

**SOMERSET BERKLEY  
REGIONAL HIGH SCHOOL  
SOMERSET, MASSACHUSETTS  
COURSE DESCRIPTIONS  
2016-2017**

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## **NON-DISCRIMINATION STATEMENT**

The Somerset Berkley Regional School District does not discriminate in admission to, access to, treatment in, or employment in its services, programs and activities, on the basis of race, color or national origin, in accordance with Title VI of the Civil Right Act of 1964 (Title VI); on the basis of sex, in accordance with Title IX of the Education Amendments of 1972; on the basis of age, in accordance with the Age Discrimination in Employment Act of 1975 (Age Discrimination Act); on the basis of domicile in accordance with Title VIIB of the McKinney-Vento Homeless Assistance Act of 2001; on the basis of native language in accordance with the No Child Left Behind Act of 2001, on the basis of disability , in accordance with Section 504 of the Rehabilitation Act of 1973 (Section 504) and Title II of the Americans with Disabilities Act of 1990 (ADA); or on the basis of sexual orientation, gender identity or religion in accordance with Mass. Gen. Laws, Chapter 71 and 151B.

To file a complaint alleging discrimination or harassment by Somerset Berkley Regional High School on the basis of race, color, national origin, sex, age, domicile, native language, sexual orientation, gender identity, or religion or to make inquiry concerning the application of Title VI, Title VII, Title IX, the Age Discrimination Act, and their respective implementing regulations, please contact:

Mr. Jeffrey Schoonover, Superintendent of Schools  
Somerset Berkley Regional School District  
580 Whetstone Hill Road  
Somerset, MA 02726  
Telephone: (508) 324-3115

To file a complaint alleging discrimination or harassment by Somerset Berkley Regional High School on the basis of disability or to make inquiry concerning the application of Section 504 and the ADA and their respective implementing regulations, please contact:

Ms. Melissa Silvia, Director of Special Education  
Somerset Berkley Regional School District  
580 Whetstone Hill Road  
Somerset, Ma 02726  
Telephone: (508) 324-3100

Inquiries concerning the applicability of the aforementioned federal laws and regulations to Somerset Berkley Regional High School may also be referred to the U.S. Department of Education, Office of Civil Rights (OCR), 33 Arch Street , Ninth Floor, Boston, MA 02110, telephone number (617) 289-0111, Fax (617) 289-0150.

## **SPECIAL EDUCATION**

Somerset Berkley Regional High School adheres to Federal Law and State Regulations when identifying, evaluating, and serving students who are experiencing difficulty accessing the curriculum effectively. When it becomes clear that a student may require specially-designed instruction and/or related services, parent consent is sought and assessments are conducted in the area of suspected need.

When reports become available, an Evaluation Team meets to review assessment and testing results, determine the student's eligibility for special education services, and develop an Individual Education Plan (IEP), if warranted.

A continuum of special education service exists in the high school ranging from the assistance that is provided in the general education classroom, to supportive lessons in instructional strategies offered in a resource room setting. Instruction in academic subject areas in a special education class with a pre-vocational and work study component is available for those students deemed appropriate by their Evaluation Team.

Somerset Berkley Regional High School offers extensive specialized programming to meet the diverse learning needs of students throughout the high school. Somerset Berkley Regional High School is committed to providing the least restrictive educational setting to students who are in need of specialized instruction. Somerset Berkley Regional High School works collaboratively with Southcoast Educational Collaborative to provide services within the high school setting in the areas of functional academics, life, vocational and transitional skills.

The continuum of services provided to students who require individualized education programs (IEP) are provided in an array of settings:

- Substantially Separate classes (up to 10 students on IEPs, special education teacher, paraprofessional) designed to address content specific skills in the areas of mathematics, problems solving, calculation skills, vocabulary, functional life skills, written language, comprehension, and reading strategies (6 credits).
- Instructional Strategies class is designed to address the student's need for direct, small group instruction (up to 12 students) providing learning strategies in the areas of comprehension, written language, problem solving, organization, self regulation, mathematics and social skills taught by a special education teacher and paraprofessional. This class meets 2-6 periods per cycle depending on the need of each individual student.
- Co-Taught Model Math I, English I, Biology in an inclusion model (general education setting): These classes are simultaneously taught by a content specific, certified, regular education teacher and a certified special education teacher. These courses focus on the key concepts and application as outlined in the Massachusetts Curriculum Frameworks (see course description) for each discipline (6 credits).
- Inclusion model: special education personnel support students within the general education classroom setting in all areas of academics in collaboration with the regular education classroom teacher. Accommodations/modifications identified in each student's IEP are provided to further their accessibility to the regular education curriculum.
- Consult model: Special education personnel consult with regular educators in monitoring the individual needs of each student on an IEP as they are progressing within the regular education setting and Massachusetts Curriculum Frameworks.

## **SECTION 504 OF THE AMERICANS WITH DISABILITIES ACT**

Section 504 is an Act which prohibits discrimination against persons with a disability in any program receiving Federal financial assistance. The Act defines a person with a disability as anyone who:

has a mental or physical impairment which substantially limits one or more major life activity (major life activities include activities such as learning, walking, seeing, hearing, speaking, breathing, caring for one's self, performing manual tasks and working); has a record of such impairment; or is regarded as having such an impairment

In order to fulfill the obligations under Section 504, Somerset Berkley Regional High School recognizes a responsibility to avoid discrimination in policies and practices regarding this personnel and students. No discrimination against a person with a disability will knowingly be permitted in any of the programs and practices in the school.

The school has specific responsibilities under the Act, which include the responsibility to identify, evaluate, and if the child is determined to be eligible under Section 504, to afford access to appropriate education services.

## **ADVANCED PLACEMENT PROGRAM**

### **The Program**

The Advanced Placement Program<sup>®</sup> is a cooperative educational endeavor between secondary schools and colleges and universities. Since its inception in 1955, the Program has provided motivated high school students with the opportunity to take college-level courses in a high school setting. Students who participate in the Program not only gain college-level skills, but in many cases they also earn college credit while they are still in high school. AP courses are taught by dedicated and enthusiastic high school teachers who follow course guidelines developed and published by the College Board.

The Program's success is rooted in the collaborative efforts of motivated students, dedicated teachers, and committed schools. By participating in the Program, secondary schools make the commitment to organize and support at least one class that is equivalent to a first-year college course.

### **The Audit**

The AP Course Audit was created at the request of secondary school and college members of the College Board who sought a means for the College Board to:

- provide teachers and administrators with clear guidelines on curricular and resource requirements that must be in place for AP courses; and
- help colleges and universities better interpret secondary school courses marked "AP" on students' transcripts.

All schools wishing to label a course "AP" as of the 2007-2008 school year must complete and return the subject-specific AP Course Audit form (available January 2007), along with the course syllabus, for each teacher of that AP course. Within two months of submitting AP Course Audit materials, schools will receive authorization for qualifying courses to use the "AP" designation on student transcripts. Each fall, beginning in 2007, colleges and universities will receive a ledger of schools that lists the courses authorized to use the "AP" designation at each school.

Information taken from [apcentral.collegeboard.com](http://apcentral.collegeboard.com) and AP<sup>®</sup> Course Audit Manual

## **SBRHS Core Beliefs and Values Statement**

In partnership with students, parents and the community, Somerset Berkley Regional High School will provide a safe and secure environment in which all students will have access to a rigorous curriculum that fosters critical and creative thinking. Somerset Berkley Regional High School will strive to develop students into responsible and productive citizens of a technological and global society.

S= Safe

B= Be critical and creative thinkers

R= Responsible and productive citizens

H= High expectations for all

S= Skills for the 21<sup>st</sup> century

## **Academic Expectations**

The academic expectations are aligned to the SBRHS Core Beliefs and Values statement and the Common Core Standards for College and Career Readiness. These expectations are measurable.

Students at SBRHS will:

1. Read analytically to support conclusions drawn from text
2. Produce clear and coherent writing that is appropriate to task, purpose and audience
3. Adapt speech to a variety of contexts and tasks
4. Solve problems and complete tasks by reasoning critically and creatively
5. Process information critically to become capable researchers
6. Demonstrate technological literacy to facilitate learning

## **Social and Civic Expectations**

Students at SBRHS will:

1. Demonstrate responsible behavior and citizenship
2. Respect themselves and others
3. Communicate and collaborate effectively with others

## Somerset Berkley Regional High School Graduation Requirements

Students should carefully review the requirements before registering for courses

### Core Requirements

<b>English</b>	4 years: English courses	(24 credits)
<b>Social Studies</b>	3 years: Early U.S. History, Mod. U S. History, Mod. World History	(18 credits)
<b>Mathematics</b>	3 years: Any combination	(18 credits)
<b>Science</b>	3 years: Any combination	(21 credits)
<b>Physical Education</b>	4 years	( 8 credits)
<b>Health I &amp; II</b>	2 semesters	( 2 credits)
<b>Fine &amp; Performing Arts</b>	6 credits: Any combination	( 6 credits)
<b>Technology Education</b>	6 credits: Any combination	( 6 credits)

**A total of 144 credits are required to graduate.  
In addition, students must pass MCAS.**

### Graduation Requirement

Students are required to complete 20 service hours over four years as a requirement for graduation from Somerset Berkley Regional High School. The community service project provides students with the opportunity to engage in active learning while developing good citizenship. Through the use of the instructional tool of community service, students will participate in service experiences that meet actual community needs. Students will explore aspects of civic engagement, as well as factors in creating and sustaining healthy communities. While completing the requirements of the community service project, students will also explore their identity in relation to the greater community.

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### Requirements for Progression to Next Course in the Sequence

- Students must receive a minimum grade of 65 to proceed to the next course.
- Students with grades of 65-69 should attend summer school, pass with a 70 or higher and earn a C- on their transcript. Students who do not attend summer school may be advised to drop to a lower level in the course sequence.
- Students with failing grades of 50-64 should go to summer school and pass with 70 or higher to bring the final grade on the high school record to 65 and earn 6 credits. Failure to attend or pass summer school will require the student to repeat the course the next school year. If applicable, students will be advised to drop to a lower level in the course sequence.
- Students with a final average below 50 must retake the course the following year. The students may be advised to drop to a lower level in the course sequence. Summer school will not earn any credit or grade change; however, the student may enroll in summer school for remedial skill development.
- To advance to a higher level in any course, it is strongly recommended that students earn a grade of A- at the present level of study.

## **LIBRARY MEDIA CENTER**

### **Hours of Operation**

The library media center is open from 7 a.m. – 3:30 p.m. Monday through Thursday and Friday 7 a.m. – 2:30 p.m. for student research and study. The media center is home to an array of print and multimedia resources that complement the high school curriculum. The library is a member of the SAILS Library Network which has over 70 member libraries. Students and staff may borrow materials from these libraries. For more detailed information please visit the library's web page: **[somesetberkeleylibrary.weebly.com](http://somesetberkeleylibrary.weebly.com)**

### **Virtual High School**

Somerset-Berkley Regional High School participates in the distance-learning program, The VHS Collaborative. VHS provides a wealth of quality online education options for high school students who would like a challenge in a computer setting.

Through VHS, schools expand their educational offerings and students expand their world view, as they attend class with students from across the country and around the world. Students gain access to a wide variety of courses not typically available and have the flexibility to take these courses anytime and anyplace as best fits their schedule. These courses are offered at various levels but are generally demanding and academically rigorous as they meet the same standards expected of students taking a traditional high school class.

Once the course has been approved by the appropriate Content Coordinator, the student will be enrolled and be asked along with, his/her parent/guardian to sign a contract, which explains the responsibilities of taking a distance-learning course. For more information about the VHS Collaborative, students may visit the website [www.thevhscollaborative.org](http://www.thevhscollaborative.org), speak with their counselor to see if they qualify, and/or meet with the on-site coordinator for VHS.

### **Equal Access Statement**

All students are allowed equal access to course offerings provided they have met pre-requisites/requirements and classroom space is available.

## ENGLISH LANGUAGE ARTS AND READING

The English Language Arts and Reading Department at Somerset Berkley High School offers a comprehensive and rigorous course of study which includes specific core requirements at grades 9 and 10, expanded core requirements at grades 11 and 12, electives, and reading and literacy supports. Our goal is to educate our students to be analytical readers, coherent writers, critical thinkers, complex problem solvers, and responsible citizens.

### English I: Literary Genre

#### Grade 9

##### Level 1: Pre-AP

190100

This Pre-Advanced Placement course is the first in a sequence of two courses which will serve as a strong foundation for AP English Language and Composition and/or AP English Literature and Language. The course is a deep study of literary genre. By the end of the year, students will master each of the following skills: rhetorical analysis, Integrating literary theory and criticism into discussion and writing, close reading, research, and the writing process. Students electing to take Pre-AP are expected to be highly independent, self-motivated and organized learners. Students should have earned a score of **ADVANCED** on the ELA MCAS, be recommended by their grade 8 teacher, and have scored exemplary on a writing sample administered by the high school English Department.

##### Level 1

120100

This accelerated course will serve as the foundation for all college preparatory English study at Somerset-Berkley Regional High School. This introductory course will focus on the reading of traditional and contemporary literature. Particular emphasis will be placed upon the development of skills needed by students to become independent readers and writers. Students will begin their mastery of the following skills: analysis of literature, critical thinking and reading, understanding literature and the writing process. Students electing to take Honors are expected to be highly independent, self-motivated and organized learners. Time will be devoted to MCAS preparation. **Students should have earned a score of ADVANCED on the ELA MCAS.**

##### Level 2

120100

This course will serve as the foundation for all college preparatory English study at Somerset-Berkley Regional High School. This introductory course will focus on the reading of traditional and contemporary literature. Particular emphasis will be placed upon the development of skills needed by students to become independent readers and writers. Students will begin their mastery of the following skills: analysis of literature, critical thinking and reading, understanding literature and the writing process. Time will be devoted to MCAS preparation.

### English II: American Literature

#### Grade 10

##### Level 1: Pre-AP

290100

This Pre-Advanced Placement course is the final course in a sequence of two courses which will serve as a strong foundation for AP English Language and Composition and/or AP English Literature and Language. By the end of the year, students will master each of the following skills: rhetorical analysis, Integrating literary theory and criticism into discussion and writing, close reading, research, and the writing process. Students electing to take Pre-AP are expected to be highly independent, self-motivated and organized learners. Students should have earned B or higher in Grade 9 Pre-AP or have earned an A- or higher in Grade 9, level 1 English and have scored exemplary on a writing sample administered by the high school English Department.

##### Level 1

210100

This accelerated course chronologically surveys American literature from the pre-colonial period to the present. Students will continue their mastery of the following skills: analysis of literature, critical thinking and reading, understanding language, and the writing process. Students are challenged to read and analyze literary selections from a humanistic approach that regards literature in context with the history, the arts, and literary movements of the time period. Grammar, vocabulary, and composition are taught utilizing a whole language method that incorporates skill instruction with the literature. Frequent formal writing assignments and oral presentations are required. Time will be devoted to MCAS preparation. **Students should earn of grade of A- in grade 9 English to be placed in this class.**

##### Level 2

220100

This college preparatory course surveys American Literature from the pre-colonial period to the present. Students will analyze the writers' techniques found in the literary genres of the short story, non-fiction, poetry and the novel. Students will study each literary selection on three levels of comprehension: literal, interpretative and applied. Along with critical thinking and reading skills, the literature based program incorporates vocabulary, writing and grammar skill development. Frequent formal writing assignments and oral presentations are required. Time will be devoted to MCAS preparation.

## GRADE 11

- **Choose only one of the options below. Students may not repeat a course they have already taken.**

### AP English Language and Composition

#### Grade 11-12

#### Level 9

390100

In this Advanced Placement Course, students will study the art of rhetoric in the context of literary non-fiction and fiction. Students will be able to analyze writers' rhetorical and linguistic choices as well as apply different rhetorical and linguistic strategies to their own writing. Students will read from a variety of prominent English language autobiographers, diarists, political writers, biographers, historical writers, essayists, fiction writers and literary critics.

Students who elect to enroll in AP English Language and Composition will meet with the AP teacher before the summer break to pick up and have an explanation of the required summer assignment. They will be expected to read and analyze a text representative of those they will encounter in the course. This assignment will be graded as a test grade (20 Points) for first quarter. A typical quarter includes assignments totaling 300-400 points. Please do not elect this course if you are unwilling to complete the summer assignments. **Students should have earned a grade of A- or better in their prior year English class. All students are required to take the AP exam.**

### AP English Literature and Composition

#### Grade 11-12

#### Level 9

490100

In this Advanced Placement Course, students will read and analyze some of the most prominent poetry, drama, novels, short stories and essays written at various times and by diverse cultures with particular emphasis being on literature originally written in English. Through the close reading of selected texts, students will consider a work's structure, style, and themes as well as such smaller-scale elements as the use of figurative language, imagery, symbolism and tone. The writing focus is the analytical essay about literature. Students will learn to sustain an argument while guiding a reader through well-organized evidence drawn from details of the text.

