution, Biodiversity, Populations, Resources, Public Lands, Agriculture, Water Pollution, Air Pollution, Environmental Health, Waste, Energy, Global Change Sustainability and Environmental Economics and Equity. There will be an emphasis on data analysis, problem-solving and advanced inquiry and reasoning skills and therefore students should have a strong background in math. Students taking AP Environmental Science will complete a self-directed unit of study during the summer and are required to take the APES examination in May.

# **SOCIAL STUDIES**

	<u>HONORS/AP</u>	<u>COLLEGE PREP L2</u>	<u>COLLEGE PREP L1</u>
Grade 9	Honors World History 9	World History 9	World History 9
Grade 10	Honors American Survey	American Survey	American Survey
Grade 11	Honors Global Studies and a Social Studies elective AP U.S. History AP World History AP Psychology AP U.S. Government	Global Studies and a Social Studies elective	
Grade 12	Honors American Government and a Social Studies Elective or A.P. U.S. History A.P. World History A.P. Psychology A.P. U.S. Government	American Government and a Social Studies Elective	

## **Electives: (2.5 credits)**

Psychology I

Student Leadership

Current Events

Law & Individual Rights  
in the United States

Criminal Justice

Criminology/Forensics

Modern Europe

All elective courses are available for honors credit through the completion of an honors contract approved by the course teacher and with the recommendation of the student's most recent Social Studies teacher.

## **NINTH GRADE**

Freshman Social Studies classes will focus on the development of empires through World War I. It will help students to develop an understanding of the forces of history that led to the dominance of Europe, the development of Asia, and the causes of global conflict. Class placement is contingent upon the recommendation of their eighth grade Social Studies teacher

### **SST15CP1**

### **WORLD HISTORY 9 CP1**

**5 credits**

Designed for students with average reading and writing skills

This course will examine world history from the development of empires through World War I. It will help students to develop an understanding of the forces of history that led to the dominance of Europe, the development of Asia, and the causes of global conflict. Topics studied will include the Renaissance & Reformation, the development of nationalism, the industrial revolution and WWI.

### **SST15CP2**

### **WORLD HISTORY 9 CP2**

**5 credits**

Designed for students with above-average reading and writing skills

This course will examine world history from the development of empires through World War I. It will help students to develop an understanding of the forces of history that led to the dominance of Europe, the development of Asia, and the causes of global conflict. Topics studied will include the Renaissance & Reformation, the development of nationalism, the industrial revolution and WWI.

### **SST15H**

### **HONORS WORLD HISTORY 9**

**5 credits**

Designed for students with high reading speed and comprehension skills as well as above average writing ability

This course will examine world history from the development of empires through World War I. It will help students to develop an understanding of the forces of history that led to the dominance of Europe, the development of Asia, and the causes of global conflict. Topics studied will include the Renaissance & Reformation, the development of nationalism, the industrial revolution and WWI.

## **TENTH GRADE**

The sophomore Social Studies program provides students with an overview of American History. The course will begin with the development of the Constitution and move on to the actions that drove the country toward Civil War. Students will then continue on with westward expansion, industrialization, American imperialism, and the Cold War. Students take courses at appropriate learning levels in accord with prior achievement and the ninth grade teacher's recommendation.

### **SST33CP1**

### **AMERICAN SURVEY CP1**

**5 credits**

Designed for students with average reading and writing skills

This 10th grade history class will provide students with an overview of American History. The course will begin with the development of the Constitution and move on to the actions that drove the country toward Civil War. Students will then continue on with westward expansion, industrialization, American

imperialism, and the Cold War. Students will work on skills ranging from claim building, providing support for an argument, document based essay questions and the proper use of documentation.

**SST33CP2**

**AMERICAN SURVEY CP2**

**5 credits**

Designed for students with above average reading and writing skills

This 10th grade history class will provide students with an overview of American History. The course will begin with the development of the Constitution and move on to the actions that drove the country toward Civil War. Students will then continue on with westward expansion, industrialization, American imperialism, and the Cold War. Students will work on skills ranging from claim building, providing support for an argument, document based essay questions and the proper use of documentation.

**SST33H**

**HONORS AMERICAN SURVEY**

**5 credits**

Designed for those students with strong reading comprehension and writing skills

Prerequisite: A grade of A-or above in Modern World or a B or above in Honors Modern World and the recommendation of the Modern World teacher.

This 10th grade history class will provide students with an overview of American History. The course will begin with the development of the Constitution and move on to the actions that drove the country toward Civil War. Students will then continue on with westward expansion, industrialization, American imperialism, and the Cold War. Students will work on skills ranging from claim building, providing support for an argument, document based essay questions and the proper use of documentation.

**ELEVENTH GRADE**

Junior year students have a number of options for Social Studies classes. Students can opt for the semester long Global Studies course that may be taken at the college prep or honors level and should be paired with a Social Studies elective. Students with a 90 or above in honors American Survey may opt to take an Advanced Placement class.

**SST34CP2 GLOBAL STUDIES**

**2.5 credits**

**SST34H**

**Prerequisite:** 11<sup>th</sup> and 12<sup>th</sup> graders only

Global citizenship education is an essential part of creating students who are prepared to compete in the 21st century. This course is designed to answer the question, “what is a global citizen?” Global Studies will introduce students to the past, present, and future trends of globalization with a specific focus on equity (poverty, education, and Human rights), peace (domestic crime, international crime, non-state conflicts, and state conflicts), and sustainability (population, energy, and environment).

Global Studies is available for honors credit through the completion of an honors contract approved by the course teacher and with the recommendation of the student’s most recent Social Studies teacher.

## **TWELFTH GRADE**

### **SST02CP2 AMERICAN GOVERNMENT** **SST02H**

**2.5 credits**

**Prerequisite:** 11<sup>th</sup> and 12<sup>th</sup> graders only

The goal of this course is to make students aware of the general functioning of government at the local, state and national levels and how students may assume an active role as citizens. Responsible citizenship and decision –making processes will be emphasized.

## **ADVANCED PLACEMENT CLASSES**

### **SST21AP ADVANCED PLACEMENT PSYCHOLOGY**

**5 credits**

**Prerequisite:** A- average in the latest honors Social Studies course and approval by the Social Studies Department faculty.

The Advanced Placement course in Psychology is designed similarly to an introduction to psychology course in college. The purpose of the course is to introduce students to the systematic and scientific study of human behavior. The topics covered will be similar to those in an introductory college class: social psychology, history, careers, theories, and research methods, biological bases of behavior, sensation/perception, consciousness, learning, memory, cognition, development, personality, stress, disorders and treatment. The course will include nightly rigorous reading assignments accompanied by critical thinking questions. Numerous assessment methods will be used, including vocabulary quizzes, unit exams, research assignments and free-response writing questions. Various class demonstrations and activities will also be incorporated to encourage student participation and application of psychological concepts in the “real world.”

### **SST17AP ADVANCED PLACEMENT U.S. HISTORY**

**5 credits**

**Prerequisite:** A- average in the latest honors Social Studies course and approval by the Social Studies Department faculty.

This course is designed as a college level course to provide students with the analytical skills and factual knowledge necessary to deal critically with the problems and materials of United States History. Students will be prepared to enter college prepared for intermediate and advanced college courses. Students will learn to assess historical materials — their relevance to a given interpretive problem, their reliability and their importance — and to weigh the evidence and interpretations presented in historical scholarship. This course will develop the skills necessary to arrive at conclusions on the basis of an informal judgment and to present reasons and evidence clearly and persuasively in essay format. Students are required to take the Advanced Placement U.S. History examination.