Students who have elected to enroll in AP English Literature and Composition will meet with the AP teacher before summer break to complete the required reflective pre-assessment on a piece of fiction they have already read and receive the required summer assignment. Students will choose two novels from a list of works recognized for their excellence. They will be expected to maintain a dialectic journal for the two novels as they read during the summer. This journal will be submitted in the fall and is worth 100 points. Furthermore, students will write an on demand analysis essay for each of the novels. These are worth 100 points each. The summer assignment is part of the first quarter grade. A typical quarter totals 1000-1200 points. Please do not elect this course if you are unwilling to complete the summer assignments. **Students should have earned a grade of A- or better in their prior year English class.. All students are required to take the AP exam.**

**All courses below are offered in Level 1 and 2.** Students choosing the honors option will move at a more rapid pace, analyze for more depth, and complete extra reading and writing assignments. We recommend that students choosing Honors level should have earned a grade of B or better in English the prior year

### British Literature

#### Grade 11

#### Level 1, 2

310100, 320100

This course emphasizes the reading and appreciation of the literature of Great Britain. Students will be encouraged to think and read critically by focusing on the literature in its historical context from the Anglo-Saxon Period through contemporary writers. Grammar, vocabulary and composition are taught using a whole language method. An extensive research project is required. Time will be devoted to SAT preparation.

### Introduction to Creative Fiction and Non-Fiction

#### Grade 11

#### Level 1, 2

310650, 320650

College professors and heads of businesses have emphatically stated that the most important skill students and/or workers need is the ability to write competently for a wide variety of audiences and purposes. To that end, this introductory course will engage students in the analysis of rhetorical strategies used in the best works of fiction and non-fiction. Moreover, students will be expected to apply these strategies in many original works of fiction and non-fiction. Students will analyze and create examples of short story, poetry, drama, digital web based literature, and novel excerpts. They will also analyze and create editorials, journalistic feature articles, personal narrative/memoir, position papers, creative reports, and digital informational text

## **Comparative Mythology and Folklore**

### **Grade 11**

#### **Level 1, 2**

**311064, 321064**

Who am I? What is the nature of the universe in which I live? How can I lead a satisfying life? Human beings have been wrestling with fundamental questions such as these since the very beginning. Mythology and folklore are attempts to answer them. Myths and folktales symbolize human experience and embody the spiritual values of a culture. Every society preserves its myths and folklore because the beliefs and worldview found within them are crucial to the survival of that culture. This course will explore myths and folktales from many different cultures, focusing on their striking similarities and colorful differences. Students will be exposed to the various academic perspectives through which scholars have approached these stories, including the theories of Carl Jung and Joseph Campbell. They will be invited to embark on a journey of self-discovery as they ask their own questions and search for answers among our oldest stories and their most recent retellings. Coursework will include reading, discussion, writing, presentations and projects.

## **Introduction to Classical and Modern Drama**

### **Grade 11**

#### **Level 1, 2**

**311651, 321651**

Drama is a genre that must be seen, heard, performed, and read if it is to be fully understood. To that end, this course will explore those great works of Classical and Modern Drama which have also been committed to film. Students will be expected to read, view, discuss, perform, and write to analyze all aspects of the dramatic arts: play writing, lighting, costuming, staging, language, directing, acting, characterization, and depiction of universal themes. Students will be asked to view and analyze films/live performances which deal with mature themes, including representations of race, gender, and sexuality in order to draw comparisons with the written play. Additionally, students will be expected to organize and perform scenes from essential works for an external audience.

## **Modern Literary Criticism**

### **Grade 11**

#### **Level 1, 2**

**311650, 321650**

Modern Literary Criticism: Analyzing Print and Non-Print Text engages students in a deep analysis of literary, informational, and non-print texts drawn from the world cannon and throughout history. Students will be expected to analyze these works through multiple critical lenses. To that end, students will study the essential principles of schools of literary criticism such as Moral Criticism, Dramatic Construction, Formalism, New Criticism, Neo-Aristotelian Criticism, Psychoanalytic Criticism, Jungian Criticism, Marxist Criticism, Reader-Response Criticism, Structuralism/Semiotics, Post-Structuralism/Deconstruction, New Historicism/Cultural Studies, Post-Colonial Criticism, Feminist Criticism, and Gender/Queer Studies. Additionally, students will be expected to apply methodologies found in multiple disciplines as they construct meaning in complex texts. These disciplines include Anthropology, Sociology, Psychology, Rhetoric, Linguistics, Media Studies, Aesthetics, and Ethics. Finally, as students read, discuss, think about, and analyze exemplar texts, it is expected that they will also develop and articulate a personal theory of the why and how of artistic expression.. **Students will be asked to view and analyze films which deal with mature themes, including representations of race and gender. Therefore, students should consult their parents and receive their permission prior to enrolling in this course.**

## **GRADE 12**

- **Choose only one of the options below. Students may not repeat a course they have already taken.**
- **Students may take a second English course during their senior year: one will count for core credit and the other as an elective.**

## **AP English Language and Composition**

### **Grade 11-12**

#### **Level 9**

**390100**

In this Advanced Placement Course, students will study the art of rhetoric in the context of literary non-fiction and fiction. Students will be able to analyze writers' rhetorical and linguistic choices as well as apply different rhetorical and linguistic strategies to their own writing. Students will read from a variety of prominent English language autobiographers, diarists, political writers, biographers, historical writers, essayists, fiction writers and literary critics.

Students who elect to enroll in AP English Language and Composition will meet with the AP teacher before the summer break to pick up and have an explanation of the required summer assignment. They will be expected to read and analyze a text representative of those they will encounter in the course. This assignment will be graded as a test grade (20 Points) for first quarter. A typical quarter includes assignments totaling 300-400 points. Please do not elect this course if you are unwilling to complete the summer assignments. **Students should have earned a grade of A- or better in their prior year English class. All students are required to take the AP exam.**

## **AP English Literature and Composition**

### **Grade 11-12**

#### **Level 9**

**490100**

In this Advanced Placement Course, students will read and analyze some of the most prominent poetry, drama, novels, short stories and essays written at various times and by diverse cultures with particular emphasis being on literature originally written in English. Through the close reading of selected texts, students will consider a work's structure, style, and themes as well as such smaller-scale elements as the use of figurative language, imagery, symbolism and tone. The writing focus is the analytical essay about literature. Students will learn to sustain an argument while guiding a reader through well-organized evidence drawn from details of the text.

Students who have elected to enroll in AP English Literature and Composition will meet with the AP teacher before summer break to complete the required reflective pre-assessment on a piece of fiction they have already read and receive the required summer assignment. Students will choose two novels from a list of works recognized for their excellence. They will be expected to maintain a dialectic journal for the two novels as they read during the summer. This journal will be submitted in the fall and is worth 100 points. Furthermore, students will write an on demand analysis essay for each of the novels. These are worth 100 points each. The summer assignment is part of the first quarter grade. A typical quarter totals 1000-1200 points. Please do not elect this course if you are unwilling to complete the summer assignments. **Students should have earned a grade of A- or better in their prior year English class. All students are required to take the AP exam.**

**All courses below are offered in Honors and College Levels.** Students choosing the honors option will move at a more rapid pace, analyze for more depth, and complete extra reading and writing assignments. We recommend that students choosing Honors level should have earned a grade of B or better in English the prior year

## **World Literature**

### **Grade 12**

#### **Level 1, 2**

**410100, 420100**

The focus of this senior honors course is the study of world literature. Through this comparative approach, students will analyze major themes in literature such as justice, love, truth and identity. In addition to extensive reading, students will be required to produce a wide variety of writing assignments. The course will include vocabulary work, college essay preparation and a research project.

## **Science Fiction and Fantasy in Print and Non-Print Media**

### **Grade 12**

#### **Level 1, 2**

**412650, 422650**

Science Fiction and/or Fantasy in Print and Non-Print Media compel the learner to address essential and universal questions about man's struggle to create both an individual and societal identity across time and space. These questions ask students to investigate and analyze important relationships: conflicts between an individual's responsibility to self and to society; societies responsibility to the individual; the impact of technology on an individual or society over time; conflicts between a magical and scientific view of nature; the benefits and challenges of diverse cultures, races, and beliefs sharing the universe; the quest to defend good and conquer evil; suffering and heroism; etc.. Students in this class will be expected to read and respond critically to a wide variety of science fiction and fantasy text; produce many critical and creative pieces of genre specific writing; conduct original research to produce a paper of not fewer than eight pages; make several classroom presentations; and produce an extended original work of science fiction and/or fantasy.

## **Advanced Classical and Modern Drama**

### **Grade 12**

#### **Level 1, 2**

**411651, 421651**

*Advanced Classical and Contemporary Drama* builds upon the foundation established in the junior level, *Introduction to Classical and Contemporary Drama*. This course will engage students in a deep analysis of selected dramas from classical beginnings to the contemporary era. While some plays may be examined chronologically, others will be juxtaposed in order to analyze changes in the conventions and practices of drama across time. Students will be expected to apply literary theory to discuss and write about evolutions and revolutions of characterization, dramatic structures, performance rituals, staging, play writing, lighting, costuming, language, directing, and the depiction of universal themes. Additionally, students will be expected to organize and perform scenes from essential works for an external audience.

## **Advanced Creative Fiction and Non-Fiction**

### **Grade 12**

#### **Level 1, 2**

**410650, 420650**

This advanced course is designed for students who have already taken *Introduction to Creative Fiction and Non Fiction*, have earned a grade of B+ or higher, and are willing to hold their work up to classroom critique. Students who have not taken the

introductory course may be admitted to this advanced course with teacher recommendations and approval. To that end, this course will engage students in a deep analysis of literary theory and rhetorical strategies as they apply to the best works of fiction and non-fiction. Moreover, students will be expected to apply these strategies in extended works of fiction and non-fiction. Students will analyze and create examples of short story, poetry, drama, digital web based literature, and novel excerpts. They will also analyze and create editorials, journalistic feature articles, personal narrative/memoir, position papers, creative reports, and digital informational text. Most importantly, students will maintain and annotate a multigenre portfolio of their work including extended works in at least two genre of their choice. Students must research the rhetorical strategies used by authors who have influenced them and show how their own works reflect this influence. As part of the reflective process, students will also be expected to research and draft a personal theory of their art.

**READING AND WRITING SUPPORT COURSE:** Offered through the English Department  
*Students interested in these courses should speak with Dr. Doucette*

### **Literacy across the Curriculum**

**Grade 9-12**

**3 Periods per cycle**

**501067**

This course is designed to address the needs of students who are identified as most at risk to develop proficiency in reading and writing in response to content text such as scientific journals, textbooks, tables, charts, graphs, primary resource documents, historical photos, political cartoons, and other print and non-print media. Moreover, this course will address the needs of students who struggle to write reports, procedural pieces, persuasive essays, and research-based pieces. Moreover, this course is designed to address the needs of students (such as English Language Learners) who need intensive support and direct instruction in content specific language structures and vocabulary.

### **Intensive Literacy across the Curriculum**

**Grade 9-12**

**6 Periods per cycle**

**601067**

This course is designed to address the needs of students who are identified as most at risk to develop proficiency in reading and writing in response to content text such as scientific journals, textbooks, tables, charts, graphs, primary resource documents, historical photos, political cartoons, and other print and non-print media. Moreover, this course will address the needs of students who struggle to write reports, procedural pieces, persuasive essays, and research-based pieces. Moreover, this course is designed to address the needs of students (such as English Language Learners) who need intensive support and direct instruction in content specific language structures and vocabulary.

## **English Department Part-time Courses**

### **Journalism**

**Grades 9-12**

**3 periods per cycle**

**600200**

This mini course is designed to introduce students to journalism. Students will use models of good writing to determine techniques that good writers use and will apply these techniques while developing writing portfolios. Students will study the history of journalism, conduct independent research and interviews, investigate student press laws and ethics and examine the skills needed to write for a newspaper. During the third term, students will create their own newspaper. During the fourth term, students will explore photojournalism.

### **Speech and Debate**

**Grade 9-12**

**3 periods per cycle**

**620600**

Students will learn the fundamentals of speech communication, research skills and the art of debate. They will listen to, deliver, discuss and respond to presentations of increasing complexity. These include introductory, informative, persuasive, interview, impromptu, tribute and process speeches.

## SOCIAL STUDIES

The goal of the Social Studies Department is to develop responsible, engaged citizens who are prepared to succeed in a 21<sup>st</sup> century global and technological world. The discipline of Social Studies provides content that students will use to understand political, social, and economic issues. It also allows students to hone their skills and apply knowledge to make effective personal and public decisions.

Courses in the social studies department stress competence in the following skills:

- Analytical and critical reading of primary and secondary sources
- Research and writing
- Oral presentation
- Historical interpretation and analysis
- Crafting historical argumentation

<b>Suggested Social Studies Course Sequence</b>				
<b>Grade 9</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>	
<div style="border: 1px solid black; border-radius: 50%; width: 80%; margin: 0 auto; padding: 10px;">                     Early U.S. History Levels AP, 1, 2, 3                 </div>	<div style="border: 1px solid black; border-radius: 50%; width: 80%; margin: 0 auto; padding: 10px;">                     Modern U.S. History Levels AP, 1, 2, 3                 </div>	<div style="border: 1px solid black; border-radius: 50%; width: 80%; margin: 0 auto; padding: 10px;">                     Modern World History Levels AP, 1, 2, 3                 </div>	<div style="border: 1px solid black; border-radius: 50%; width: 80%; margin: 0 auto; padding: 10px;">                     Electives                 </div>	
<div style="border: 1px solid black; width: 80%; margin: 0 auto; padding: 5px;"> <b>Electives</b> </div>	<div style="border: 1px solid black; width: 80%; margin: 0 auto; padding: 5px;">                     Grades 11 and 12                 </div>			
<b><u>No Level (3p/c)</u></b>	<b><u>Level 1</u></b>	<b><u>Level 2</u></b>	<b><u>Level 3</u></b>	<b><u>AP Level</u></b>
The American Exp (11, 12)	Intro to Psychology Law International Relations Economics Abnormal & Social Psychology	Intro to Psychology Law International Relations Economics	Contemporary Issues Law	European History Psychology

### COURSE OFFERINGS:

#### U.S. History & Government before 1877 with document readings

##### Grade 9

##### Level 9 (AP)

**190101**

In this course, students will engage in a comprehensive and in-depth analysis of political, social, economic, diplomatic, intellectual and cultural aspects of U.S. history from colonial times to the end of the Reconstruction period. Based on primary and secondary sources, this course utilizes extensive document readings that enhance students' comprehensive reading of the text. Students will develop skills in historical interpretation, oral argument, and writing and research in preparation for the United States History Advanced Placement Exam, which will be taken in the spring of grade 10.

#### U.S. History & Government 1763-1877 with document readings

##### Grade 9

##### Level 1

**110101**

Students will examine the historical and intellectual origins of the United States during the Revolutionary and Constitutional eras. Students will study the basic framework of American democracy and concepts of American government, as well as America's westward expansion, the establishment of political parties, economic and social change, sectional conflict, the Civil War and Reconstruction. Students will be required to interpret and analyze substantial primary source and supplemental readings, sometimes independently.

## **Level 2**

**120101**

Students will examine the historical and intellectual origins of the United States during the Revolutionary and Constitutional eras. Students will study the basic framework of American democracy and concepts of American government, as well as America's westward expansion, the establishment of political parties, economic and social change, sectional conflict, the Civil War and Reconstruction. Students will be required to interpret and analyze primary and secondary source readings.

## **Level 3**

**130101**

Students will examine the historical and intellectual origins of the United States during the Revolutionary and Constitutional eras. Students will study the basic framework of American democracy and concepts of American government, as well as America's westward expansion, the establishment of political parties, economic and social change, sectional conflict, the Civil War and Reconstruction. Students will have extensive opportunity to practice close reading skills thereby preparing them for independent historical analysis. Students will be introduced to the interpretation and analysis of required primary source documents. This course does not satisfy NCAA eligibility requirements.

## **U.S. History & Government from 1877 with document readings (AP)**

### **Grade 10**

#### **Level 9**

**290101**

In this rigorous college course students will engage in a comprehensive and in-depth analysis of the political, social, economic, diplomatic, intellectual, and cultural forces that influenced the United States from the end of the Reconstruction period to the present. Based on primary and secondary sources, this course utilizes extensive document readings that enhance students' comprehensive reading of the text. Students will develop skills in historical interpretation, oral argument, and writing and research in preparation for the United States History Advanced Placement Exam which will be taken in the spring. **All students are required to take the AP exam. Prerequisite: Completion of U.S. History and Gov. 1763-1877, Level 9 and completion of a summer assignment.**

## **U.S. History & Government from 1877 with document readings**

### **Grade 10**

#### **Level 1**

**210101**

Students will analyze the causes and results of the Industrial Revolution and America's growing role in international relations. Students will also examine the goals and accomplishments of the Progressive and New Deal Eras and the various factors that led to America's entry into World War II as well as its effects. In addition, students will study the causes and events of the Cold War, the Civil Rights movement and recent social, political, and economic developments. Students will be required to interpret and analyze substantial primary source and supplemental readings independently.

#### **Level 2**

**220101**

Students will analyze the causes and results of the Industrial Revolution and America's growing role in international relations. Students will also examine the goals and accomplishments of the Progressive and New Deal Eras and the various factors that led to America's entry into World War II as well as its effects. In addition, students will study the causes and events of the Cold War, the Civil Rights movement and recent social, political, and economic developments. Students will be required to interpret and analyze primary source and supplemental readings, at times independently.

#### **Level 3**

**230101**

Students will analyze the causes and results of the Industrial Revolution and America's growing role in international relations. Students will also examine the goals and accomplishments of the Progressive and New Deal Eras and the various factors that led to America's entry into World War II as well as its effects. In addition, students will study the causes and events of the Cold War, the Civil Rights movement and recent social, political, and economic developments. Students will continue to develop analytical skills using required primary source documents and supplemental readings. This course does not satisfy NCAA eligibility requirements.

## **World History AP**

### **Grade 11**

#### **Level 9**

**490101**

This course will follow the Advanced Placement World History curriculum and prepare students for the Advanced Placement exam. World history will be studied from 8,000 B.C.E to the present. Students will analyze and interpret a wide variety of challenging primary and secondary sources. Students will develop proficiency in historical thinking skills. **All students are required to take the AP exam. Prerequisite: Completion of a summer assignment.**

## **Modern World History**

### **Grade 11**

#### **Level 1**

**310101**

Students will study the period from the Enlightenment to the present time. Major forces such as liberalism, nationalism, and imperialism evident throughout the 19<sup>th</sup> and 20<sup>th</sup> centuries will be examined. In addition, the course will proceed with the study of events, concepts, and ideologies associated with revolutions, war and conflict, technological revolutions, and modernization of the 20<sup>th</sup> century to the present. Diversity of culture and social, political economic developments will be emphasized. Students will draw upon the following skills: chronological thinking, historical comprehension, analysis and historical research. Students will be required to interpret and analyze substantial primary source and supplemental readings independently.

## **Level 2**

**3200101**

Students will study the period from the Enlightenment to the present time. Major forces such as liberalism, nationalism, and imperialism evident throughout the 19<sup>th</sup> and 20<sup>th</sup> centuries will be examined. In addition, the course will proceed with the study of events, concepts, and ideologies associated with revolutions, war and conflict, technological revolutions, and modernization of the 20<sup>th</sup> century to the present. Diversity of culture and social, political economic developments will be emphasized. Students will draw upon the following skills: chronological thinking, historical comprehension, analysis and historical research. Students will be required to interpret and analyze primary source and supplemental readings.

## **Level 3**

**330101**

Students will study the period from the Enlightenment to the present time. Major forces such as liberalism, nationalism, and imperialism evident throughout the 19<sup>th</sup> and 20<sup>th</sup> centuries will be examined. In addition, the course will proceed with the study of events, concepts, and ideologies associated with revolutions, war and conflict, technological revolutions, and modernization of the 20<sup>th</sup> century to the present. Diversity of culture and social, political economic developments will be emphasized. Students will draw upon the following skills: chronological thinking, historical comprehension, analysis and historical research. Students will be required to interpret and analyze primary source and supplemental readings to develop and refine investigative skills. Students will draw conclusions from information they have found through deciphering primary source documents.

This course does not satisfy NCAA eligibility requirements.

## **Introduction to Psychology (AP)**

### **Grades 11, 12**

#### **Level 9**

**390201**

This course will follow the Advanced Placement Psychology curriculum and prepare students for the Advanced Placement exam. The Advanced Placement Psychology course involves an in-depth analysis of the biological foundations of the brain, perception, states of consciousness, thinking, language, motivation, learning, memory, personality theory, therapeutic techniques, and social psychology. Students will develop research and writing skills in preparation for the spring AP Psychology exam. **All students are required to take the AP exam. Prerequisite: Completion of a summer assignment**

## **Introduction to Psychology**

### **Grades 11, 12**

#### **Level 1**

**310201**

The purpose of this course is to provide the students with the opportunity to gain in-depth knowledge of terminology and conceptual material of Psychology. Areas of concentration for the course include biological foundations of the brain, perception, states of consciousness, thinking and language, motivation, learning, memory, classical and operant conditioning, personality theory, abnormal psychology, therapeutic techniques and social behavior. Students are required to regularly, and primarily independently, complete readings and outline the material in order to contribute in class activities and discussions. The rigor and depth of discussion, analysis, and complexity of material is of the nature in which students are to take greater personal responsibility of the content. Students will be provided a structure for understanding of material through guided discussion, case studies, and project based activities.

#### **Level 2**

**320201**

The purpose of this course is to provide the students with the opportunity to gain in-depth knowledge of terminology and conceptual material of Psychology. Areas of concentration for the course include biological foundations of the brain, perception, states of consciousness, thinking and language, motivation, learning, memory, classical and operant conditioning, personality theory, abnormal psychology, therapeutic techniques and social behavior. Students are required to regularly complete readings and supportive assignments, and contribute in class activities and discussions. Students are guided with instruction of material with regard to complexity, depth, and pace of presenting concepts as appropriate to the level. Students will be provided a structure for understanding of material through, notes, guided discussions, case studies and project based activities.

## **Abnormal & Social Psychology**

### **Grade 12**

#### **Level 1**

**410201**

The purpose of this psychology course is to provide the students with the opportunity to gain in-depth knowledge of abnormal & social psychology. The first two terms will focus on the diagnosis, causes, and treatment of mental disorders. The remaining terms will focus on social psychology theory and applications. Areas of focus will include the psychological study of gangs, terrorism, crime, bullying, and other relevant social topics. Students will explore psychological concepts in the class through activities, projects, and problem-based learning.

## **Economics**

### **Grades 11, 12**

#### **Level 1**

**310301**

This course is an introductory survey of the basic principles of microeconomics and macroeconomics. Students will examine key economic concepts through simulation activities, projects, participation in the stock market game and problem-based learning. Among the topics analyzed are the study of markets, externalities, government intervention, taxation, national income, economic role of government, trade, banking, and money. Students will be required to analyze primary and secondary sources and

demonstrate their skills through a short writing /reflection assignment each term.

### **Level 2**

**320301**

This course is an introductory survey of the basic principles of microeconomics and macroeconomics. Students will examine key economic concepts through simulation activities, projects, participation in the stock market game and problem-based learning. Among the topics analyzed are the study of markets, externalities, government intervention, taxation, national income, economic role of government, trade, banking, and money. Students will be given scaffolded learning opportunities to develop the critical skills of analysis, synthesis, and evaluation of primary and secondary sources.

## **International Relations: The World Since 1945**

### **Grades 11, 12**

#### **Level 1**

**310601**

This course is designed to focus on US foreign policy and the critical international issues facing our world today. Emphasis will be placed on such topics as the US response to terrorism and terrorist groups such as Al Qaeda, nuclear proliferation, affects of globalization, and our relations with vital countries such as Iran and China. In addition, students will gain knowledge of the United Nations and its role, as well as the plight of developing nations socially, politically, and economically. This course will require active participation through debate and discussion. Students will analyze substantial primary source documents independently. In addition, assignments will require more complex ideas developed within their writing.

#### **Level 2**

**320601**

This course is designed to focus on US foreign policy and the critical international issues facing our world today. Emphasis will be placed on such topics as the US response to terrorism and terrorist groups such as Al Qaeda, nuclear proliferation, affects of globalization, and our relations with vital countries such as Iran and China. In addition, students will gain knowledge of the United Nations and its role, as well as the plight of developing nations socially, politically, and economically. This course will require active participation through debate and discussion. Students will analyze primary source documents with instructional support. In addition, assignments will include required elements to develop writing.

## **Contemporary Issues**

### **Grades 11, 12**

#### **Level 2**

**320501**

This course emphasizes the issues and problems that face the world today. Through the use of magazine and newspaper articles, news media and film, students will analyze various issues that shape the society in which they live. Units of study include but are not limited to: terrorism, immigration, the economy, societal problems, politics, and racism. Beyond focusing on these specific units of study, students will also be required to keep abreast of current events, demonstrated through class discussion and written summary. Students will be assessed based upon their successful use of skills in extensive writing and analysis, their understanding and ability to be able to put together a comprehensive, sophisticated argument in an oral presentation, and the synthesis of information through research. The goal of this elective is to provide students with the ability to understand major issues that impact their lives.

#### **Level 3**

**330501**

This course emphasizes the issues and problems that face the world today. Through the use of magazine and newspaper articles, news media and film, students will analyze various issues that shape the society in which they live. Units of study include but are not limited to: terrorism, immigration, the economy, societal problems, politics, and racism. Beyond focusing on these specific units of study, students will also be required to keep abreast of current events, demonstrated through class discussion and written summary. Students will be assessed upon their continuing development in written analysis and general conceptual understanding of topic of study. Students will be assessed based upon their ability to develop a clear, organized argument in an oral presentation. Students will have ample opportunity to develop effective research methods. The goal of this elective is to provide students with the ability to understand major issues that impact their lives. This course does not satisfy NCAA eligibility requirements.

## **Law**

### **Grades 11, 12**

#### **Level 1**

**310401**

The course will introduce students to the basics of the American legal system. The course will emphasize Constitutional Law and the rights that it provides to American citizens. Students will explore the areas of freedom of speech, freedom of religion, rights of the accused, rights to privacy, and civil rights. Additional emphasis will be placed on criminal law and the course will examine the arguments and strategies involved in both prosecuting and defending criminal cases. The course will also explore the basics of family law, civil law, and business law. Students will develop logical and critical thinking skills in their legal analysis of significant legal cases, at times independently. Students will learn to write legal briefs and will participate in debates and mock trials.

## **Law**

### **Grades 11, 12**

#### **Levels 2, 3**

**320401, 330401**

The course will introduce students to the basics of the American legal system. The course will emphasize Constitutional Law and rights that it provides to American citizens. Students will explore the areas of freedom of speech, freedom of religion, rights of the

accused, rights to privacy, and civil rights. Additional emphasis will be placed on criminal law and the course will examine the arguments and strategies involved in both prosecuting and defending criminal cases. The course will also explore the basics of family law, civil law, and business law. Students will develop logical and critical thinking skills in their legal analysis of significant legal cases. Students will participate in debates and mock trials.

## **European History AP**

### **Grade 12**

### **Level 9**

**490201**

This course examines the history of Europe from the 15<sup>th</sup> century to the present. Emphasis will be placed on political, diplomatic, social, economic, intellectual and cultural developments. Students will analyze a wide variety of challenging primary and secondary sources to evaluate historical evidence and offer insight on different historical interpretations of Western Civilization. This course will correspond to recent trends in history curricula at the undergraduate level and will prepare students for the College Board examination in European History. **All students are required to take the AP exam. Prerequisite: Completion of a summer assignment.**

## **Social Studies Department Part-time Courses**

## **The American Experience Since 1945**

### **Grades 11-12**

### **3 periods per cycle**

**603401**

This course will take an in-depth look into American affairs and life in the post-World War II era. Some of the topics covered are: Cold War conflicts and policies including the Korean War, Cuban Missile Crisis, Vietnam, the assassination of JFK, and the fall of Communism. This course will look into popular culture issues such as the different styles of music of each decade, art, everyday life, such as roles of men and women and new technology from 1945 to today. The workload of this class is primarily focused on in class readings, debates and student/group centered projects.

## **MATHEMATICS**

### **Mathematics Dept. Calculator Policy:**

To follow the Massachusetts Common Core Curriculum Frameworks and to meet our school's academic expectations, it is necessary to utilize technology as an essential tool in the teaching of mathematics. In keeping with the school's Core Values and Beliefs Statement, that each student come to school ready to learn, and to maximize learning success, appropriate calculators will be recommended for use at home and in school.

***It is recommended that all students provide their own calculators and develop proficiency with them.*** Scientific calculators are sufficient for Geometry courses. Graphing calculators are encouraged for all courses starting with Algebra II, while strongly recommended for Pre-Calculus and Calculus. Graphing calculators are required for AP Statistics. The TI-84+CE graphing calculator is recommended. Teachers will inform students of the appropriate calculator at the beginning of the school year.

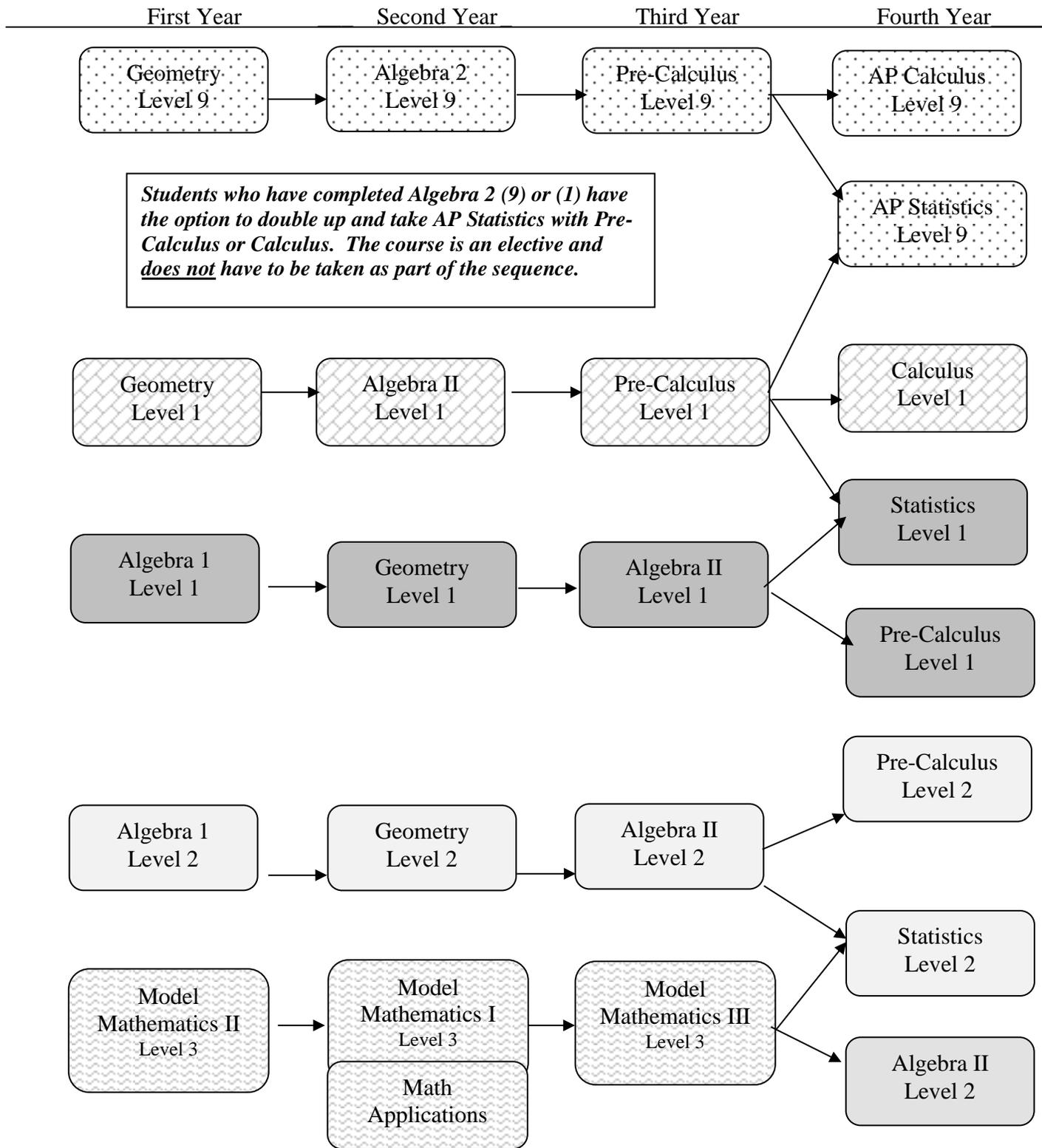
In addition, students taking the math portion of the MCAS, PARCC, the PSAT's and the SAT's will be required to have their own calculators and be proficient with them. A minimum scientific calculator is required. A graphing calculator is required for taking the Calculus AP exam and the AP Statistics exam.