### **SST19AP AP US GOVERNMENT**

**5 credits**

**Prerequisite:** A- average in the latest honors Social Studies course and approval by the Social Studies Department faculty.

The AP course in United States Government and Politics is designed to give students an analytical perspective on government and politics in the United States. This course includes both the study of general concepts used to interpret U.S. government and politics and the analysis of specific examples through the use of primary and secondary source documents. It requires familiarity with the various institutions, groups, beliefs, and ideas that constitute the government of the United States and its politics.

### **SST22AP AP WORLD HISTORY**

**5 credits**

**Prerequisite:** A grade of A- or higher in your latest social studies course and the recommendation of the department.

If you are interested in exploring the origins of the world we live in today, enjoy reading and are a good writer, AP World History may be the course for you. The course is a college level examination of major concepts in world history from approximately 8000 BCE to the present that helps students develop historical thinking skills as they learn about the past. Five themes of equal importance — focusing on the environment, cultures, state-building, economic systems, and social structures — provide areas of historical inquiry for investigation throughout the course. AP World History encompasses the history of the five major geographical regions of the globe: Africa, the Americas, Asia, Europe, and Oceania, with special focus on historical developments and processes that cross multiple regions.

## **SOCIAL STUDIES ELECTIVES**

### **SST10CP2 MODERN EUROPE**

**2.5 credits**

#### **SST10H**

This course will focus on the social, economic, political, and intellectual developments in Europe from the beginning of the Cold War to the present day. Students will discuss practical questions about the forces that have shaped Europe since the end of World War II. Particular attention will be paid to the disintegration of the Soviet Union, efforts to build a European Union, and the role of modern European nations in a rapidly changing world. In addition, students will explore Europe's quest for international security in the emergence of the nuclear age. While investigating broader issues, the course will also draw attention to localized European issues, including civil war in Bosnia, the troubles in Northern Ireland, and other events that have impacted Europe since 1945.

### **ST03CP2 CRIMINAL JUSTICE**

**2.5 credits**

#### **SST03H**

**Prerequisite:** 10<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup> graders only

In this course, students will examine the social science of criminology. The course will incorporate materials for studying crime, criminals, criminal behavior, and corrections. Utilizing criminal justice statistics, current conceptual theories, and a wide array of primary sources, students will explore the history of criminology and how criminologists influence the world around us. Students will evaluate social patterns to identify trends of crime in the United States. After developing the framework of criminology, the course will include topics related to the impact of crime on victims and methods for applying statistical data in crime prevention, and ways to prevent crime. Ultimately, students will identify the forces that cause crime and develop a model for applying criminological theories to modern day issues.

**NOT OFFERED IN 2019-2020 SST08CP2 MIDDLE EASTERN STUDIES  
SST08H**

**2.5 credits**

This course will explore the history, culture, politics, and economics of the Middle East from 1850 to the present. Students will explore several historical topics through primary and secondary resources. Topics include: the role of religion in the region's history; the role of oil and other economic issues in the development of the modern middle-east; Pan-Arab movements, foreign involvement in the region since the decline of the Ottoman Empire; the role of the Zionist movement and the formation of Israel; the wars and conflicts in the region since 1947; and recent developments in the region.

**NOT OFFERED IN 2019-2020 SST06CP2 FACING HISTORY AND OURSELVES 2.5 credits  
SST06H**

Students will examine the roots of hate and acts of hatred in an attempt to understand history not as a series of inevitable events, but as a sequence of events resulting from individual actions and decisions through time. Students will examine their roles and responsibilities as American and global citizens and the potential for the wide reaching impact that every individual has daily. These themes will be examined through a series of readings, videos, activities and reflections. Activities will incorporate technology, include guest speakers and enable students to demonstrate expertise through a wide array of projects. The foundation of the course will be historical case studies of the genocides in Armenia, Cambodia, Bosnia, Rwanda, Sudan, and the Holocaust. By examining acts of genocide, students will have the opportunity to reflect not only upon the universality of racism and social injustice, but also upon the importance of global awareness. Students may take the course for honors credit.

**SST12CP2 PSYCHOLOGY I**

**2.5 credits**

A survey of psychology through its theories and theorists

The course features studies of the history of psychology, psychological research methods, the brain, body and behavior, state of consciousness, dream theories and human development. Students will be required to prepare a major project or paper as a part of the course.

**NOT OFFERED IN 2019-2020 SST13CP2 PSYCHOLOGY II  
SST13H**

**2.5 credits**

The objective of this course is to offer students greater insight and knowledge into the various areas of abnormal psychology including: addiction, stress, depression, schizophrenia, anxiety, organic and behavior disorders.

**SST18CP2 LAW AND INDIVIDUAL RIGHTS IN THE UNITED STATES  
SST18H**

**2.5 credits**

In this course, students will explore the American legal system. Using the U.S. Constitution as a foundation, students will investigate landmark U.S. Supreme Court cases related to subjects found in the Bill of Rights. Coursework will emphasize individual rights and the influence laws have on our world today. Students will gain a greater understanding of the inner workings of our legal system through a wide array of activities and lessons. We will debate Supreme Court decisions, experience mock trial settings, and discuss the scope and meaning of the Constitution as it affects our daily lives. Topics for the course include gun rights/gun control, religion freedoms, questions of free speech, civil rights, and other matters facing the United States in current times. The course includes a Capstone project, the Government Action Plan (GAP). We will work collaboratively to define a problem, propose, build and



implement a solution strategy, and communicate the results to our broader community. Students may take this course for College Prep, or Honors Credit.

**NOT OFFERED IN 2019-2020 SST27CP2 SPECIAL PROJECTS US HISTORY 2.5 credits**  
**SST27H**

For students who want to incorporate more independent study and technology into their learning experience, this interdisciplinary course will help them to achieve their goal. This course is designed to look at various historic events, philosophies, and trends and create presentations that will allow others to both understand what happened and why these events are important. Projects may include, but are not limited to, the rise of Darwinism, the influenza epidemic of 1918 and its effects on Ipswich and the North Shore, the validity of Ipswich's claim to be the "Birthplace of American Independence, and other topics of interest to the class. The course will focus on the research process and will create projects that will incorporate video, audio, Internet/web, podcast and other relevant and appropriate technologies.

**SST24CP2 INTERNATIONAL RELATIONS 2.5 credits**  
**SST24H**

The major goal of this course is to introduce the student to the way in which nations and non-government entities operate, compete, and cooperate with each other. This goal will be accomplished by looking at international laws, international organizations, multinational corporations, non-governmental organizations, and threats to international security. A significant amount of time will be dedicated to the foreign policy of the United States with regard to other countries (Russia, China, Middle East and North Korea) and the foreign policies between other countries (Pakistan and India).

**SST04CP2 CRIMINOLOGY FORENSIC SCIENCE 5 credits**  
**SST04H**

Dual Listing as Science and Social Studies Department (2.5 credits from each department)

Prerequisite: Successful completion of chemistry with a minimum grade of C. Open to juniors and seniors. Please note that this course does not count towards the core requirement in social studies or science.

In this course, offered jointly by the Social Studies and Science departments, students will explore criminal justice theories and examine forensic science. Utilizing statistics, characteristics of criminal behavior, chemistry, biology and other scientific fields of study, students will apply the core knowledge of the course to actual cases. Students will become skilled at such analytical methods as securing crime scenes, collecting and preserving evidence, fingerprinting, and DNA analysis.