### **Mathematics Dept. Summer Packet Policy:**

In order to have students maintain content knowledge, summer packets are given at the end of the previous school year. The summer packets are due the first Monday after school begins. There are no exceptions. The packets are given to all students all math classes except Math Applications. If a summer packet is lost, it is available for download on the math department website [shsmath.webnode.com](http://shsmath.webnode.com) or at the Somerset Berkley Regional High School website [somersetberkley.org](http://somersetberkley.org).

### **Doubling Courses Policy:**

***Any student entering grade 10 that wishes to double up and take Geometry and Algebra 2 at either Level 9 or Level 1 concurrently must have a minimum average of A- in Algebra 1 AND have teacher recommendation.***



## **COURSE OFFERINGS:**

### **Algebra I**

#### **Grade 9**

##### **Level 1**

**110103**

This course is an in-depth study of Algebra I which proceeds at a quick pace. The concepts of algebra are introduced with an examination of the structure and the techniques of algebra, linear equations, factoring, quadratic equations, inequalities, graphing, probability, and statistics. Real world applications are integrated throughout the course. **Students should have a minimum average of C+ in level 1 Math in grade 8 and/or qualify according to skill level on a grade 8 placement test.**

##### **Level 2**

**120103**

The concepts of algebra are introduced with an examination of the structure and the techniques of algebra. Topics studied include: number lines, variables, functions, linear equations, factoring, quadratic equations, inequalities, graphing, probability, and statistics. Real world applications are integrated throughout the course. **Students should show appropriate skill level to succeed in this course by taking a grade 8 placement test.**

### **Model Mathematics I**

#### **Grade 9**

##### **Level 3**

**130103**

The fundamental purpose of the course is to formalize and extend the mathematics that students learned in the middle grades. This course is comprised of standards selected from the high school **conceptual categories of the Common Core Frameworks**, which were written to encompass the scope of content and skills to be addressed throughout grades 9–12 rather than through any single course. This is a course in which students learn mathematics in the context of real world applications and a wide variety of problems. The course is intended for students who have difficulty with the abstract nature of the traditional approach. Topics in Algebra, Geometry, Logical Reasoning, Measurement, Probability, Data Analysis, Statistics, Patterns, Relations, Number Sense and Operations are interwoven throughout. These topics are spiraled throughout the course to enhance learning. This course is part of a three-year sequence. This course does not satisfy NCAA eligibility requirements. **Students should have successfully completed Pre-Algebra.**

### **Geometry**

#### **Grades 9, 10**

##### **Level 9**

**190103**

Students taking this course will move at a quicker pace than level one. This course is a more in-depth study of Geometry including the definitions, postulates, and theorems of plane geometry using a rigorous theoretical approach with emphasis on logical arguments and proofs. The course covers plane geometry, deductive reasoning, problem solving strategies, and logic. Solids and three-dimensional space is explored and developed including surface area and volume. There is a special emphasis on coordinate and transformational geometry. Right triangle trigonometry is introduced and explored. **Students should have a minimum average of A- in Algebra 1, level 1, in grade 8 or 9, and qualify according to skill level on an Algebra final exam.**

##### **Level 1**

**210103**

This course covers the definitions, postulates, and theorems of plane geometry using more rigorous approach than a level 2 course. Plane geometry, deductive reasoning and logic, areas and volumes of plane and solid figures are also covered. Solids and three-dimensional space is explored and developed including surface area and volume. There is a special emphasis on coordinate and transformational geometry. Right triangle trigonometry is introduced and explored. **Students should have successfully completed Algebra I level 1 with a final average of B- in grade 8 or 9 and/or achieved a qualifying score on an Algebra I final exam.**

##### **Level 2**

**220103**

This course emphasizes a more investigative approach to geometry. Students study plane geometry, deductive reasoning and logic. Solids and three-dimensional space are explored, including surface area and volume. There is a special emphasis on coordinate and transformational geometry. Right triangle trigonometry is also introduced. **Students should have successfully completed Algebra 1 level 2 with a minimum final average of C-**

### **Model Mathematics II**

#### **Grades 10, 11**

##### **Level 3**

**230103**

The focus of the Model Mathematics II course is on quadratic expressions, equations, and functions; comparing their characteristics and behavior to those of linear and exponential relationships from Model Mathematics I. Topics covered will be from the same areas of mathematics but will build on knowledge from the previous year. This course does not satisfy NCAA eligibility requirements. **Students should have successfully completed Model Mathematics I**

## **Math Applications**

### **Grades 10-12**

**230203**

This course emphasizes the Learning Standards of the six conceptual categories of the Massachusetts Mathematics Common Core Curriculum Framework: 1.) Number and Quantity, 2.) Algebra, 3.) Functions, 4.) Modeling, 5.) Geometry, and 6. Statistics and Probability. The course is designed to prepare students for the mathematics portion of the MCAS test. Students are evaluated on the basis of their performance in previous math courses and prior MCAS scores for placement into this class. **Requirement: This MCAS course must be taken in conjunction with another math course. IT CAN NOT BE TAKEN ALONE. This course does not count toward the mathematics graduation requirement.**

## **Algebra II**

### **Grades 10, 11**

#### **Level 9**

**290103**

This course covers all the topics of Advanced Algebra II at a rapid pace and in depth. The concepts of algebra are expanded to include real and complex numbers, graphing, conic sections, all aspects of quadratic equations, varied applications of word problems, systems of equations, exponentials and logarithms. Students are strongly encouraged to have their own graphic calculator. The TI-83 is recommended and will be used in class. **Students should have successfully completed level 9 Geometry or level 1 Geometry with an average of A- or higher.**

#### **Level 1**

**310103**

The concepts of algebra are expanded to include real and complex numbers, various functions, graphing, conic sections, all aspects of quadratic equations, varied applications of word problems, systems of equations, exponentials and logarithms. Students are strongly encouraged to have their own graphic calculator. The TI-83 is recommended and will be used in class. This course covers all the topics of Algebra II, level 2, in greater depth and rigor. **Students should have successfully completed Geometry and Algebra level 1 with an average of C- or better.**

#### **Level 2**

**320103**

This course in intermediate Algebra continues the study of the structure of algebra, reinforcing the topics of Algebra I. The concepts of algebra are expanded to include real and complex numbers, various functions, graphing, conic sections, all aspects of quadratic equations, varied applications of word problems, systems of equations, exponentials and logarithms. **Students should have successfully completed Geometry and Algebra I.**

## **Model Mathematics III**

### **Grades 11, 12**

#### **Level 3**

**330103**

It is in the Model Mathematics III course that students integrate and apply the mathematics they have learned from their earlier courses. The main focus is on four critical areas: (1) apply methods from probability and statistics to draw inferences and conclusions from data; (2) expand understanding of functions to include polynomial, rational, and radical functions; (3) expand right triangle trigonometry to include general triangles; and (4) consolidate functions and geometry to create models and solve contextual problems. This course does not satisfy NCAA eligibility requirements. **Students should have successfully completed Model Mathematics II.**

## **Pre-Calculus with Trigonometry**

### **Grade 11**

#### **Level 9**

**390103**

This course will cover all topics found in Pre-Calculus with more depth and an accelerated pace. Students will also study additional topics relating to the study of calculus. This course includes a thorough study of functions, trigonometry, and other advanced topics. This course begins a study of mathematics that thoroughly combines algebra and geometry. Since functions are the foundation of calculus, the course covers rational, exponential, trigonometric and logarithmic functions. Other topics addressed include: circular functions, identities, analytic geometry, complex numbers, matrices, determinants, polar coordinates, limits and series. Graphing calculators are necessary for this course. **Students should have successfully completed Algebra II (9) with a B average or higher or Algebra II (1) with an A average.**

#### **Level 1**

### **Grades 11, 12**

**410103**

This course includes a thorough study of functions, trigonometry, and other advanced topics. This course begins a study of mathematics that thoroughly combines algebra and geometry. Since functions are the foundation of calculus, the course covers rational, exponential, trigonometric and logarithmic functions. Other topics addressed include: circular functions, identities, analytic geometry, complex numbers, matrices, determinants, polar coordinates, limits and series. Graphing calculators are necessary for this course. **Students should have successfully completed Algebra II Level I with a C average or higher.**

## **Pre-Calculus with Trigonometry**

### **Level 2**

#### **Grade 12**

**420103**

This course includes a thorough study of functions, trigonometry, and other advanced topics. This course begins a study of mathematics that thoroughly combines algebra and geometry. Since functions are the foundation of calculus, the course covers rational, exponential, trigonometric and logarithmic functions. This course will go through topics at a slower pace than the Level 1 course. **Students should have successfully completed Algebra II Level II with a C+ average or higher.**

## **AP Statistics**

### **Grades 11, 12**

#### **Level 9**

**390203**

This course is designed to cover the syllabus for Advanced Placement Statistics as prescribed by the College Entrance Examination Board. Students are expected to take the AP Statistics exam in the spring when the course concludes. A TI-83 Plus calculator or TI-84 Plus is required for use in this course. Topics include exploring data, sampling and experimentation, anticipating patterns and statistical inference. **Students should have successfully completed Algebra 2 (9) or (1).**

## **Statistics**

### **Grade 12**

#### **Level 1**

**410203**

This course is a multi-level offering with Level 2. The level 1 section will have extra assignments and different assessments than the level 2 course. This course specifically addresses the tenth and twelfth grade Massachusetts Common Core Mathematics Frameworks in Data Analysis, Statistics, and Probability. Students enrolled in this course are assumed to have mastered the concepts outlined in the Algebra 2 standards of the Common Core curriculum frameworks. The purpose of this course is to present basic concepts and techniques for collecting and analyzing data, drawing conclusions, and making predictions. This course will assist in the preparation for college and potential mathematics entrance/placement exams. There will be many projects and case studies to enhance student learning. A scientific calculator is recommended for this course. **Students should have successfully completed Algebra II.**

#### **Level 2**

**420203**

This course specifically addresses the tenth and twelfth grade Massachusetts Common Core Mathematics Frameworks in Data Analysis, Statistics, and Probability. In addition, the course will also cover some standards in Patterns, Relations and Algebra, as well as Number Sense and operations. Students enrolled in this course are assumed to have mastered the concepts outlined in the Algebra 2 standards of the Common Core curriculum frameworks. The purpose of this course is to present basic concepts and techniques for collecting and analyzing data, drawing conclusions, and making predictions. This course will assist in the preparation for college and potential mathematics entrance/placement exams. There will be many projects and case studies to enhance student learning. A scientific calculator is recommended for this course. **Students should have successfully completed Algebra II or Model Mathematics III.**

## **Calculus AP**

### **Grade 12**

#### **Level 9**

**490303**

This course is designed to cover the syllabus for Advanced Placement Calculus (AB) as prescribed by the College Entrance Examination Board. Students are expected to take the AB exam in the spring when the course concludes. A TI-83 Plus calculator, or the equivalent is required for use in this course. Topics include functions, limits, derivatives and their applications, integrals and their applications, parametric equations, polar coordinates, and infinite series. The philosophy and goals of Advanced Placement Calculus will set the direction for the entire course. The Rule of Four will be used to develop students' understanding of the concepts of calculus. The Rule of Four is shorthand for the multi representational approach to mathematics that encourages all the topics, results and discussion be done verbally, analytically, numerically and graphically. Some topics from the BC syllabus will be covered, but preparation for the (AB) AP Calculus exam will be given. **Students should have successfully completed Pre-Calculus and have the recommendation of a teacher.**

## **Calculus**

### **Grade 12**

#### **Level 1**

**410303**

This course is organized and presented specifically for the high school senior. It will begin with a review of number theory, linear & quadratic functions, trigonometric functions & conics. All standard topics of elementary calculus will be covered, including limits, continuity, techniques of differentiation and integration. Differential equations will be applied to the solution of practical problems regarding maxima, minima, rates of change, and motion. Integration will be applied to problems of area and volume. Graphing calculators are necessary for this course. **Students should have successfully completed Pre-Calculus.**

# SCIENCE

## SCIENCE PROGRAM

The science program offers strong traditional core science courses such as Physics, Biology, and Chemistry. Offered electives include Environmental Science, Forensics/Biotechnology, Human Anatomy and Physiology, Science Review, AP Chemistry, AP Biology, and AP Physics. Colleges and universities traditionally consider Physics, Biology, and Chemistry as single-discipline lab courses serving as the foundation of any science program. All full-time science courses are lab courses and meet 7 periods per cycle, except AP Classes which meet for 12 periods per cycle.

In addition to providing their own colored pencils, notebooks, book covers, binders, binder paper, rulers, and writing instruments as required by individual teacher expectation sheets, **Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

## Science Course Summer Assignment and Level Expectations:

### Summer Assignment Expectations:

**All Physical Science, Biology, Chemistry and other core courses have mandatory summer assignments associated with them. These are e-learning assignments that require the students to work independently during the summer months. All assignments are due by August 31<sup>th</sup> and will be part of the term 1 grade for the student. The value of these assessments will be that of a quiz grade. Failure to follow directions will result in the student receiving a "0." In addition, the students will be assessed on the knowledge gained during the summer assignment process in subsequent assessments. Please see the Science Department website for further instructions.**

### Level Expectations:

Tech Prep/Level 3: Students electing these courses will cover the SBRHS core curriculum for the course they are taking. Courses will be taught in a manner to prepare them for science classes at a two year college or technical program. Assignments and assessments will be similar to level 2, however, the pace of the course will be slower and with more adaptations and modifications made to meet the needs of the student.

College Prep/Level 2: Students electing these courses will cover the SBRHS core curriculum for the course they are taking. Courses will be taught in a manner to prepare them for science classes at a traditional four year college or university. Assignments and assessments will be similar to level 1, however, the pace of the course will be moderate with more interaction between student and teacher in regards to analytical reading and writing, independent projects and learning to meet the needs of the student.

Honors/Level 1: Students electing these courses will cover the SBRHS core curriculum for the course they are taking. Courses will be taught in a manner to prepare students for Honors programs at a traditional four year colleges or university. Pacing for the course will be accelerated, and students will be held to high expectations. Students in this level will be prepared for advanced and AP courses. Assignments and assessments will be given that will require independent research and work habits. Critical thinking, analytical reading and writing skills are criterion for success at this level.

Advanced Placement/Level 9: In addition to following the expectations for students in the Level 1 program, students electing this level are taking courses designed to offer rewarding academic experiences to highly motivated and mature students, who will be responsible for studying various science disciplines. Students enrolling in the advanced placement program must have a strong foundation in the core curriculum subjects of math, biology, chemistry, and physics. **REQUIREMENT FOR ALL AP SCIENCES: a summer project needs to be completed by the first week of the program. All students enrolled in AP courses must take the appropriate Advanced Placement Examination and are responsible for the fee.**

## Suggested Sequence of Courses

Level	Grade 9 Core	Grade 10 Core	Grade 11 Core and Electives	Grade 12 Core and Electives
Tech Prep (3)	Introductory Physics	Biology	Chemistry (3) or Environmental Science (3) or Forensics and Biotechnology (3) and/or Part Time Electives	Anatomy and Physiology (2) Chemistry (3) Environmental Science (2 or 3) Forensics and Biotechnology (2 or 3) Part Time Electives

<b>College Prep (2)</b>	<b>Introductory Physics</b>	<b>Biology</b>	<b>Chemistry (2) and/or Honors Physics (1) and Part Time Electives</b>	<b>College Prep Physics (2) AP Biology AP Chemistry Advanced Chemistry AP Physics Anatomy and Physiology (1 or 2) Forensics/Biotechnology (1 or 2) Part Time Electives</b>
<b>Honors (1)</b>	<b>Introductory Physics</b>	<b>Chemistry and/or Biology</b>	<b>Biology (1) and/or Chemistry (1) and/or Honors Physics (1) and/or AP Biology AP Chemistry Advanced Chemistry and Part Time Electives</b>	<b>AP Biology AP Chemistry Advanced Chemistry AP Physics Anatomy and Physiology (1 or 2) Forensics/Biotechnology (1 or 2) Part Time Electives</b>

<b>Course</b>	<b>Pre-Requisites (see course descriptions for more detailed information)</b>
<b>Introductory Physics (All Levels)</b>	<ul style="list-style-type: none"> <li>For Honors, students should have a minimum average of B in level 1 Math and Science in grades 7 &amp; 8.</li> <li>All Introductory Physics level selections should match Freshman Math level selection.</li> <li>Changes may be made to student's course selection based on teacher recommendations and Middle School MCAS Scores.</li> </ul>
<b>Biology (All Levels)</b>	<ul style="list-style-type: none"> <li>For Honors, students should have a minimum average of B+ in level 1 Math and Science in grades 9 or 10.</li> <li>All Biology level selections should match Sophomore or Junior Math level selections.</li> </ul>
<b>Chemistry (All Levels)</b>	<ul style="list-style-type: none"> <li>For Honors, students should have a minimum average of B+ in level 1 Math and Science in grades 9, 10, or 11.</li> <li>All Chemistry level selections should match Sophomore or Junior Math level selections.</li> </ul>
<b>Honors/College Prep Physics</b>	<ul style="list-style-type: none"> <li>For Honors, students should have a minimum average of B+ in level 1 Math and Science in grades 9, 10 and 11.</li> <li>All Physics level selections should match Sophomore, Junior or Senior Math level selections. However Algebra II must have been successfully complete.</li> </ul>
<b>Anatomy and Physiology</b>	<ul style="list-style-type: none"> <li>Successful completion of Biology</li> <li>Successful completion of Chemistry</li> </ul>
<b>Environmental Science</b>	<ul style="list-style-type: none"> <li>Successful completion of Biology and Chemistry (levels 1 and 2)</li> <li>For level 3, students should have a working background in math and science.</li> </ul>
<b>Forensics/Biotechnology</b>	<ul style="list-style-type: none"> <li>Successful completion of Biology and Chemistry (levels 1 and 2)</li> <li>For level 3, students should have a working background in math and science.</li> </ul>
<b>AP Biology</b>	<ul style="list-style-type: none"> <li>Successful completion of Biology</li> <li>Successful completion of or dual enrollment in Chemistry</li> </ul>
<b>AP Chemistry</b>	<ul style="list-style-type: none"> <li>Successful completion of Chemistry</li> <li>Successful completion of or dual enrollment of Physics</li> </ul>
<b>AP Physics</b>	<ul style="list-style-type: none"> <li>Successful completion of Honors/College Prep Physics</li> </ul>
<b>Part Time Electives</b>	<ul style="list-style-type: none"> <li>None</li> </ul>

## COURSE OFFERINGS:

### Introductory Physics

#### Grade 9

##### Level 1

110104

This accelerated course is a conceptual study of motion, forces, energy, momentum, heat and heat transfer, waves, electromagnetism, and electromagnetic radiation with a focus on the basic principles of physics. This course is devoted to imparting a sound foundation in the areas of measurement, laboratory techniques and the analysis of experimental data. **Students should have a minimum average of B in level 1 Math and Science in grades 7 & 8. Physical Science level selection should match Freshman Math level selection. Changes may be made to student's course selection based on teacher recommendations and MCAS Scores. Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

##### Level 2

120104

This course is a conceptual model that involves the study of motion, forces, energy, momentum, heat and heat transfer, waves, electromagnetism, and electromagnetic radiation. This program gives students experience in measurement and observation, basic laboratory skills, and analysis of experimental data. **Physical Science level selection should match Freshman Math level selection. Changes may be made to student's course selection based on teacher recommendations and MCAS Scores. Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

##### Level 3

130104

This course is structured to provide coverage in the basic principles of physics which include motion, forces, energy, momentum, heat and heat transfer, waves, electromagnetism, and electromagnetic radiation. Emphasis is placed on thinking and study skills and the basics of measurement and laboratory skills and techniques. This course does not satisfy NCAA eligibility requirements. **Physical Science level selection should match Freshman Math level selection. Changes may be made to student's course selection based on teacher recommendations and MCAS Scores. Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

### Biology

#### Grade 10

##### Level 1

210104

This accelerated lab course encompasses a comprehensive study of biological concepts with an emphasis on investigation and inquiry. Much consideration is given to the cellular and biochemical approach to the study of the processes of organisms. Major topics include biochemistry, cellular biology, anatomy and physiology, evolution, genetics and ecology. Enrichment is provided whenever possible. **Students should have a minimum average of B+ in Physical Science. Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

##### Level 2

220104

This is a college prep lab course, which encompasses a comprehensive study of biological concepts with an emphasis on investigation and inquiry. Major topics include biochemistry, cellular biology, anatomy and physiology, evolution, genetics and ecology. **Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

##### Level 3

230104

The basis of this lab course is the comprehensive study of fundamental biological concepts. Topics to be discussed include biochemistry, cellular biology, anatomy and physiology, evolution, genetics and ecology. This course does not satisfy NCAA eligibility requirements. **Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

### Chemistry

#### Grades 10-11

##### Level 1

310204

This lab course is an in-depth study of the principles of chemistry. The curriculum, which is aligned with the Massachusetts Curriculum Frameworks, includes such topics as atomic structure, chemical bonding, chemical and nuclear reactions, stoichiometry, acids and bases, gas laws, and thermo-chemistry. A variety of experiments are performed and the data analyzed to reveal scientific patterns that enhance the students learning experience. **Students should have a strong background in Algebra. Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

##### Level 2

320204

This college preparatory lab course studies the principles of chemistry. The curriculum for this course, developed from the Massachusetts Curriculum Frameworks, includes but is not limited to the properties of matter, atomic structure, periodic trends and properties, chemical bonding, chemical and nuclear reactions, and stoichiometry. An integral part of the program, the various laboratory experiences enhance and support the chemical concepts being studied. **Students should have a fundamental understanding of Algebra. Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

##### Level 3

330204

This course is designed for students wishing to pursue Community College programs and want to expose themselves to a High School Tech Prep Chemistry course. This lab course studies the general principles of chemistry. The curriculum for this course, developed from the Massachusetts Curriculum Frameworks, includes properties of matter, atomic structure, periodic trends and properties, chemical bonding, chemical and nuclear reactions, and stoichiometry. While the various laboratory experiences enhance and support the chemical concepts being studied, special emphasis will be placed on thinking and study skills and the basics of measurement and laboratory skills and techniques. This course does not satisfy NCAA eligibility requirements. **Students should have a basic understanding of Algebra. Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

## **Advanced Chemistry**

### **Grade 11-12**

#### **Level 1 12 periods per cycle**

**410204**

Advanced chemistry is a second-year course that covers topics normally included in a first-year college chemistry course. Accordingly, the course is a progression of topics that are more in-depth than the first year course. Because some of the content requires challenging mathematical problem-solving, it is suggested that students have a strong background in algebra. The laboratory investigations provide students with experience in chemical techniques and the use of computer-based instrumentation. Most of the labs are college-level exercises that would provide students with valuable experience. Each student who successfully completes this course will have an excellent foundation in chemistry. This course and AP Chemistry will be combined into one classroom. Assessments for the Level 1 students will be appropriate for a second year of high school chemistry. **Students should have successfully completed Algebra II and Chemistry. Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

## **Honors Physics**

### **Grades 11-12**

#### **Level 1**

**410304**

This lab program represents a challenging physics curriculum designed for the honors student. It serves as both an informative physics course and as an excellent foundation for further work in mathematics, science, or engineering. Areas of emphasis include the study of kinematics, dynamics, electricity, and light and optics. **Students should have successfully completed Algebra II. Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

## **College Preparatory Physics**

### **Grades 12**

#### **Level 2**

**420304**

This is an algebra-based physics lab course designed for students preparing for college. Areas of emphasis include the study of kinematics, dynamics, electricity, and light and optics. The development of skills and thought processes are stressed especially in the areas of experimentation and problem solving. **Students should have successfully completed Algebra II and Chemistry. Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

## **ADVANCED PLACEMENT OFFERINGS**

### **Grade 11-12, Level 9 (12 periods per cycle)**

#### **ADVANCED PLACEMENT Biology**

##### **Level 9**

**490104**

The advanced placement biology course is a certified College Board course which follows the A.P. Biology curriculum established by the College Board. Students will be provided the opportunity to experience laboratory skills comparable to introductory college level Biology courses, including inquiry-based labs and computerized data acquisition and analysis. This class requires learning at an accelerated pace due to the amount and complexity of the required material. Material will be covered through daily class activities, lectures, discussions, laboratories, and independent projects. A student's success will depend on the time and effort that is invested into this course. Students enrolling in the Advanced Placement Biology course should have a strong foundation in biology and chemistry. It is also recommended that students in this course also take level 1 Anatomy and Physiology. This course is designed to prepare students for the College Board A.P. Biology exam. **Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

#### **ADVANCED PLACEMENT Physics**

##### **Level 9**

**490304**

The advanced placement physics course is a certified College Board course that represents the equivalence of a first-year college course. Students should have an excellent background in algebra, trigonometry, and should have a basic understanding of calculus, which should be taken concurrently. The course is an in-depth study of mechanics, including kinematics/dynamics, energy, momentum, rotational kinematics/dynamics, gravitation, and oscillations. All labs are college level labs that reinforce the ideas presented in the lecture. A lab notebook is required for all laboratory entries. Upon completion of this course, all students will have an excellent background in physics. This course is designed to prepare students for the College Board A.P. Physics Mechanics C exam. **Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

#### **ADVANCED PLACEMENT Chemistry**

##### **Level 9**

**490204**

The advanced placement chemistry is a certified College Board course that represents the equivalence of a first-year college chemistry course. Accordingly, the course is a progression of topics which are conceptually and sometimes mathematically challenging. A workable knowledge of algebra/trigonometry is strongly recommended for the success of the student. The laboratory investigations provide students with experience in chemical techniques and the use of instrumentation. All the required labs are college-level exercises that require intensive analysis and discussion. Each student who successfully completes this course will have an excellent foundation in chemistry. It is suggested that all students interested in taking AP Chemistry successfully complete a physics course in

the prior school year. This course is designed to prepare students for the College Board A.P. Chemistry exam. **Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

## **STEAM Electives: Science Department STEAM Electives**

**STEAM** has become a common acronym for the fields of **Science, Technology, Engineering, Arts and Mathematics**. The term is commonly used in relation to the nation's economic competitiveness and the related need for education programs in support of future generations. In the Science Department at SBRHS, it is our goal to offer Common Core courses that prepare our students for work and education after High School. In addition, it is also our goal to offer full time and part time courses, to all our students that broaden their knowledge base in scientific literacy across the curriculum and areas that are conducive to STEAM initiatives at the community, national, and global levels.

### **Full Time Electives:**

#### **Environmental Science and Engineering**

##### **Grade 12**

##### **Levels 1**

**410504**

The primary role of this lab oriented course is to allow seniors the advantage of utilizing information they have previously attained in their physical science, biology, and math classes and apply that knowledge to this interdisciplinary science. The course focuses on the scientific method, environmental laws, environmental problems and ecology. Students will also concentrate on biodiversity, energy, waste, water, air, and soil testing. This class encourages and enhances the students' extended field science skills and knowledge. The theoretical aspect is taught in the classroom while the fieldwork applies its theory outside, as well as, through community service learning projects. **Students should have an advanced background in math and science and successfully completed Chemistry. Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

##### **Level 2**

**420504**

The primary role of this lab oriented course is to allow seniors the advantage of utilizing information they have previously attained in their physical science, biology, and math classes and apply that knowledge to this interdisciplinary science. The course runs concurrently with the Level 1 Environmental Science course. Using modified assignments and assessments, students will focus on the scientific method, environmental laws and problems, ecology, energy, and human impact on the environment. This class encourages and enhances the students' extended field science skills and knowledge. The theoretical aspect is taught in the classroom while the fieldwork applies its theory outside, as well as, through community service learning projects. **Students should have a strong background in math and science and successfully completed Chemistry. Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

#### **Environmental Science and Engineering**

##### **Grade 11-12**

##### **Level 3**

**330504**

Using diverse teaching and assessment methods, juniors who have had Physical Science and Biology, will be afforded the opportunity of utilizing information they have previously attained in their science and math classes and apply that knowledge to this interdisciplinary science. The course focuses on the scientific method, environmental laws, environmental problems and Earth as a system. Students will also concentrate on biodiversity, ecology, energy, and human impact on the environment. This class will encourage students to develop critical thinking, and field science skills. The theoretical aspect is taught in the classroom while the fieldwork applies its theory outside, as well as, in community service learning projects. This course does not satisfy NCAA eligibility requirements. **Students should have a working background in math and science. Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

#### **Forensics & Biotechnology**

##### **Grade 11-12**

##### **Level 1**

**410604**

This accelerated course encompasses a comprehensive study of the principals of Forensic Science, as well as the study of several selected topics in the field of Biotechnology. Students will utilize methods of investigation, observation and deductive reasoning to apply Forensic Science to laboratory experience and crime scene analysis.

Forensic Science topics include: Crime Scene Investigation, Physical Evidence, Serology, Toxicology, Fire Science, Anthropology and Computer Forensics. Biotechnology topics include: DNA Science, Medical Biotechnology, Industrial Biotechnology, Agricultural Biotechnology, and Environmental Biotechnology. This elective will prepare students for further study in such fields as: Criminal Justice, Forensic Technology, and Biotechnology. **Students should have a successfully complete Chemistry. Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

##### **Level 2**

**420604**

This differentiated course encompasses a comprehensive study of the principals of Forensic Science, as well as the study of several selected topics in the field of Biotechnology. Students will utilize methods of investigation, observation and deductive reasoning to apply Forensic Science to laboratory experience and crime scene analysis.

Forensic Science topics include: Crime Scene Investigation, Physical Evidence, Serology, Toxicology, Fire Science, Anthropology and Computer Forensics. Biotechnology topics include: DNA Science, Medical Biotechnology, Industrial Biotechnology, Agricultural

Biotechnology, and Environmental Biotechnology. This elective will prepare students for further study in such fields as: Criminal Justice, Forensic Technology, and Biotechnology. **Students should have a successfully complete Chemistry. Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

## **Forensics & Biotechnology**

### **Grade 11-12**

#### **Level 3**

**430604**

This course encompasses a comprehensive study of the principals of Forensic Science, as well as the study of several selected topics in the field of Biotechnology. Students will utilize methods of investigation, observation and deductive reasoning to apply Forensic Science to laboratory experience and crime scene analysis.

Forensic Science topics include: Crime Scene Investigation, Physical Evidence, Serology, Toxicology, Fire Science, Anthropology and Computer Forensics. Biotechnology topics include: DNA Science, Medical Biotechnology, Industrial Biotechnology, Agricultural Biotechnology, and Environmental Biotechnology. This elective will prepare students for further study in such fields as: Criminal Justice, Forensic Technology, and Biotechnology. This course does not satisfy NCAA eligibility requirements. **Students should have a working background in math and science. Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

## **Human Anatomy and Physiology**

### **Grade 12**

#### **Level 1**

**410404**

This challenging course is designed for the honors student. The accelerated, comprehensive curriculum will familiarize students with the anatomy, physiology, and histology of the human organ systems. Students interested in a biology, pre-medical, or pre-dental college program should consider taking this course. **Students should have a strong background in math and science and successfully completed Chemistry. Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

#### **Level 2**

**420404**

The primary role of this college preparatory course is to familiarize students with the structure and function of the organ systems of the human body. It is designed for those interested in working in nursing, physical education and health-related professions. **Students should have a strong background in math and science and successfully completed Chemistry. Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

## **Science Department Part Time Courses**

### **Astronomy**

#### **Grades 11-12**

#### **3 periods per cycle**

**503004**

This course deals with the interpretation of the nature of the universe. In this course, students will become familiar with planetary models, the sun as a model star, general classifications of stars, and types of galaxies. In addition, current theories of the universe will also be discussed. **Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

### **Oceanography**

#### **Grades 11-12**

#### **3 periods per cycle**

**503005**

This course deals with the interrelationship of the various processes that occur in the world's ocean. Emphasis will be placed on how oceanographers collect and analyze data This course concentrates on the physical and chemical marine environment, and its interactions with biogeochemical and political realms. **Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

### **Survey of Health Sciences**

#### **Grades 11-12**

#### **3 periods per cycle**

**503997**

This course is an introduction to the field of Clinical Laboratory Science. It incorporates the studies of Biology, Chemistry, Microbiology, Serology, Genetics, and Anatomy and Physiology into the daily routine of the clinical laboratory scientist. Content taught in this class will deal with information to perform and evaluate tests on blood, body fluids and tissues (in a simulated environment), conduct research on the development of new tests and methodologies, and monitor quality to maintain test performance of the highest standard. Students interested in pursuing this course should have an interest and aptitude in the sciences, particularly chemistry and biology. **Students are required to have their own scientific calculator (TI-30XIIS or equivalent).**

### **Science Review**

#### **Grades 9-12**

#### **1 period per cycle**

**500104**

This non-credit mini course is offered based on student need in the fall and spring semester to students who need to pass the Massachusetts Comprehensive Assessment (MCAS) in science and/or require remediation in their science course(s) . It is designed to

aid students to pass their science class, MCAS exam and achieve the graduation requirement of attaining a passing score on the science MCAS.