This course will cover the various biological, psychological, and sociological aspects of crime in U.S. society. Students will be provided with an ability to perform basic forensic techniques and use appropriate scientific procedures that follow established guidelines for admissible evidence. Students will document results and draw conclusions employing criminology and forensic science terminology. Students will explore such topics as juvenile justice and capital punishment. Within a laboratory setting, students will gain hands-on experience in the use of current investigative techniques. Participating in a mock crime scene and trial will be the capstone project for the course. Students who have taken the Criminal Justice course are also eligible to enroll in this course.

**SST28CP2 STUDENT LEADERSHIP**  
**SST28H**

**2.5 credits**

This course is designed to answer the question, "What makes someone a leader?" The class will provide students with the opportunity to study, practice and develop leadership skills. These skills will include decision making & communication skills, problem-solving techniques, leadership roles, organizational and time management skills and understanding the need for social and civic responsibility. Students will apply these skills in dealing with peers, school administration and the community while also learning about famous individuals throughout history who have successfully practiced these leadership skills. The class is designed as a hands-on, active learning approach to leadership.

**SST05CP2 CURRENT EVENTS/CURRENT ISSUES**  
**SST05H**

**2.5 credits**

Current Events/Current Issues is a course structured to give the student an understanding of the events and issues (primarily political, social, and economic) that are having an impact on the world in which we live. In addition to studying current events and current issues, students will also study the context (primarily geography, individuals, IGOs, and NGOs) of the events and issues that are shaping the world we live in.

**NOT OFFERED IN 2019–2020 SST07CP2 FAMOUS FIGURES IN HISTORY**  
**SST07H**

**2.5 credits**

This course will focus on figures in history that have made a difference in the way that we live our lives. From the dark charisma of Jim Jones, to the inspirational music of John Lennon, to the bravery of the passengers on flight 93, and the activism of Abbie Hoffman, each person left a mark on history. An understanding of other people's decisions, triumphs, and mistakes can help students to gain some perspective into their own lives. This class will follow the format of Time magazine's 100 most influential list, covering a rotating roll call of those who have had an impact, good or bad, big or small. The course will be broken down into the following categories: leaders & revolutionaries, heroes & icons, trailblazers & pioneers, villains & scoundrels, artists & entertainers, and mysteries & enigmas.

**NOT OFFERED IN 2019-2020 SST23CP2 HISTORY GOES TO THE MOVIES**  
**SST23H**

**2.5 credits**

Since the introduction of the motion picture the debate over the merits of film as a means of expressing the past has raged between filmmakers and historians. History Goes to the Movies is intended to provide students with the necessary background to weigh in on this debate by making a detailed examination of a narrow topic of history and an in-depth study of its portrayal in motion pictures. Students will also gain experience in various methods of conducting historical research, analyzing film as a tool for cultural expression, and a greater comfort with the forms of writing relevant to historians.

**NOT OFFERED IN 2019-2020 SST14CP2 THE VIETNAM EXPERIENCE**  
**SST14H**

**2.5 credits**

The war between the United States and Vietnam stands as one of the most controversial and influential moments in modern history, one in which two countries a world apart found themselves drawn into a clash of arms, ideologies, and cultures that left them both torn apart. Beyond the battlefields, the Vietnam experience was a culmination of the major forces that shaped the 20th century: nationalism and

colonialism, socialism and capitalism, race and ethnicity, and fundamental differences between East and West. This elective traces the early cultural history of Vietnam through the colonial experience under the French, into the war with the United States, and beyond.

**NOT OFFERED 2019 -2020** SST01CP2 CLOSE UP AMERICAN GOVERNMENT 2.5 credits  
SST01H

**Prerequisite:** 11<sup>th</sup> and 12<sup>th</sup> graders only

The Close Up American Government course is designed to engage students in cooperative and experiential learning while exploring citizenship in our democracy. The overarching goal of the course is to equip students with the knowledge and skills necessary for effective and responsible participation in the processes of a democratic society and the American political system. Issue-centered topics and opportunities for discovery are the cornerstones of Close Up American Government. Placing current public policy controversies and political debates at the center of the course, students reflect on their own political effectiveness and assess their growth as powerful democratic citizens. Students apply knowledge gained in previous courses as they draw on their studies of American history, geography and culture. A one week intensive trip to Washington, D.C. in March is the culmination of the course. The Close Up Washington D.C. trip gives students an inside look at the U.S. government in action. Using the nation's capital as a living classroom, students have access to politicians, Senate and House of Representatives sessions, and the inner workings of government and historical attractions. The cost of the trip is paid by students who choose to participate with fundraising as an active part of the course. This course is open juniors and seniors who have completed U.S. History I and U.S. History II. Students may take Close Up American Government for College Prep or Honors credit.

# **VISUAL ART AND DESIGN**

The recommended sequence of Visual Art Courses is as follows:

All students should begin with Art and Design Foundations-01CP2 or Visual Literacy and Communication- followed by elective courses which include Drawing-ART04CP2, Printmaking-ART02CP2, Ceramics I-ART03CP2, Ceramics II-ART13CP2, Painting-ART05CP2, Graphic Design I -ART06CP2, Graphic Design II-ART06CP2, Digital Photography I-ART11CP2, Digital Photography II-ART12CP2, and Studio Art- ART08CP2 and Introduction to Video Production-.

The serious Visual Art student is advised to review the Pathways in Fine Art and Media Art. Course selection should begin with Art & Design Foundations-ART01H or Visual Literacy and Communication- followed by Drawing-ART04H, followed by elective leading to Studio Art and Portfolio.

*Unless otherwise designated, all courses are offered at the College Prep Level 2. However, all courses may be taken for Honors credit.*

## **ART01CP2 ART AND DESIGN FOUNDATIONS** **ART01H**

**2.5 credits**

Open to all students.

This course is designed as an introduction to the language and materials of the visual art and design. Emphasis will be placed on acquiring proficiency skills in basic drawing, painting, printmaking, sculpture and graphic communications. Each unit incorporates the building blocks of visual analysis and literacy with a concluding focus on evaluating art for exhibition. This course includes discussions and critiques that pertain to art history and visual media.

## **ART33CP2 VISUAL LITERACY AND COMMUNICATIONS** **ART33H**

**2.5 credits**

Open to all students.

Focusing on media literacy, this class will begin to explore how we are influenced by the imagery that surrounds us and what makes visual language effective. The images used in this course include historically significant images as well as student contributions of displays seen in everyday life. In this course, students develop a vocabulary for visual critique to be a more careful and precise observer and a more perceptive consumer. Introduction to the Adobe Creative Suite and a basic understanding of contemporary art and design history.

## **ART02CP2 PRINTMAKING** **ART02H**

**2.5 credits**

**Prerequisite:** Art and Design Foundations

This course is designed to enhance the art of experimentation. Students will be introduced to the printing press and several printing methods from relief printing to etching, monotype, transfer printing, collographs and screen printing. The class will reflect on traditional methods for viewing printed images and ask students to develop their own narrative for their artwork. Exhibit ready outcomes include an

edition of prints defining a sense of place.

**ART03CP2 CERAMICS I**  
**ART03H**

**2.5 credits**

**Prerequisite:** Open to all students.

Students will explore clay as an art medium through a survey of ceramic art forms from around the world. Using various techniques that define and express form and function, students will be hand building using slab and coil methods. Introductory opportunities for throwing clay on the potter's wheel will be encouraged. Students will investigate the design and craft of sculpture and dinnerware while applying both historical and natural influences. A variety of high-fire glazing methods are available to enhance student's stoneware ceramics artworks.