## **WORLD LANGUAGES**

In order to satisfy most college's entrance requirements for foreign languages, a student should take at least two consecutive years of study (three and four years are preferable in the eyes of admissions counselors) in one of the following languages that offer a full sequence of courses: **French, Spanish or Portuguese.**

**If an incoming Freshman student with a minimum of 1 year prior experience, would like to place into a Second Year course, the student must pass the Year 1 Final exam with a score of 85 or better. The student must also complete an oral proficiency exam in the target language. Please contact the Content Coordinator or the Guidance Department regarding this course change.**

### **Summer Assignment Expectations:**

**All World Language courses have summer assignments associated with them. This includes all incoming Grade 9 students. These are assignments that require the students to work independently during the summer months. All assignments are due by September 1st and will be part of the term 1 grade for the student. Failure to follow directions will result in the student receiving a "0." In addition, the students will be assessed on the knowledge gained during the summer assignment process in subsequent assessments.**

### **COURSE OFFERINGS: Available to all grades**

#### **French Courses**

##### **French I**

##### **Levels 1, 2**

**110102, 120102**

Much attention is given to pronunciation, the alphabet and sound system. Students are encouraged to communicate in the language at levels appropriate to their knowledge and ability. Basic skills in listening, reading, and writing are introduced. Ancillary materials are presented to foster an understanding of peoples and cultures. Critical thinking skills are emphasized. When choosing a level 1 class, it is important to understand that the class will move at a quicker pace. It is also important to note that the students in a level 1 course are expected to perform at mastery level with regards to grammar, application, and fluency.

##### **French II**

##### **Levels 1, 2**

**210102, 220102**

Greater attention is given to the spoken language, with continued emphasis on listening, translating, learning grammatical patterns and developing better reading comprehension skills. Paragraph writing is introduced and short oral presentations are assigned. When choosing a level 1 class, it is important to understand that the class will move at a quicker pace. It is also important to note that the students in a level 1 course are expected to perform at mastery level with regards to grammar, application, and fluency.

##### **French III**

##### **Levels 1, 2**

**310102, 320102**

Basic grammar presentations are completed. Communication skills continue to be emphasized in more demanding, situational settings. Students deal with more complex and lengthy writing assignments. Readings from outside sources are occasionally introduced. When choosing a level 1 class, it is important to understand that the class will move at a quicker pace. It is also important to note that the students in a level 1 course are expected to perform at mastery level with regards to grammar, application, and fluency.

##### **French IV**

##### **Levels 1, 2**

**410102, 420102**

Detailed and sophisticated grammatical items are presented. Comprehension skills are emphasized in the context of current events as well as from the works of traditional authors. Communication skills are stressed through longer student presentations. When choosing a level 1 class, it is important to understand that the class will move at a quicker pace. It is also important to note that the students in a level 1 course are expected to perform at mastery level with regards to grammar, application, and fluency.

#### **Portuguese Courses**

##### **Portuguese I**

##### **Levels 1, 2**

**110302, 120302**

Much attention is given to pronunciation, the alphabet and sound system. Students are encouraged to communicate in the language at levels appropriate to their knowledge and ability. Basic skills in listening, reading, and writing are introduced. Ancillary materials are presented to foster an understanding of peoples and cultures. Critical thinking skills are emphasized. When choosing a level 1 class, it is important to understand that the class will move at a quicker pace. It is also important to note that the students in a level 1 course are expected to perform at mastery level with regards to grammar, application, and fluency.

## **Portuguese II**

### **Levels 1, 2**

**210302, 220302**

Greater attention is given to the spoken language, with continued emphasis on listening, translating, learning grammatical patterns and developing better reading comprehension skills. Paragraph writing is introduced and short oral presentations are assigned. When choosing a level 1 class, it is important to understand that the class will move at a quicker pace. It is also important to note that the students in a level 1 course are expected to perform at mastery level with regards to grammar, application, and fluency.

## **Portuguese III**

### **Levels 1, 2**

**310302, 320302**

Basic grammar presentations are completed. Communication skills continue to be emphasized in more demanding, situational settings. Students deal with more complex and lengthy writing assignments. Readings from outside sources are occasionally introduced. When choosing a level 1 class, it is important to understand that the class will move at a quicker pace. It is also important to note that the students in a level 1 course are expected to perform at mastery level with regards to grammar, application and fluency.

## **Portuguese IV**

### **Levels 1, 2**

**410302, 420302**

Detailed and sophisticated grammatical items are presented. Comprehension skills are emphasized in the context of current events as well as from the works of traditional authors. Communication skills are stressed through longer student presentations. When choosing a level 1 class, it is important to understand that the class will move at a quicker pace. It is also important to note that the students in a level 1 course are expected to perform at mastery level with regards to grammar, application and fluency.

## **Portuguese V**

### **Level 1**

**510302**

Creative use of the knowledge previously acquired by the student is stressed. More intricate grammatical constructions are introduced. Oral assignments and presentations are lengthened, as are writing assignments in the target language. Literary works by critically acclaimed authors are introduced to prepare the student for future college-level work. When choosing a level 1 class, it is important to understand that the class will move at a quicker pace. It is also important to note that the students in a level 1 course are expected to perform at mastery level with regards to grammar, application and fluency.

## **Spanish Courses**

### **Spanish I**

#### **Levels 1, 2**

**110402, 120402**

Much attention is given to pronunciation, the alphabet and sound system. Students are encouraged to communicate in the language at levels appropriate to their knowledge and ability. Basic skills in listening, reading, and writing are introduced. Ancillary materials are presented to foster an understanding of peoples and cultures. Critical thinking skills are emphasized. When choosing a level 1 class, it is important to understand that the class will move at a quicker pace. It is also important to note that the students in a level 1 course are expected to perform at mastery level with regards to grammar, application and fluency.

### **Spanish II**

#### **Levels 1, 2**

**210402, 220402**

Greater attention is given to the spoken language, with continued emphasis on listening, translating, learning grammatical patterns and developing better reading comprehension skills. Paragraph writing is introduced and short oral presentations are assigned. When choosing a level 1 class, it is important to understand that the class will move at a quicker pace. It is also important to note that the students in a level 1 course are expected to perform at mastery level with regards to grammar, application and fluency.

### **Spanish III**

#### **Levels 1, 2**

**310402, 320402**

Basic grammar presentations are completed. Communication skills continue to be emphasized in more demanding, situational settings. Students deal with more complex and lengthy writing assignments. Readings from outside sources are occasionally introduced. When choosing a level 1 class, it is important to understand that the class will move at a quicker pace. It is also important to note that the students in a level 1 course are expected to perform at mastery level with regards to grammar, application and fluency.

### **Spanish IV**

#### **Levels 1, 2**

**410402, 420402**

Detailed and sophisticated grammatical items are presented. Comprehension skills are emphasized In the context of current events as well as from the works of traditional authors. Communication skills are stressed through longer student presentations. When choosing a level 1 class, it is important to understand that the class will move at a quicker pace. It is also important to note that the students in a level 1 course are expected to perform at mastery level with regards to grammar, application and fluency.

### **Spanish V**

#### **Level 1**

**510402**

Creative use of the knowledge previously acquired by the student is stressed. More intricate grammatical constructions are introduced. Oral assignments and presentations are lengthened, as are writing assignments in the target language. Literary works by critically acclaimed authors are introduced to prepare the student for future college-level work.

## BUSINESS

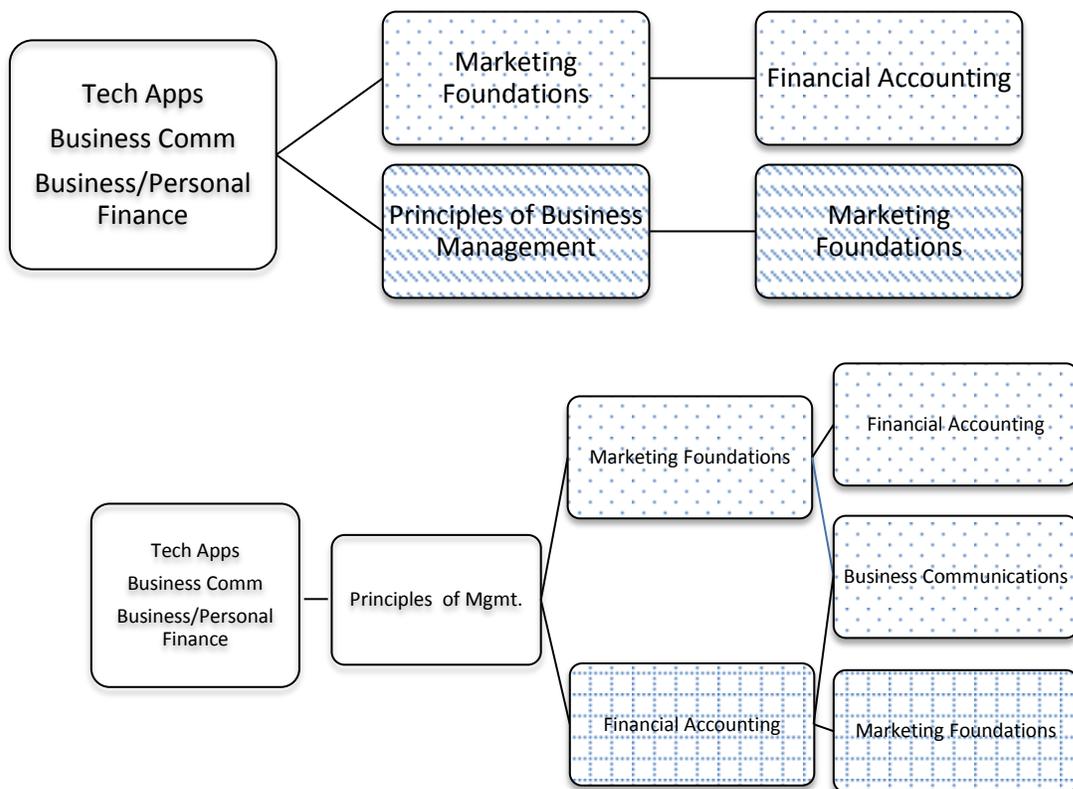
Courses offered in Business are designed to introduce students to various career paths in Business Administration, Office Administration, Computer Information, Computer Science Engineering, and others.

\* Articulation agreements with Bristol Community College are being reviewed and may offer students credit for courses taken at Somerset Berkley Regional High School.

**CVTE** – Refers to courses designated Career Vocational Tech Ed.

**DECA**- Refers to courses that support 'Distributive Education Clubs of America' activities and goals.

### Suggested Business Course Sequences



### COURSE OFFERINGS:

#### **Business and Personal Finance (DECA) (CVTE)\***

**Grades 9 - 12**

**Levels 2, 3**

**620205, 630205**

This course of study is designed as a prequel to Accounting, Management and Marketing following NBEA standards. Students are engaged in the study of personal financial planning, banking and credit, investing financial resources, protecting personal finances, an introduction to business finance as well as organizational financial planning. Students are engaged in cooperative learning through

groups and in the development of financial planning guides. Online Internet activities will allow reinforcement of skills learned. Technology tools used include financial planning software, PowerPoint presentations and virtual business simulations. 21<sup>st</sup> century skills and frameworks are an integral part of the program of applied learning. This course does not fulfill MCAS EPP math requirements. Level 3 students are allowed more time to complete assignments. Technology components include: online career interest surveys and interpretations, Microsoft Word software applications and Modern Language Art (MLA) formatting of all reports and essays, web-based Morningstar analysis of stocks, bonds and mutual funds as well as career portfolio preparations of resumes, cover letters and interviewing techniques.

## **Business Communications**

### **Grades 9 -12**

#### **Levels 2, 3**

**620605, 630605**

The course content includes the following topics: choosing a career, preparing for an interview, mock interviews, communication skills necessary in the business world, writing letters of application, follow-up letters, oral presentations, composing professional resumes and related topics. Computer access to word processing allows students to complete necessary tasks to develop a career portfolio. Students also are exposed to current trends in business and global economies. The internet is used for career exploration and research. 21<sup>st</sup> century skills and frameworks are an integral part of the program of applied learning. Level 3 students are allowed more time to complete assignments. Technology components include: online career interest surveys and interpretations, Microsoft Word software applications and Modern Language Art (MLA) formatting of all reports and essays, web-based Morningstar analysis of stocks, bonds and mutual funds as well as career portfolio preparations of resumes, cover letters and interviewing techniques.

## **Principles of Business Management (DECA) (CVTE)\***

### **Grades 10 - 12**

#### **Levels 1, 2**

**610805, 620805**

This course provides the student with a broad overall viewpoint of universal business operations as well as the art and science of management itself in regard to planning, organizing and controlling various activities and factors related to the private and public sectors. Areas of study will include the business environment, forms of ownership and the law, information and communication systems, production, marketing, financial, and human resources management as well as various aspects of managerial styles, leadership and decision making abilities. Level 1 students will also be required to submit a M.L.A. formatted research term paper every quarter on various business related topics of theory and practice as well as individual case study analysis. Students are given an opportunity to participate in the DECA competencies based on NBEA standards for competitive events that can lead to college scholarships. 21<sup>st</sup> century skills and frameworks are an integral part of the program of applied learning. Technology components include: online career interest surveys and interpretations, Microsoft Word software applications and Modern Language Art (MLA) formatting of all reports and essays, web-based Morningstar analysis of stocks, bonds and mutual funds as well as career portfolio preparations of resumes, cover letters and interviewing techniques.

## **Business Marketing Foundations (DECA)(CVTE)\***

### **Grades 10 -12**

#### **Levels 1, 2**

**610705, 620705**

This course will concentrate on the study of the definitive marketing functions of selling, promotion, distribution, product/service management, pricing, purchasing, marketing information management & research, product & service planning and financing. In doing so, economic foundations, business and marketing concepts as well as human resource applications are stressed throughout instruction. Level 1 students will also be required to submit a research term every quarter on various business related topics of theory and practice as well as individual case study and/or role play analysis. Integrated DECA competencies for competitive events are designed around the (NBEA) National Business Education Association standards and Massachusetts state frameworks. 21<sup>st</sup> century skills are an integral part of the program of applied learning. Technology components include; online career interest surveys and interpretations, Microsoft Word software applications and Modern Language Art (MLA) formatting of all reports and essays, web-based Morningstar analysis of stocks, bonds and mutual funds as well as career portfolio preparations of resumes, cover letters and interviewing techniques.

## **Financial Accounting Fundamentals (DECA) (CVTE)\***

### **Grades 10 - 12**

#### **Levels 1, 2**

**610405, 620405**

This course is designed to introduce the student to the study of financial accounting by way of utilizing the multi-column journal approach. Accounting as it relates to the three forms of business ownership, namely; proprietorships, partnerships and corporations will be analyzed. Business start-up, journalizing transactions, posting to subsidiary and general ledgers, payroll accounting, taxes and reports, recording adjusting and closing entries, trial balances as well as financial statements such as Income Statements and Balance Sheets will be some of the topics covered. Level 1 students will also be required to submit a M.L.A. formatted research paper every quarter on various business related topics of theory and practice as well as individual case study analysis. Additionally, personal income tax preparation will be analyzed through use of computerized software. 21<sup>st</sup> century skills and frameworks are an integral part of the program of applied learning. Technology components include: online career interest surveys and interpretations, Microsoft Word software applications and Modern Language Art (MLA) formatting of all reports and essays, web-based Morningstar analysis of stocks, bonds and mutual funds as well as career portfolio preparations of resumes, cover letters and interviewing techniques.

## **Business Department Part-time Courses**

### **Entrepreneurship (DECA)**

**Grades 9-12**

**3 periods per cycle**

**612053**

Do you want to be your own boss? In this course students will identify the fundamentals of business creation, the personal attributes needed to be a successful entrepreneur, and will research various business opportunities. Topics covered include the characteristics of an entrepreneur, discovering entrepreneurial opportunities, and researching and analyzing domestic, global and market trends. The course culminates with the student developing a hypothetical business plan and project to implement their unique venture that conforms to all applicable governmental laws and regulations. This course aligns with National Business Education Standards (NBEA) and is a DECA competition category.

### **Hospitality and Tourism (DECA)**

**Grades 9-12**

**3 periods per cycle**

**612159**

This course welcomes students into the exciting and diverse hospitality and tourism industry. While providing an understanding of the scope and complexity of the industry, the course covers key hospitality issues, management definitions, and career opportunities available in restaurants, hotels, beverage operations, sports venues, entertainment centers, cruise lines, and countless other hospitality and tourism businesses. Topics include introduction to the skills involved in all aspects of the hospitality industry, including human resources, customer service, operations, marketing and promotion. This course is an asset to any student interested in exploring career opportunities in the hospitality and tourism industry. •DECA competition category

### **Sports/Entertainment Marketing (DECA)**

**Grades 9-12**

**3 periods per cycle**

**612163**

The Sports and Entertainment industry is a major component of contemporary business and society offering individuals many interesting career opportunities. Venues in this area are all around us, not only at stadiums and theaters but also at thousands of universities, colleges and schools as well as on television, radio and the internet. Students taking this course will focus on the real world perspectives of branding, licensing, royalties, promotion, merchandising, pricing, ticket sales, event planning, broadcasting, and agency topics. Guest speakers, videos, and a field trip will be integrated in the class schedule.