**ART13CP2 CERAMICS II**  
**ART13CP2 CERAMICS III**  
**ART13H**

**2.5 credits**

**Prerequisite:** Ceramics I or II

This advanced studio course is designed to expand upon the skills acquired in Ceramics I with an emphasis on throwing pots on the potter's wheel. Students will be expected to make larger and more complex pieces that include lids and handles. Students will also refine their hand building skills and explore various decorative techniques such as Mishima and the mixing of different clay bodies. At the conclusion of the course, students will create an art piece influenced by a contemporary ceramicist of their choice.

**ART04CP2 DRAWING**  
**ART04H**

**2.5 credits**

**Prerequisite:** Art and Design Foundations or Visual Literacy and Communication

This course is designed to expand the student's knowledge of the language and materials of drawing, as well as explore the differences between representational and expressive art. Students will experiment with a variety of materials including pencil, charcoal, pen and ink, pastels, and non-traditional drawing media. The class begins will focus on improving observational skills in order to render forms more realistically. The class will be introduced to various sighting methods that are designed to simplify the drawing process and make the exercises attainable for all students. All assignments have choice and challenges that will help to define a student's individual drawing style and form of expression.

**ART05CP2 PAINTING**  
**ART05H**

**2.5 credits**

**Prerequisite:** Art and Design Foundations or Visual Literacy and Communication

This course uses a survey of art movements beginning with Impressionism and continuing through Abstract Expressionism. Students will explore a variety of techniques and approaches to the art of applying paint and complete a series of paintings using various stylistic methods, sizes, and surfaces options. The painting mediums available for study include: acrylic, watercolor, oil and mixed media.

**ART06CP2 GRAPHIC DESIGN I**  
**ART06H**

**2.5 credits**

**Prerequisite:** Art and Design Foundations or Visual Literacy & Communication

Students will begin to develop a visual sensitivity to and awareness of the world of commercial design, as well as explore how visual imagery is used to communicate meaning and shape the perceptions of the viewer. We will consider the fields of graphic design, illustration and advertising, and the roles they play in society. Students will utilize both traditional methods and industry-standard computer software such as Adobe Photoshop, Illustrator and InDesign. Subject matter for assignments will be drawn from discussion of issues relating to the media, advertising and current events.

**ART22CP2 GRAPHIC DESIGN II**  
**ART22H**

**2.5 credits**

**Prerequisite:** Art and Design Foundations or Visual Literacy & Communication and Graphic Design I

In this class students will begin to analyze the marketing mind, advertising, and communication design. Students will use Adobe Photoshop, Illustrator, and InDesign interchangeably as they see fit for their needs in each project. Market research as well as critiques will be a regular aspect of this class as we discuss best practices for in studio work, engaging with clients, printing and production, as well as talking about aesthetic choices working towards design focused careers.

**NOT OFFERED 2019-2020 ART07CP2 SCULPTURE**  
**ART07H**

**2.5 credits**

**Prerequisite:** Art and Design Foundations

Students will learn the materials and techniques of three-dimensional design, as well as study how sculpture has evolved as an art form over time. Materials used include wood, plaster, paper, wire, and found objects, among others. Emphasis is placed on understanding structure, exploring how an object fills space, and the importance of craftsmanship. Additionally, students will explore how art is used to both question and reflect society.

**ART08CP2 STUDIO ART(spring semester (Junior year))**  
**ART08H**

**2.5 credits**

**Prerequisite:** Art and Design Foundations and a second Art elective and/or permission of the instructor

This is a course for the independent-minded art student who wishes to pursue the study of art in a self-defined manner. Class projects will encompass work in all media, with most of the decisions regarding subject matter and materials left for the student to determine. An import focus of this class will be on experimentation and the process of developing ideas. Students will be expected to keep a record of their ideas, thoughts, and observations in a journal and build a collection of various images and articles for reference.

**ART09CP2 PORTFOLIO**  
**ART09H**

**2.5 credits**

**Prerequisite:** Senior or advanced junior level and by permission of instructor.

The Portfolio student will develop a comprehensive body of artwork demonstrating technical competency in a wide range of media. Students enrolled in this class may choose to create a portfolio for part of an art school application or a supplement to a liberal arts program. The course curriculum includes a museum experience, visits with professional artists and opportunities to exhibit their artwork in competitive art shows. Exhibiting skills will be utilized in a group art show that will display the collective body of artwork from all students participating in the class.

**ART11CP2 DIGITAL PHOTOGRAPHY I**  
**ART11H**

**2.5 credits**

**Prerequisite:** Basic computer navigation and mouse skills.

This course is an introduction to the practice of digital photography. Students learn the basics of shooting with a digital camera, including aperture, shutter speed, lighting, and composition. Adobe Lightroom is used to discuss image editing and its relevance to the practice of photography. Emphasis is also placed on exploring the history of photography, understanding its technical development and impact on society.

**ART12CP2 DIGITAL PHOTOGRAPHY II**  
**ART12H**

**2.5 credits**

**Prerequisite:** Digital Photography I

Students having taken Digital Photography I will refine and advance their photography skills, expanding into the use of color and introducing some of the more advanced imaging features of Adobe Photoshop. Projects here are more conceptual and independent in nature, allowing the student to focus on a particular technique or area of interest. Students will contribute to critiques with their peers and engage in dialogue about the importance of alternative ways to create, manipulate and display digital photographic images.

**ART34CP2 INTRODUCTION TO VIDEO PRODUCTION**  
**ART34H**

**2.5 credits**

**Prerequisite:** Art and Design Foundation or Visual Literacy and Digital Photography I

Video Production students will have an interest in all things video related. Students will be writing, shooting, producing and editing their own videos, as well as experiencing live broadcast and behind-the-scenes production roles. Students will be expected to work very diligently on projects that are concept focused and self-directed. Both creatively and technically demanding this class will include some film history and analysis, various styles of filming and shooting and regular screenings of work in class for peers.

## **ART CLUB**

Art Club is for High School students who would like to be more involved with visual arts throughout the school year. The club promotes individual and collaborative exchanges of ideas, meeting weekly after school in a open studio. Special workshops offer opportunities to explore subjects such as : learning to knit a hat, scratch-boarding, stenciling, animation, hand building ceramic mugs and deconstruct clothing To create newly fashioned accessories. Art Club enjoys the annual tradition of joining forces with the Middle/High school Art Clubs for an annual field trip to New England museum and the bi-annual New York City Fine Art Field Trip for juniors and seniors.



# MUSIC

The Music Department offerings are divided into the following three areas:

## **Performing Ensembles** - Band, Choir, and Orchestra

Students may sign up for more than one Performing Ensemble. See the multiple performing Ensemble options below.

**Audition Ensembles** - Bel Canto, Chamber Singers, Jazz Ensemble, Chamber Orchestra, Wind Ensemble and Symphony Orchestra for wind, brass and percussion players.

**Electives** – Advanced Musicianship, Music Theory I + II, Guitar Experience, Vocal Foundations.

## **Performing Ensembles**

**Prerequisite:** Permission of the instructors.

<b><u>MUS01CP2</u></b>	<b><u>CONCERT BAND</u></b>	<b>7 credits</b>
<b><u>MUS01H</u></b>	<b><u>HONORS CONCERT BAND</u></b>	<b>7 credits</b>

**Prerequisite:** Proficiency on a wind, percussion or other participating instrument.

The Concert Band studies and performs standard wind band repertoire, with an emphasis on technical development, control of tone and intonation, musical terminology and balanced ensemble sound. The band experience includes pep band, concert band, small ensembles, and sectional rehearsals. Musical development is reinforced through group instruction and daily practicing. Attendance is required at all rehearsals and performances.

<b><u>MUS02CP2</u></b>	<b><u>CONCERT CHOIR</u></b>	<b>5 credits</b>
<b><u>MUS02H</u></b>	<b><u>HONORS CONCERT CHOIR</u></b>	<b>5 credits</b>

**Prerequisite:** Permission of instructor

Choral music at Ipswich High School is an elective academic subject with CONCERT CHOIR as the core chorus organization. This is primarily a performance-oriented class, however, students will work on the basic tenets of good singing through the use of vocal warm-ups and literature that develop tone quality, breathing, intonation, diction, and other areas of voice. This mixed chorus will prepare and perform a wide range of challenging choral music representative of many styles, genres, cultures, and periods. Enrollment is open to students in grades 9-12.

Attendance is required at all rehearsals and performances. CONCERT CHOIR meets five days per week, and students may be required to participate in sectional rehearsals during designated Resource Blocks.

<b><u>MUS03CP2</u></b>	<b><u>ORCHESTRA</u></b>	<b>5 credits</b>
<b><u>MUS03H</u></b>	<b><u>HONORS ORCHESTRA</u></b>	<b>5 credits</b>

**Prerequisite:** Proficiency on a string instrument, permission of the instructor.

Orchestra studies string music from the Renaissance, Baroque, Classical and Contemporary periods. In addition to developing mature tonal, rhythmic, and interpretation skills the Orchestra will also focus on

the unique technical skills of string instruments. Attendance at all rehearsals and performances is required.

**Ipswich High School students enrolled in Band, Chorus and Orchestra have the option of pursuing honors credit. Students seeking honors credit are expected to be leaders in their respective groups and are required to complete 2 additional requirements per semester. Honors Contracts are available from instructors. Instructors must approve projects in the first week of Semesters 1 and 2. Projects must be completed before final exams each semester.**

### **Multiple Performing Ensemble Options**

Students who elect to be in two or three of our core performance groups (Concert Band, Concert Choir, and Orchestra) will enroll in one of our performance options. (See course descriptions for Concert Band, Concert Choir and Orchestra.) Band Ensembles require attendance at PEP Band and therefore receive additional credit

<b><u>MUS04CP2</u></b>	<b><u>BAND/CHORUS</u></b>	<b>7 credits</b>
<b>MUS04H</b>	<b>HONORS BAND/CHORUS</b>	<b>7 credits</b>
<b><u>MUS05CP2</u></b>	<b><u>BAND/ORCHESTRA</u></b>	<b>7 credits</b>
<b>MUS05H</b>	<b>HONORS BAND/ORCHESTRA</b>	<b>7 credits</b>
<b><u>MUS07CP2</u></b>	<b><u>CHORUS/ORCHESTRA</u></b>	<b>5 credits</b>
<b>MUS07H</b>	<b>HONORS CHORUS/ORCHESTRA</b>	<b>5 credits</b>
<b><u>MUS08CP2</u></b>	<b><u>BAND/CHORUS/ORCHESTRA</u></b>	<b>7 credits</b>
<b>MUS08H</b>	<b>HONORS BAND/CHORUS/ORCHESTRA</b>	<b>7 credits</b>

### **Audition Ensembles**

**MUS12H HONORS JAZZ ENSEMBLE** **3 credits**

**Prerequisite:** Competitive audition, permission of the instructor and registration in Concert Band

This ensemble meets once a week and performs, listens to, and analyzes the music from the 20<sup>th</sup> Century to modern day. This music includes Afro-American jazz, fusion, funk, and popular songs. Students will perform in a big band setting with emphasis placed on jazz style, improvisation, and the historical aspects of the development of the jazz genre.

**MUS10H HONORS CHAMBER ORCHESTRA** **3 credits**

**Prerequisite:** Competitive audition, permission of the instructor and registration in Orchestra. Chamber Orchestra is a select group of string students that perform challenging and original works for string orchestra. Repertoire will include works from the Renaissance, Romantic, Impressionist, and Contemporary periods. The Chamber Orchestra will perform at school concerts, district and state competitions. Chamber Orchestra will also represent the Orchestra Program at community functions. Attendance is required at all rehearsals and performances and individual practice is expected outside of the classroom rehearsal.

**MUS16H HONORS SYMPHONY ORCHESTRA****3 credits****Prerequisite:** Competitive audition, permission of the instructor and registration in Band.

Symphony Orchestra is a select group of brass, woodwind and percussion students that will perform challenging music written for Symphonic Orchestra. Students will develop advanced sight reading, solo and ensemble skills. Repertoire will be drawn from Renaissance, Classical, Romantic, Impressionist and Contemporary periods. The Symphony Orchestra will perform at school performances, district and state competitions. Attendance is required at all rehearsals and performances.

**MUS11H HONORS CHAMBER SINGERS****3 credits****Prerequisite:** Competitive audition, permission of the instructor and registration in Concert Choir.

CHAMBER SINGERS is a select choir drawn from the Concert Choir dedicated to the performance of literature best suited to a chamber group of advanced musicians. Students should be able to read and memorize music quickly and carry their own part in a small ensemble. All of the requirements and standards of excellence in Concert are maintained. As this chorus offers a more rigorous and comprehensive repertoire and honor approach to choral concepts, individual practice is expected outside of classroom rehearsal. Attendance is required at all rehearsals and performances.

**MUS06H HONORS AFTER SCHOOL BEL CANTO****3 credits****Prerequisite:** Competitive audition, permission of the instructor and registration in Concert Choir.

BEL CANTO is a select women's choir drawn from the Concert Choir for the performance of advanced treble literature. Students should be able to read and memorize music quickly and carry their own part in a small ensemble. All of the requirements and standards of excellence in Concert Choir are maintained. As this chorus offers a more rigorous and comprehensive repertoire and honor approach to choral concepts, an emphasis is placed upon each singer's responsibilities, particularly in the individual's preparation for rehearsals and performances. Attendance is required at all rehearsals and performances.

**MUS25CP2 WIND ENSEMBLE****2.5 credits****Prerequisite:** Competitive audition, permission of the instructor, and registration in band or orchestra.

Wind Ensemble is a select group of woodwind, brass, and percussion students that will perform challenging music written for wind ensemble. Students will develop advanced sight reading, solo, and ensemble skills. Most sections include only one or two students per part, so members must be strong musicians and take ownership of their unique roles. Repertoire will be drawn primarily from the 20th and 21st centuries, and features greater musical and technical challenges than concert band repertoire. Wind Ensemble performs at Spring concerts. Attendance is required at all rehearsals and performances.

## Electives

### **MUS13H HONORS ADVANCED MUSICIANSHIP**

**2.5 credits**

**Prerequisite:** Permission of the instructor.

This course will offer instruction in the development of advanced performing skills and techniques. Students will design their own performance projects in collaboration with the instructor and other students in the class. Students may work as individuals or as a small ensemble and will need to choose one of the following tracts. This course is designed for the serious music student with an interest in developing a performance project/recital, exploring jazz improvisation, or recording a music supplement for college acceptance.