### **Freshman Seminar**

**Grade 9**

**2 periods per cycle, one semester**

**622151**

In this course, students will connect learning with real life. Through self-discovery and collaboration with the classroom teacher and guidance, students will discover college and career pathways that are right for them. Students will start by learning more about who they are, including their interests and skills. Students will then explore career and college options based on their interests and skills. This course will help students plan a course of action to reach their goals. This course aligns with National Business Education Standards (NBEA), National Guidance Standards (ASCA) and National Educational Technology Standards (ISTE) and is recommended for all freshmen students.

## **ENGINEERING TECHNOLOGY**

### **ENGINEERING TECHNOLOGY EDUCATION 9-12**

The objectives of the High School Engineering Technology Program are to present courses which reflect the four major areas of technology: communication, manufacturing, transportation and construction and to give students basic skills and concepts in these areas in a "learn by doing" approach. Students in all engineering technology classes will be grouped heterogeneously regardless of their year in high school or level of designation.

Courses with the designation \* may be used for credit at Bristol Community College in an equivalent (articulated) course.

All students will be expected to demonstrate imaginative, critical and reflective thinking. All students will be expected to demonstrate knowledge and usage of the principles of technology and to analyze and interpret technical literature and engineering drawings as well as works of historical and cultural significance. Students will understand the ethical use and responsibilities associated with technology in the workplace and in their personal lives. Each student will be expected to participate in oral class discussions and presentations, complete written assignments, maintain a portfolio of work, and keep anecdotal records of his or her work.

All Engineering Technology courses meet the curriculum requirements of the Massachusetts Frameworks for Technology and Standards for Technological Literacy and are taught as Level 2 courses. Level 1 students are required to complete assignments showing greater depth of understanding or skill and Level 3 students are given more time to complete their assignments.

**Note: All lab courses may assess fees for take-home products.** All students enrolled in hands on courses in engineering technology will be required to pass a safety exam prior to being allowed to conduct any hands-on work in the labs. Students will also complete a permission form that allows for 'walking' field trips outside the building to gather research materials.

**\* Note: All Tech Prep and Advanced Tech students must meet level 1 or level 2 requirements.\***

## **COURSE OFFERINGS:**

### **Engineering Design**

**Grades 9 – 12**

**Levels 1, 2, 3**

**610106, 620106, 630106**

Students will examine the steps of the engineering design process and produce original proposals for a variety of design challenges. "Project Based Learning" will be the main instructional strategy throughout this engineering course. This learning model allows students to design, build, test, and evaluate quality products and systems that meet world needs. Required assignments in the areas of Agricultural, Transportation, Construction, Manufacturing, Energy and Power technologies provide the 9-12 grade students with an understanding and appreciation of the designed world. The safe use of materials, power tools and machines highlight the student's engineering experience. Development of "Engineering Design" curriculum used the national Standards for Technological Literacy (STL) as published by the International Technology Education and Engineering Association (ITEEA). Our highly qualified teachers are active members in the ITEEA. Note\* **Students selecting Level 1 will conduct research on engineering marvels in the world and examine the environmental, economic, social, ethical, health and safety impacts.**

### **Architectural Design**

**Grades 10 – 12**

**Level 1, 2, 3**

**611103, 621103, 631103**

Architectural Design students will work in special design teams planning and creating a variety of authentic scale models including buildings, structures, and new eco-spaces with high precision in our Engineering Design lab. A judged Architectural Design event at SBRHS in the spring will showcase your achievements to the community. This 6 credit class will provide enrolled students with access and experience in design, construction and sustainability in a potential career pathway. Architectural Design is scheduled to be highlighted with guest speakers, an Internship Day and USSC Architectural Division Judging Invitations. **Prerequisite: Successful completion of Computer Drafting and Design or Engineering Design.**

### **Robotic Engineering**

**Grades 9-12**

**Level 1, 2, 3**

**610206, 620206, 630206**

Robotics Engineering provides students opportunity to learn engineering concepts through experience and discovery. Students build, program and design real autonomous robots that can feel, touch and see. Students use hands-on engineering techniques to discover solutions to proposed design challenges and document outcomes in electronic portfolios. Robotics engineering engages students in learning that is both specific in its technological relevance and general in the way that the skills it requires, patience, problem solving, collaboration, communication, carry over to all facets of life and learning. This course is fundamental for students pursuing careers in the field of engineering and design. Level differentiation occurs by varying the complexity of the design challenge in terms of imposed design constraints. Design constraints in Robotics Engineering refer to the limitations on the conditions under which a robot is developed to satisfy a particular need. All students will be expected to develop solutions to challenges with embedded constraints; however, the type and quantity of constraints will differentiate the curriculum requirements for level one, two and three students.

### **Advanced Robotic Engineering**

**Grades 10-12**

**Level 1, 2, 3**

**612206, 622206, 632206**

This course will provide students with an in-depth study of robotics and artificial intelligence. Students will learn to reason critically, analytically and creatively to develop problem-solving skills. Students will engage in sophisticated design challenges and compete in the annual Massachusetts Science Olympiad robotics competition. Using data collection sensors and feedback control systems, students will work in design teams and utilize the engineering design process to conduct research and experiments. Students will demonstrate technological literacy as they use a variety of software to digitize artifacts that represent fulfillment of standards. Advanced robotic students will use LabView software and advance (Tetrix) robot building materials. Level differentiation occurs by varying the complexity of the design challenge in terms of imposed design constraints. Design constraints in Robotics Engineering refer to the limitations on the conditions under which a robot is developed to satisfy a particular need. All students will be expected to develop solutions to challenges with embedded constraints; however, the type and quantity of constraints will differentiate the curriculum requirements for level one, two and three students.

## **Graphics Engineering**

### **Grades 9-12**

#### **Levels 1, 2, 3**

**610306, 620306, 630306**

This introductory course emphasizes exposure to a wide range of computer programs and research techniques for producing quality publications and presentations. Students will work with software programs such as: MS Word, MS Publisher, Adobe Photoshop and MS PowerPoint to design projects that cover business, advertising, and presentation applications. Students will be required to utilize the internet, library and their own personal creative resources as input material for products. Projects will also require students to use the an industrial Laser Color Copier and Ink Jet printers for scanning and reproducing computer-generated images and text. Bindery and other finish operations will be part of the course objective. Projects will include advertisements, flyers, maps, calendars, business cards, compact disc covers, slide shows and animated presentations. College-bound students and those considering a career in publishing, as well as, students that wish to improve their technology skills for related academic requirements, should consider this course as part of their studies. Students will build and maintain a web-based digital portfolio to showcase their work and be the primary source of assessment. Level 1 students will expand their portfolios to include other classes and school activities as a continuous graphics project throughout the school year.

## **Advanced Graphics Engineering**

### **Grades 10-12**

#### **Levels 1, 2, 3**

**610706, 620706, 630706**

This course is available to students that have successfully completed Graphics Engineering I. The course content reflects authentic 'world of work' activities that exist in the print and digital communications industries. This is a project based course that follows the convention of current 'design to market' manufacturing and communications. Students work in a collaborative setting to produce both printed and digital work. Students will learn to use advanced graphics and video software tools used in commercial video, digital and advertising media including stop motion video production. Students will build and maintain a web-based digital portfolio which will be used to showcase their work and be a primary source of their assessment. Level 1 students will expand their portfolios to include other classes and school activities as a continuous graphics project throughout the school year.

## **Computer Diagnostics and Repair**

### **Grades 9 - 12**

#### **Levels 1, 2, 3**

**611506, 621506, 631506**

This course will provide students with hands on skills in the diagnosis and repair of personal computers. Students will tear down and rebuild PC systems and diagnose hardware and software problems, install software and solve software conflicts. Students will use diagnostic techniques and tools to evaluate problems, develop solutions, and the implement them in the most appropriate manner. As an integral part of this course, students will develop an understanding the PC history, where we are today, and where the future may lead and how it impacts their lives through hands on lab work, research projects and class presentations. Computers impact our lives on a daily basis and everyone should know and understand how computers work and what may go wrong, even if they do not want to make the repairs themselves. Level 1 students will be required to do 2-3 additional assignments on their own time in addition to the normal class work . **This course can provide introductory skills which will prepare students to pass A+ certification exam for computer repair technicians.**

## **Computer Drafting and Design (CVTE)\***

### **Grades 9 – 12**

#### **Levels 1, 2, 3**

**610506, 620506, 630506**

Students enrolled in this course will learn the basics of Computer Aided Drafting. Students will complete assignments in the areas of single-view, orthographic projection, sectional, auxiliary, and isometric drawing. Additionally, each student will learn how to layout and produce complex drawings. Students will learn how to export CAD files to a 3D printer and turn their design into real components that can be used for complex assemblies. Students will document progress and demonstrate proficiency via portfolios. Level 1 students will be required to do 2 to 3 additional assignments on their own time in addition to the normal class work. This course is offered as both a fulltime elective (6 periods per cycle) and a part-time elective (3 periods per cycle). **Those students enrolled in the part-time class will need permission of the instructor to enroll in Advanced Computer Drafting.**

## **Advanced Computer Drafting and Design**

### **Grades 10 – 12**

#### **Levels 1, 2, 3**

**610606, 620606, 630606**

Students enrolled in this course will learn the basics of Computer Aided Drafting and Design through mastery of the Rhinoceros program. Using the System Design Model, students will learn to design objects in three dimensions, give the object a surface, and then apply materials, textures, and lighting to those surfaces to give them a lifelike appearance. The student will then render their design giving it realistic real world appearance and then export their designs to a 3D printer. In addition, students will use the animation capabilities of the program to animate their creation and create short movie presentations of their designs using various programs. Students will document their progress and development by maintaining a digital portfolio on the internet. Upon completion of this course, the student will be proficient in designing three-dimensional objects and presenting them in the best possible way to prospective clients. As each student increase their skill level and becomes proficient the instructor will assign more complex assignments that the student will be required to complete independently. If a student takes the course multiple times it will culminate in a long term project where the student will be required to hand sketch their design, draw it in 3D, render the model, export to a 3D printer and then put together a detail portfolio of their project for a perspective client. Level 1 students will be required to do several

additional assignments on their own time in addition to the normal class work. **Prerequisite: Computer Drafting & Design I and/or previous Advanced Computer Drafting & Design.**

### **Intro to TV Media Production**

**Grades 9 - 12**

**Unleveled**

**601103**

The course will provide students with the opportunity to learn the skills necessary for TV productions. Students will develop skills working on both sides of the camera. The class will produce programs that will be used by the school and the community as well. Students that elect to take this class must understand that there is a commitment to participate in taping and covering a wide array of events after school hours. Some of the skills include: slating your name, editing, PSA's, in-studio projects, instructional videos, all stages of production, producing, reducing, hosting, filming, lighting and sound techniques, and editing. This class will be held in the new state-of-the-art TV production studio.

## **Engineering Technology Department Part-time Courses**

### **Intro to Computer Drafting and Design**

**Grades 9-12**

**3 periods per cycle**

**623506**

Students enrolled in this course will learn the basics of Computer Aided Drafting. Students will complete assignments in the areas of single-view, orthographic projection, sectional, auxiliary, and isometric drawing. Students will document progress and demonstrate proficiency using digital portfolios. This course is best suited to students who may have an interest in CADD yet prefer the part-time approach to learning the AutoCADD LT engineering software. **Those students enrolled in the part-time class will need permission of the instructor to enroll in Computer Drafting II.**

### **Web Page Design**

**Grades 9-12**

**3 periods per cycle**

**601806**

Students will explore web page designs by creating pages to serve various marketing functions. After taking this course you will have the skills necessary to design a web site that is easy to use and fulfills the needs of the users. Students will work independently to develop various styles of web sites using programs such as MS Publisher, Adobe Dreamweaver, and web based programs. The goal is to create sites that are easy to use, exciting and fulfill the needs of end-users. As part of this course you will also learn to understand the importance of graphic design in web page layouts and the use of animations, video and sound in a web site. Students will be required to develop their own animation for a web site. The course will also encompass presenting and explaining your web site design to the class.

### **Games and Apps**

**Grades 9-12**

**3 periods per cycle**

**611153**

This course is designed as an introductory-level programming course that does not require any prior experience in computer programming. Students will learn and apply computer science programming concepts by using a visual, object-oriented programming language (VPL). Students will program scripts to create shapes, characters, and objects that move and interact with each other to make their own animations and animated stories, including sound effects, audio and music. Eventually, students will learn to program more complex coding scripts to create their own simple interactive games. The computer science programming concepts learned in this course can be applied to learning more advanced syntax programming languages in future courses. Computer Science programming skills learned throughout this course include: computational thinking (sequence, loops, parallelism, events, conditional, operators, data) and computational thinking practices (experimenting and iterating, testing and debugging, reusing and remixing, abstracting and modularizing). The skills and knowledge learned in this course align with the MA Digital Literacy and Computer Science Standards and the National Computer Science Standards.

**\*This course satisfies 3 credits toward the SBRHS technology requirements for graduation.**

## **MUSIC**

### **Performing Organizations:**

The following performing organizations exist at Somerset Berkley Regional High School. Rehearsals and performances for these groups are both in and out of school. **Students will receive course credit for every rehearsal period that the class is scheduled for.** These organizations include performances at some or all of the following: Musictown Festival Concerts and Events,

Vespers Concert, Spring Concerts, Music Festival Competitions, as well as New England Scholastic Band Association (NESBA) and United States Bands (USBands) Marching Band, Indoor Color Guard and Indoor Percussion Ensemble Competitions. Music of various styles is studied for the purpose of enriching the lives of these student musicians through cooperative individual participation. All of these organizations encourage the intellectual, musical and social development of the individual through the performance of high-quality music. Students who wish to participate in the Massachusetts Music Educators Association (MMEA) Southeast District and All-State Festivals, as well as the National Association for Music Education (NAFME) Festivals must be a member in good standing of an appropriate school performing organization.

## INSTRUMENTAL ENSEMBLES

### Concert Band

**Grades 9-12**

**3 periods per cycle**

**60907**

The concert band is open to all woodwind, brass and percussion students, grades 9 - 12, who have had at least 2 years of experience playing their instrument. \*\*\*Special consideration will be given for people with limited experience at the director's discretion. \*\*\* **This class is a pre-requisite for all extra-curricular, band/color guard-related ensembles.**

### Symphonic Wind Ensemble

**Grades 9-12**

**3 periods per cycle**

**600807**

This is a select band comprised of students in grades 9 -12, who have had at least 2 years of experience playing their instrument. All members must audition for this group in the spring with the Director of Bands. **Pre-requisite: Students who participate in this ensemble must also participate in the Concert Band.**

### Orchestra

**Grades 9-12**

**4 periods per cycle**

**600747**

This ensemble is open to all string players in grades 9 – 12, who have had at least 2 years' experience playing their instrument. \*\*\*Special consideration will be given for people with limited experience at the director's discretion.\*\*\* Woodwind, Brass and Percussion student musicians from the Symphonic Wind Ensemble may be selected to perform with the Orchestra to form a Symphonic Orchestra for select concerts.