Students must choose one of the following tracts per semester: Chamber Music; Jazz Improvisation; or Solo Performance.

### **MUS14CP2 MUSIC THEORY I** **MUS14H**

**2.5 credits**

**Prerequisite:** Permission of the instructor.

This course is designed to teach the elements of music and to develop basic musical skills such as sight-reading, rhythmic dictation, and composition. Students will learn to read and write in different clefs, keys and meters; will construct scales, identify intervals, study basic harmony, and learn basic compositional techniques. No prerequisite is required for this course.

### **MUS17CP2 MUSIC THEORY II** **MUS17H**

**2.5 credits**

**Prerequisite:** Completion of Music Theory I, and/or permission of the instructor.

This course reinforces concepts learned in Music Theory I, continues with ear training and dictation exercises, and introduces additional elements of music, including modes, 7th chords, inversions, cadences, and melody writing. Extensive work in voice leading and 4-part writing is included, along with harmonic analysis and compositional technique. This is an excellent course for students planning on studying music at the college level.

### **MUS15CP2 THE GUITAR EXPERIENCE (LEARN TO PLAY GUITAR)**

**2.5 credits**

This course will teach basic guitar techniques for the beginning guitarist. The course will cover music notation including traditional notation and tablature, learning to play melodies, basic chord structure, chord symbols and chord strumming, styles of accompaniment, solos, and music theory. Students will be introduced to various guitar styles including folk, classical, blues and rock and roll. Students must provide their own **Acoustic** guitar.

(An acoustic guitar with nylon strings is preferred for ease of playing).

### **MUS30CP2 VOCAL FOUNDATIONS**

**2.5 credits**

Want to be a better singer? This class offers the building blocks for proper vocal technique, music reading skills, and working within an ensemble. Students will be assessed individually and corporately through class participation, tests and quizzes, performances and one-on-one evaluations.

# THEATER

## TTR02CP2 THEATER ARTS- Beginning/Intermediate TTR02H

**2.5 credits**

Beginning/Intermediate Theatre Arts Introduces the student to beginning/intermediate acting techniques and theatre appreciation. The course is organized into five areas: Artistic Perception, using the language and skills of theatre, Creative Expression, creating theatre to communicate meaning and intent, Historical and Cultural Content, examining the key figures and historical periods of theatre and the role theatre plays culturally in the world, Aesthetic Valuing, analyzing theatre for meaning and intent as well as its ability to communicate effectively, and Connections, Relationships and Applications, developing lifelong skills such as creative problem-solving. The class includes: team work, relaxation, concentration, movements, voice, play analysis, acting, improvisation, character analysis, performance, scene work, monologues, theatre vocabulary and theatre history. Students will also explore basic technical elements such as set, costume and lighting. Basic theatre arts marketing techniques will also be explored.

## TTR03CP2 THEATER ARTS- Intermediate/Advanced TTR03H

**2.5 credits**

Intermediate/Advanced Theatre Arts is a theatre class for those students who have enjoyed and passed Beginning/Intermediate Theatre Arts with a “B” or better, or with the permission of the instructor. Incoming freshman with at **least 2 years** of theatre experience are also allowed to register for this class. It is designed to build upon past theatre experiences and enhance skills.

This class concentrates on all aspects of creating a dramatic production and includes the five areas listed above in the beginning class description. Intermediate/Advanced Theatre Arts will cover ensemble work/team work, movement, voice, scene and play analysis, scene work including an emphasis on objectives, obstacles, and acting techniques, improvisational skills, character analysis and performance, monologues, audition skills, career paths and theatre history, basic technical elements and marketing techniques.

Honors Credit involves performance time beyond the normal school day along with one of the following requirements:

Assistant Director for the Play or Musical  
Serving as a Drama Club Officer

## THEATER ARTS- ADVANCED

**2.5 credits**

Advanced Dram is an audition-only theatre class for those students who have enjoyed Beginning Theatre/Intermediate Theatre Arts, Intermediate/Advanced Theatre Arts, and/or previous participation in theatrical productions. In this intensive course, actors develop a deeper understanding of theatre and production from different cultural and historical perspectives and build upon past theatre experiences. Advanced Theatre Arts will strengthen and enhance skills in ensemble work/team work, movement, voice, scene and play analysis, scene work including an emphasis on character development and emotional truth, improvisational skills, character analysis and performance, audition skills, career paths, designing, and directing. Students will produce Student Directed One Acts.

Honors Credit is Available for students who direct a One act **OR** the completion of direct project in class **AND** fulfilling on of the following roles in an IHS Company Production:

Assistant Director for the Play or Musical  
Serving as a Drama Club Officer  
Serving as Stage Manager or Asst. Stage Manager for the Play or Musical  
Properties Master/Mistress for the Play or Musical  
Lighting, Sound, or Stage Technician for the Play or Musical  
Costume Asst. for the Play or Musical  
Publicity/Promotion Asst. for the Play or Musical

# **TECHNOLOGY** **ENGINEERING**

## **TEC03CP2 ENGINEERING THE FUTURE** **TEC03H**

**2.5 credits**

Open to all grades

Engineering the Future is a project based course that will help students develop a better understanding of technology and engineering. Students will develop their ability to use the engineering design process in solving technological challenges and have the opportunity to use modern technology and 3D printing in developing solutions. Students will understand how advances in technology affect human society and the complementary relationship between science, technology and engineering.

## **TEC01CP2 DRAFTING & DESIGN TECHNOLOGY I** **TEC01H**

**2.5 credits**

Open to all grades

This is an introductory course which teaches design fundamentals and skills for planning and building residential structures. The class will use AutoCAD, a professional, computer-aided drafting (CAD) system and Google SketchUp to create plans for a single family home. Students will be presented with the challenge of designing and modeling a home within given criteria and constraints. Their solution will be presented to their peers and visiting professional architects. Drafting and design offers many career opportunities which will be explored through site visits and guest lecturers.

## **TEC02CP2 DRAFTING & DESIGN TECHNOLOGY II** **TEC02H**

**2.5 credits**

**Prerequisite:** Drafting & Design Technology (B or above)

Students will use their design experience to develop a professional proposal for commercial or mixed use development in Ipswich. The proposal will include CAD floor plans, 3D models and development of a narrative to sell their idea. The final project will be presented to design professionals.

## **TEC04CP2 ENGINEERING TECHNOLOGY II (Lab)** **TEC04H**

**5 credits**

Grades 10, 11 & 12

**Prerequisite:** Successful completion of this course may be applied to the science graduation requirement.

In Engineering Technology II, students will use the Engineering Design Process to solve a series of complex design challenges requiring advanced materials and methods. Employing processes used by engineers, the students learn teamwork, analysis techniques, communication skills and the importance of completing a task on time within given criteria and constraints. Students will be required to complete engineering presentations on their work as well as current topics in science and technology.

**TEC05CP2 ENGINEERING PROJECTS (LAB)**  
**TEC05H**

**5 credits**

Grades 10, 11 & 12

Successful completion of this course may be applied to the science graduation requirement.

Engineering Projects students will participate in the Student Racing Challenge which is an engineering project-based curriculum and annual competition where you will practice as a professional in careers with a strong emphasis on science, technology, engineering and mathematics (STEM). Ten80 Student Racing Challenge teams are mini-race teams that compete using 1:10 scale electric RC cars. Student teams earn points between October and May and points leaders compete in the National Finals held in the spring. Students enrolled in the class are expected to participate in all team events including weekend fundraising and travel.

**TEC06CP2 ROBOTICS I (Lab)**  
**TEC06H**

**2.5 credits**

This course introduces the principles of machine design (robotics) and the roles that robots play in our lives. Students will increase their understanding about what makes a robot a robot, how robots sense, think and act as well as the uses and limitations of working robots. Students will better understand the roles of project management, mechanic electronics and process language computer programming in the open-ended design and development of machines to accomplish different tasks. The class will learn basic robotics using the VEX EDR Robotics Systems and remote as well as open loop and closed loop autonomous control system programming in Graphical C and Robot C.

**TEC07CP2 ROBOTICS II (Lab)**  
**TEC07H**

**2.5 credits**

Grades 10, 11 & 12

**Prerequisite:** B or above in Algebra 1, B or above in Robotics I or computer programming and teacher approval.

In this course, students will learn advanced robotics/machine design concepts and techniques with a focus on programming and electronics using task-oriented robots controlled by Arduino microcontrollers, Raspberry-Pi microcomputers, or similar products. Arduino and Raspberry-Pi products can be used to control DC motors, servo motors, lights and buzzers, and receive input from numerous other sensors and cameras. The course will start with guided lessons on integrating robotics systems and coding using object-oriented programming in C/C++ in the Eclipse IDE and Python, Java or C++ using the Raspbian OS and Eclipse or Algo IDE, Putty SSH Terminal emulator, or equivalent set-up. Students will learn to use sensors to adapt their robot to its environment by reading inputs and controlling outputs. There will be a final hands-on design project, where students will specify, design, build, and program an Autonomous or Remotely Controlled robot or other robotic device, such as a robot arm. Students will be expected to keep engineering notebooks, create presentations on their work, and write reflections on their designs. Current topics in the field of robotics will be reviewed and discussed through assigned readings and viewings of TED talks.



**NOT OFFERED IN 2019-2020 TEC08CP2 SOLIDWORKS ESSENTIALS**  
**TEC08H**

**2.5 credits**

The goal of this course is to teach students how to use the Solidworks design automation software to build parametric models of parts and assemblies and how to make simple drawings of those parts and

**TEC26CP2 3D Printing**

**2.5 credits**

**TEC26H**

Open to all grades

3D Printing is a tool that allows people to create new things, limited only by imagination. 3D printing and modeling projects empower students to take chances and make mistakes thereby acquiring the problem-solving skills and confidence that will convince them to keep trying until their designs succeed. In this course, students will explore the 3D printing additive manufacturing process in which an object is built over time by stacking layers of material directly on top of each other. These layers fuse together to assemblies. This course is designed around a process or task based approach to training. The course will emphasize the processes and procedures you follow to complete a particular task.

Lab exercises will be used to give students the opportunity to apply and practice the material covered during the demonstration portion of the course. Exercises are designed to represent typical engineering design and modeling situations while being modest enough for beginning students to complete during class time.

**NOT OFFERED IN 2019-2020 TEC09CP2 FIRST ROBOTICS**  
**TEC09H**

**4 credits**

Students may take this class every year

First Robotics Competition (FRC) combines the excitement of sport with the rigors of science and technology. Under strict rules, limited resources and time limits, teams are challenged to raise funds, design a team brand, and hone teamwork skills as the team programs and build a robot to perform prescribed tasks against a field of competitors. Students who elect FRC will be required to participate in 6 weekend build sessions and at least two regional competitions during March and April.

**NOT OFFERED IN 2019-2020 TEC10CP2 THE BEAT**  
**TEC10H**

**2.5 credits**

The Basics of Engineering Audio Technology (BEAT) is a new, hands-on course in which students learn about, explore, and build technological devices associated with music and audio production. Students will have the opportunity to experiment with, design, and create items such as instruments, amplifiers, speakers, headphones, and microphones. The class is co-taught by members of the engineering and music faculties, but there is no prior knowledge or coursework required. Course topics will include acoustics, objective and subjective analysis of sound and music (both analog and digital), electronic engineering project-based learning, and big picture questions about the role of sound and music in society. This course is closely aligned with the STEAM pathway, and provides a wealth of practical and creative experience that will lead to a deeper understanding of all that is audible.

**NOT OFFERED IN 2019-2020 TEC12CP2 VIDEO PRODUCTION  
TEC12H**

**2.5 credits**

This class will introduce students to real-world video production. This is a project based class that will provide students instruction and training in pre-production, production and post production phases of project development. Students will explore video/digital editing, camera shooting, sound and lighting design, project research and script writing. This class will provide students with artistic, creative and historical background in the fields of video and film production.

create 3D printed objects. The course will begin with an introduction to the applications that can be used to create printable objects. After completing a series of projects designed to demonstrate essential considerations when preparing models for 3D printing, students will be able to design their own objects for printing.

# **PHYS. ED./HEALTH**

## **PEH06CP2 PE/WELLNESS 9**

**2.5 credits**

Physical Education for grade 9 is a combination of sports and physical fitness. Units will include tennis, volleyball, badminton, pickle ball & ultimate Frisbee. Fitness training will include H.I.I.T. (High Intensity Interval Training), TRX work, Weight Room and Aerobics room training and outdoor track training. Activities may include: floor hockey, cross-country skiing, basketball, futsal, gator ball, ping pong, track and field, new games, more personal fitness videos and a pre/post-physical fitness assessment.

## **PEH10CP2 PE /WELLNESS (10) PROJECT ADVENTURE**

**2.5 credits**

**Prerequisite:** Sophomore status.

Project Adventure is a course in which Physical Education and the Outdoor Adventure-Based Learning Process are combined as one curriculum. The Project Adventure course is designed to develop balance, coordination, agility, and willingness to trust, within a supportive, non-competitive atmosphere. The program offers a high and low ropes course (indoors and outdoors), low balance course, problem solving, trust activities, adventure games and selected field trips.

## **PEH02CP2 PE/WELLNESS ADVANCED PROJECT ADVENTURE**

**2.5 credits**

### **PEH02H**

**Prerequisite:** B or higher grade in Project Adventure. Junior or Senior status

Advanced Project Adventure follows the same philosophy, goals and objectives as Project Adventure. A student who signs up for this program is seeking greater challenges and a desire to improve on technique, terminology and processing. The exploration of outdoor opportunities involves research, group discussions and field trips, including a weekend overnight trip.

## **PEH05CP2 LIFETIME SPORTS/WELLNESS**

**2.5 credits**

### **PEH05H**

**Prerequisite:** Junior or Senior status

Units will include: archery, golf, bowling, pickle ball, ultimate Frisbee, badminton, volleyball, tennis. Activities may include: floor hockey, cross-country skiing, basketball, futsal, gator ball, ping pong, track and field, new games and a variety of personal fitness videos. Personal fitness will be an option for all units. Classes will participate in weekly High Intensity Interval circuits. This course will emphasize skill development, competitive game play and fitness that will benefit students throughout their adult lives. There will be a pre/post-physical fitness assessment. Honors options available.

**PEH01CP2 HEALTH & WELLNESS**  
**PEH01H**

**2.5 credits**

This health education class provides our students with basic essentials in physical, mental/emotional, and social health. This course is designed to develop knowledge, attitudes and the appreciation necessary to meet the present and future health needs of youth and society. This course meets a graduation requirement. Also, this course can be taken for Honors Credit.

**PEH03CP2 FITNESS & NUTRITION FOR LIFE**

**2.5 credits**

**Prerequisite:** Recommended for Sophomore, Junior or Senior status

This elective is designed to further students' knowledge in the areas of caloric intake (diet) and caloric expenditure (exercise). Students will learn about the musculoskeletal system, principles/types of exercise, physical fitness, recognition and care of injuries as well as eating for energy, food selection/balance, and staying healthy. The course is broken into two sections. Section one will take place in a classroom/academic setting and section two will take place in a physical/laboratory setting. Through planning, tracking, journaling, and implementing students will gain a firm understanding of the balance that is needed to achieve their goals.

**PEH07CP2 PEAK ATHLETIC PERFORMANCE**  
**PEH07H**

**2.5 credits**

**Prerequisite:** Junior or Senior status or permission of the instructor

This course is designed for the Varsity or other student-athletes who want to take their sport to the next level with hopes of possibly participating in college athletics. Emphasis of this course will be at a personal level with high intense workouts and individual sport skill training. Students with help of the instructor will compile proper testing measurable, which will be part of pre and post testing for their particular sport. Students will create a detailed plan to increase performance in their sport of choice. Students will also create a recruiting video as part of final project. Honors option available.

**PEH04CP2 FITNESS PLUS**  
**PEH04H**

**2.5 credits**

**Prerequisite:** Junior or Senior status or permission of the instructor

The purpose of this semester class is to give high school students a wide variety of fitness and wellness opportunities that will be carried over to their adult life. Cardiovascular activities will include, but are not limited to, aerobic exercises (treadmill/stair master/track, fitness walking, step aerobics, Tae Bo, TRX, Stability ball workouts, H.I.I.T., Tabata training, dance and other fitness options). Strength and flexibility fitness will be maintained through resistance training, weight room training, TRX Training, Yoga, and Pilates. Students will create own fitness plans. Students will participate in pre/post-physical fitness assessments. Honors option available.

**PEH09CP1 SPORTS REPLACEMENT / PHYSICAL EDUCATION:**

**0 Credits**

**\*\*Students who choose this option are required to make arrangements with Mr. O'Flynn or Mrs. McGinley during an R-block one time each semester to partake in our school wide fitness assessment, which includes the pacer run (cardiovascular measurement) and flexed arm hang (functional strength measurement).**

Juniors and seniors who have completed their 5 credits in physical education may elect this course if they complete one or more seasons of junior varsity or varsity level interscholastic athletics during their junior and/or senior years. Students must successfully complete the entire sport season in order to receive credit. Students who choose not to elect one or more junior varsity or varsity level sports during their junior and/or senior year will be responsible for earning an additional 5 credits in physical education in order to fulfill their graduation requirement (see [page 3](#)).

**PEH06TACP2 PHYSICAL EDUCATION TEACHER ASSISTANT**

**2.5 credits**

Open to grades 11 and 12 with prior approval of the Physical Education teacher.

Physical education teacher assistants will help the teacher distribute, collect, set up and take down equipment, lead conditioning and stretching exercises and otherwise assist in Physical Education, Lifetime Sports, or Project Adventure classes. To register for this course one must have prior approval from the teacher.

## **Other Courses/Programs**

### **GUI05CP1 WORK STUDY PROGRAM**

**5 credits**

**Prerequisite:** approval of the Principal and a Guidance Counselor and Work Study Team.

The Work Study Program is available to those students who may benefit from a school day that includes both academic classes and a paid work experience (minimum two hours per day) outside of the school. Parental consent and a Work-Based Learning Plan are required. Regular conferences with a member of the Guidance Department will be expected.

### **VIRTUAL HIGH SCHOOL (VHS)**

**2.5 credits semester course or 5 credits full year course**

The VHS program is a collaborative of high schools from around the country that offer students courses ranging from advanced academic subjects to technical and specialized courses via the internet. Full credit is given for all courses successfully completed. The VHS course catalog can be found online at <https://my.vhslearning.org/PublicStudentCourseList.aspx>. Students interested in a VHS course should select VHS 2.5 for a semester course or VHS 5.0 for a full year course during the online course selection and then meet with the Assistant Principal to register for the course. Availability is limited for VHS courses so please have an alternate selection.

### **GUI08CP2 PEER MENTORING I**

**2.5 credits**

This class is designed to provide a mentoring program for sophomores, juniors, and seniors. The course provides leadership opportunities for qualified students. Students should be able to demonstrate the qualities of enthusiasm, initiative, and patience while working with students who have disabilities. Peer Mentors will work closely with students who have disabilities in coordinated activities and lessons with teachers and teaching assistants. Peer Mentors must have a sense of responsibility and sensitivity toward others.

### **GUI06CP2 BRIDGE PROGRAM**

**5 credits**

The BRIDGE Program is the senior year component of the IHS School-to-Work program. Through a full-time internship, seniors learn what skills are necessary and what it takes to succeed in a career while gaining “real world” experience. Senior internships start at the beginning of the fourth quarter and run until the end of senior classes. To qualify, seniors must be in good academic standing earning C- or better in every course during their senior year and must meet all graduation requirements. Parental consent and approval by the BRIDGE Review Board are required.

### **GUI21AP AP SEMINAR COURSE OVERVIEW**

AP Seminar is a foundational course that engages students in cross-curricular conversations that explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. Using an inquiry framework, students practice reading and analyzing articles, research studies, and foundational literary and philosophical texts; listening to and viewing speeches, broadcasts, and personal accounts; and experiencing artistic works and performances. Students learn to synthesize information from multiple sources, develop their own perspectives in research-based written essays, and design and deliver oral and visual presentations, both individually and as part of a team. Ultimately, the course aims

to equip students with the power to analyze and evaluate information with accuracy and precision in order to craft and communicate evidence-based arguments.

### **GUI22AP AP RESEARCH COURSE OVERVIEW**

AP Research allows students to deeply explore an academic topic, problem, or issue of individual interest. Through this exploration, students design, plan, and conduct a year-long research based investigation to address a research question. In the AP Research course, students further their skills acquired in the AP Seminar course by understanding research methodology; employing ethical research practices; and accessing, analyzing, and synthesizing information as they address a research question. Students explore their skill development, document their processes, and curate the artifacts of the development of their scholarly work in a portfolio. The course culminates in an academic paper of 4000–5000 words (accompanied by a performance or exhibition of product where applicable) and a presentation with an oral defense.

### **LIB02CP2 CLAM TOWN TV VIDEO JOURNALISM**

**3 credits**

The focus of this class will be on writing, researching and producing short monthly news video segments for our Ipswich High School Clam Town TV show. Students will work collaboratively as a class to create video segments including, but not limited to news, public service announcements, commercials, event promos including music, art, sports, field trips, reviews of popular culture like movies, local restaurants and television and theater reviews.

Video production techniques that students will be learning about and using in class include making storyboards for your videos, video camera use, non-linear editing (using Adobe Premiere Pro), and studio production techniques including audio, lighting and green screen.

This is journalism news production class which requires research, writing and editing before creating video news segments.

### **Gul03CPI TIGER TOTS LEARNING CENTER**

**2.5 credits**

This one semester elective for sophomores, juniors and seniors involves helping to care for and interact with Infants, Toddlers and Preschoolers. Helping children learn rules by following positive examples of appropriate behavior.

Outside play, art projects, cleaning, organizing, preparing art projects and helping at meal times are some daily expectations.

Tiger Tots is a high energy, challenging environment, yet very rewarding for the right students!

This elective is by permission only. Applications are available in the guidance office.