### String Ensemble

**Grade 9-12**

**2 periods per cycle**

**600407**

This is a select ensemble of string students, grades 9 – 12, who have had a at least 2 years of experience playing their instrument. All members must audition for this group in the spring with the Orchestra Director. **All students who participate in this group must also participate in the Orchestra.**

## VOCAL ENSEMBLES

### Concert Choir

**Grades 9-12**

**3 periods per cycle**

**600537**

Membership in this organization is elective and is open to all students. **This class is a pre-requisite for all extra-curricular choral ensembles.**

### Chorale

**Grades 9–12**

**3 periods per cycle**

**600637**

This is a select choir comprised of students in grades 9 -12. All members must audition for this group in the spring with the Director of choirs. **Pre-requisite: Students who participate in this ensemble must also participate in the Concert Choir. Exceptions will be granted at the discretion of the Director.**

### Extracurricular Ensembles:

**These ensembles meet after-school and/or in the evening. All students who wish to participate in these ensembles must be a member in good standing of an appropriate in-school ensemble.**

1. "Blue Raider" Marching Band (Fall Season/ June — December as well as Memorial Day Parade in May.) This organization is an extracurricular band comprised of hornline (woodwind & brass), color guard, battery percussion and pit percussion sections. All members of the band program are strongly encouraged to participate. The

Marching Band competes at New England Scholastic Band Association (NESBA) and United States Bands (USBands) marching band competitions, as well as performs at home varsity football games and represents Somerset Berkley Regional High School at local civic events and in many area parades during the fall season. **All instrumental members of the Marching Band must be a member in good standing of the Symphonic Wind Ensemble and/or Concert Band; Color Guard members must be a member in good standing of any in-school band, choral or string ensemble.**

2. **Select Jazz Band (Full School Year Season/September-June)** Membership in this organization is selective, and open to all students from grades 9-12 through **auditions** given in the spring based on openings in the ensemble. The ensemble rehearses weekly and represents Somerset Berkley Regional High School at various festivals, competitions, and performance sites during the school day and after school hours throughout the year. **All instrumental members of the Select Jazz Band must be a member in good standing of the Symphonic Wind Ensemble and/or Concert Band; vocal members must be a member in good standing of any choral ensemble.**
3. **Winter Percussion Ensemble (Winter Season / December - April)** The Indoor Winter Percussion rehearses weekly from December through April during after school hours and on weekends. The Winter Percussion Ensemble represents Somerset Berkley Regional High School at New England Scholastic Band Association (NESBA) indoor percussion competitions beginning in February and ending in mid-April. All competitions are held on Saturdays and Sundays. Woodwind and Brass instrumentalists from other band ensembles are strongly encouraged to participate and learn a new instrument. **All members of the Winter Percussion Ensemble must be a member in good standing of any in-school band, choral or string ensemble.**
4. **Winter Color Guard (Winter Season / December - April)** The Winter Color Guard rehearses weekly from December through April during after school hours and on weekends. The Winter Color Guard represents Somerset Berkley Regional High School at New England Scholastic Band Association (NESBA) indoor percussion competitions beginning in February and ending in mid-April. All competitions are held on Saturdays and Sundays. Woodwind and Brass instrumentalists from other band ensembles are strongly encouraged to participate. **All members of the Winter Color Guard must be a member in good standing of any in-school band, choral or string ensemble.**
5. **"Electrify" Show Choir (Full School Year / September - June)** "Electrify" Show Choir rehearses weekly throughout the school year during after-school hours, evening hours and on weekends. Membership in the ensemble is selective, and open to all students from grades 9-12 through **auditions** given in the spring. This ensemble provides both singing and dance opportunities in a variety of contemporary genres. The "Electrify" Show Choir represents Somerset Berkley Regional High School at various festivals and competitions beginning in November and ending in early-May. All competitions are held on Saturdays and Sundays. **All members of the "Electrify" Show Choir must be in good standing in Concert Choir and/or Chorale.**
6. **"Amplified" Show Choir (Full School Year / September - June)** "Amplified" Show Choir rehearse weekly throughout the school year during after-school hours, evening hours and on weekends. Membership in the ensemble is selective, and open to all female students from grades 9-12 through **auditions** given in the spring. This ensemble provides both singing and dance opportunities in a variety of contemporary genres. The "Electrify" Show Choir represents Somerset Berkley Regional High School at various festivals and competitions beginning in November and ending in early-May. All competitions are held on Saturdays and Sundays. **All members of the "Amplified" Show Choir must be in good standing in Concert Choir and/or Chorale.**
7. **Chamber Strings (Full School Year / September – June)** Chamber Strings rehearses weekly throughout the school year during after-school hours. Membership in the ensemble is selective, and open to all String students from grades 9-12 through **auditions** given in September. This ensemble provides advanced String students the opportunity to perform for official school functions, community events as well as working on standard chamber music literature. **All members of Chamber Strings must be in good standing in Orchestra and String Ensemble.**

## **COURSE OFFERINGS:**

### **FULL-TIME COURSES**

#### **History of Broadway**

**Grades 9–12**

**Levels 1, 2, 3**

**610207, 620207, 630207**

This class meets six times per cycle and is an elective where the primary objective is to expose students to the rich history, heritage and evolution of the American Musical Comedy leading to a vast knowledge of New York's theatrical history from Vaudeville through modern day integrated musicals through the use of audio and visual media. Students will also develop an understanding of the production aspects of the theater world from the points of view of directors, producers and behind-the-scenes technicians. Students will also be required as part of this course to contribute to the Spring Musical Production whether it be during class time or as an extra-curricular participant. **No instrumental or choral experience required.**

#### **Introduction to Music**

## **Grades 9-12**

**605114**

This class will cover the basics and more advanced of music theory, arranging, composition and ear training. This course is designed to enable students with experience in performing music, instrumentally or vocally, to take their musical skills to a higher level. With music theory, students will learn how the combination of melody, harmony and rhythm develop into music. Ear training will allow them to become better sight-readers and performers. These two skills will allow you the ability to compose and arrange their own music.

### **Music Department Part-time Courses**

## **Music Production and Engineering**

### **Grades 9-12**

#### **3 periods per cycle**

**600207**

Music Production and Engineering meets twice in a cycle and designed for the student who is interested in music, but may not play an instrument. This class will spend much time exploring the newest forms of digital sound recording and manipulation on the computer through a process called sequencing. We will be investigating on-line resources and working with software programs such as Audacity, Finale, Garage Band, and Avid ProTools to create music without performing on traditional instruments. Students will be creating their own songs from the computer as well as arranging well-known popular, jazz, classical, and folk songs from online midi resources and then recorded on CD's or digital media. In addition to digital audio recording, students will learn about sound production and put those skills to practical use by providing sound engineering and digital recording services for school events, concerts and drama productions. **No Prerequisite: Playing an instrument or the ability to read music is NOT necessary for this course, but is beneficial.**

## **Vocal Techniques**

### **Grades 9–12**

#### **3 period per cycle**

**605113**

This class is designed to provide students with the fundamental techniques of singing well in both solo and ensemble. Music of all styles, periods and cultures will be studied. Students will expand their individual abilities with both solo and class ensemble performances. Students will also develop skills necessary to become an independent musician. **Requirements will be adjusted and arranged between the teacher and student.**

## **Theater Techniques**

### **Grades 10–12**

#### **3 periods per cycle**

**605056**

This class is designed to provide advanced students with the opportunity to further their mastery of theater arts. This class will encompass Singing, Acting, Writing, Directing, and Stage Movement. Students will expand their individual abilities with both solo and class performances. Students will also develop skills necessary to become an independent musician director, and actor. **Requirements will be adjusted and arranged between the teacher and student. Multi-year enrollment is open to the discretion of the instructor.**

## **History of Rock 'n' Roll**

### **Grades 9-12**

#### **3 periods per cycle**

**600107**

The primary objective of this course is to expose students to American popular music in a variety of genres from 1950's pioneering rock 'n' roll to the contemporary genres of today's popular music, leading to an informed understanding of music as an art form. The primary function is to further the development of basic skills (such as structure/song form), broaden musical awareness and to understand how society influences the changing tide of musical styles. This course will explore the role that music plays in our everyday lives and students will be exposed to various media. No instrumental or choral experience required.

## **Piano/Keyboard Lab**

### **Grades 9-12**

#### **3 periods per cycle**

**601107**

The purpose of this class is to introduce and develop keyboard skills from beginner to intermediate. The class is recommended for Music Foundations, Jazz and Choral students as well as any other interested students. Each student may progress at their own speed, working individually and in groups. Included in this class will be the use of current electronic keyboards and electronic equipment, including sequencers, sound modules, and the Macintosh computer with music software. **This class requires no previous experience.**

## **FINE ARTS**

### **ART PROGRAM**

## **Grades 9-12**

### **Levels 9, 1, 2, 3**

Everyone possesses an aptitude for and is capable of developing a proficiency in one or more forms of art. Art is essential to the education of all students. Electing art affords the opportunity to develop and use an impressive assemblage of knowledge and skills. It provides extended learning opportunities. Many studies have documented the role of art in improving basic skills of learning areas in the curriculum. Students selecting one or more of the following courses will:

- Acquire and apply essential skills
- Use the arts to express ideas, emotions & beliefs
- Use imaginative, reflective, analytical & critical thinking
- Understand the visual arts in relation to history and culture
- Use technology
- Make connections among the arts and other disciplines

Attitude, interest, commitment and desire will play an important part of each student's success.

**Please Note:** Because of space constraints in art classes, it is necessary to limit the number of classes each student may take in the Visual Arts Department. Students who are enrolled in more than 1 class must be students planning a career in the arts and/or students who have demonstrated dedication and craftsmanship in studio courses. **Special permission must be acquired from the art department in order to be enrolled in more than one art course.**

### **Art Studio Level Designations**

Grades in studio-based classes are derived from student effort and quality of finished artwork. Student effort grades **are not** governed by levels. **Every** student is expected to work diligently during the entire class time. Finished artworks are graded according to student levels.

#### **Level one:**

Artworks are created with care and presented in excellent condition.

Work is rich in detail and highly refined as well as being harmonious, dynamic, and exciting. Student displays deep understanding of design principles, superior use of tools, materials, and techniques. Level one students may be asked to work beyond allotted studio time on studio-based or research projects.

#### **Level two:**

Artworks are created with care and presented with proficient execution. Work is detailed and refined but may lack harmony and variety. Student understands and applies design principles and demonstrates solid understanding of the medium being explored through the studio class.

#### **Level three:**

Artworks are created with care and presented with acceptable craftsmanship. Student attempts to apply design principles and demonstrates satisfactory understanding of the medium being explored through the studio class.

## **COURSE OFFERINGS:**

### **Art Foundations**

#### **Grades 9, 10**

**614108, 624108, 634108**

Art Foundations is an introductory class for freshman and sophomores. This class will provide the student with a basic introduction to drawing and 2-dimensional and 3-dimensional design. Students will learn basic vocabulary, be exposed to various media, color theory, and drawing from observation. Art movements and artists from history will be integrated throughout the course. An emphasis will be placed on the elements and principles of design. Students will be expected to keep a sketchbook/journal for homework and reflective writing. Portfolios and self-assessments are also required.

### **Ceramics**

#### **Grades 10-12**

**610108, 620108, 630108**

Ceramics students will investigate the potential of clay as a means of discovering strengths, personal sensibilities and giving expression to a new range of experiences. The focus of this course is to master throwing on the potters' wheel while providing a foundation in a variety of processes including hand building, modeling, and glazing. Some assignments will be supported by art historical introduction and discussions centered on contemporary ceramic artists

### **Drawing & 2-Dimensional Design**

#### **Grades 10-12**

**611208, 621208, 631208**

Drawing I will teach basic techniques of drawing and painting with an emphasis on the elements and principles of design. Through the completion of a series of sequential projects, students will strengthen their ability to draw and paint expressively while using basic formal techniques. Students will achieve a greater understanding of the elements and principles of design through contour drawing, value studies, color theory, perspective, and printmaking.

### **Jewelry, Metals, and Stained Glass**

## **Grades 10-12**

**612108, 622108, 632108**

The first year in this course provides students with a foundation in the studio disciplines of jewelry/metals and stained glass. Students receive instruction through a series of hands-on, sequential assignments that focus on design fundamentals as well as basic fabrication skills and techniques. Students will achieve a greater understanding of craftsmanship while creating original works in each discipline. The course is divided into two units of study: terms one and two focus on the study of metalsmithing and jewelry making while terms three and four investigate the discipline of stained glass.

## **Advanced Ceramics**

**Grades 11, 12**

**610508, 620508, 630508**

**Second Year of Study:** In this course students will develop more advanced technical skills with an emphasis on critical thinking, problem solving, creativity and design. In addition, second year students will be given an introduction to glaze formulation and kiln firing. **Students must have an average of B- or higher in Ceramics I in order to advance.**

**Third Year of Study:** This course requires more advanced expressive and technical skill with a focus on personal exploration supported by topical discussions of contemporary and historical ceramics. During this year of study, students are expected to create a body of work that is unified in direction, significant in degree of growth, innovative in its solutions and personal in expression.

**Students must have an average of B- or higher in Advanced Ceramics in order to advance.**

## **Advanced Drawing**

**Grades 11, 12**

**611508, 621508, 631508**

**Second Year of Study:** Drawing & 2-Dimensional Design II will be a sequential extension of and build upon the basic techniques of drawing, painting and printmaking. Through the completed assigned problems, students improve in their ability to draw, paint and produce prints expressively or through observation using learned formal techniques. Students will also strive to achieve a greater understanding of the elements and principles of design through progressively more difficult and challenging applications of design, drawing, value and tonal studies, color theory, perspective and basic printmaking techniques. Critique and discussion of a variety of artists' work will be an integral part of the course. **Students must have an average of B- or higher in Drawing.**

**Third Year of Study:** This course of studio study is the culmination of two prior years of sequential creative experiences in the areas of drawing and two-dimensional design. Students in advanced drawing will continue their artistic development and growth by becoming more intimately involved in the decisions governing the direction and goals of their artistic production. The course encourages students to involve themselves in both long and short-term studio problems and experiences, as well as in depth research of artists, cultures and stylistic movements of both historic and contemporary significance. The scope, sequence and specific nature of their concentration and artistic production will be determined jointly by the instructor and student. The specific goals and objectives for the course will be directly dependent upon the unique artistic, personal and educational intentions and needs of each student enrolled in the program. Personal reflection, self-examination and critique will regularly assess and evaluate student progress and achievement throughout the process. **Students must have an average of B- or above in Advanced Drawing.**

## **Advanced Jewelry, Metals, and Stained Glass**

**Grades 11, 12**

**612508, 622508, 632508**

**Second Year of Study:** The second year in this course continues to engage students in the study of jewelry metals and/or stained glass. The intent of this course is to assist students in building upon the basic skills and techniques learned during the first year of study. This goal is accomplished through the completion of sequential assignments which explore more sophisticated applications and techniques. Students may choose to create works in either metal or stained glass for the duration of the four terms or divide the year into two units of study. In the second year of study, students take a more active role in determining the direction of their work in terms of material, design, and functionality. **Students must have an average of B- or above in Jewelry, Metals, and Stained Glass.**

**Third Year of Study:** The third year of study requires a thorough understanding of the skills and techniques investigated during the prior two years of study. In the third year, students are expected to work more independently in developing and executing works which demonstrate a rich understanding of concept, design, and craftsmanship. Students will continue to develop advanced technical skills while creating a cohesive body of work in either metal or stained glass. An emphasis will be placed on research of significant historical and contemporary artists and trends as well as issues facing the working artist. **Students must have an average of B- or above in Advanced Jewelry, Metals, and Stained Glass.**

## **Advanced Digital Photography**

**Grade 12 (Grade 11 with permission of the instructor)**

**6 periods per cycle**

**610105, 620105, 630105**

In this course, students will build upon knowledge from Digital Photo I and/or the Advanced Digital Photo 3 credit class while covering in depth the technical aspects of using a Digital SLR camera, as well as continued lessons in Photoshop. Students will continue to have out of class assignments photographing a variety of photography concepts and subject matter and will begin to create more conceptual work combining a variety of media and materials with their photographs. Students will create a minimum of

2 photo series that will culminate in an artist's book or photo display. Students must provide their own digital camera although it is not necessary that the camera be a DSLR. **Students must have an average of B- or better in Digital Photography.**

## Art Department Part-time Electives

### Looking at Art thru Time

#### Grades 9-12

605608

Looking at the objects, art and buildings people make helps us to understand them better. This course takes a visual approach to learning history and allows students to be inspired by human creativity. The course is a traditional discussion-based course paired with minimal art-making activities. No preexisting art ability is required!

### Intro to Textile and Fashion Design

#### Grades 10-12

#### 3 periods per cycle

605164

This is a beginning course for designers looking to develop their skills in the areas of color, pattern design and simple fabric construction. Students will create their own prints and patterns using beginning textile processes such as stamping, printing, image transfer and fabric dyeing. Students will explore the elements of art and principles of design in a series of projects that move from two-dimensions to three-dimensions. Basic hand stitching and machine sewing will be introduced as students progress from making basic prints to creating basic apparel, fashion and interior accessories.

### Digital Photography

#### Grades 10-12

#### 3 periods per cycle

605105

In this course, students will learn the functions of a digital camera, and explore concepts for composing and creating photographs in art and design. Students will photograph a range of subject matter and ideas, as well as use the classroom lighting studio to create portraits. In addition, students will learn basic photo editing techniques, and create a digital portfolio of their work. This course will culminate in the creation of a photo essay of the student's choosing. This course will require significant photography work outside the classroom. Students must provide their own digital camera although it is not necessary that the camera be a DSLR.

### Advanced Digital Photography

#### Grades 11 and 12

#### 3 periods per cycle

605205

In this course, students will build upon knowledge from Digital Photo I, while also learning to manipulate photos in Photoshop. Students will learn advanced techniques with the digital camera as well as complete assignments comparable to tasks encountered in the professional art and design fields. Students must provide their own digital camera although it is not necessary that the camera be a DSLR. **Students should have an average of B- or better in Digital Photography.**

### AP Art Studio

#### Grade 12 (Grade 11 with permission of the instructor)

#### 3 periods per cycle (must be taken in conjunction with an Advanced Studio Art course)

690207

The AP Studio Art program is designed for highly motivated advanced art students who are seriously interested in the practical experience of art. Students will work throughout the year on a portfolio that will be evaluated by the Advanced Placement College Board. This course will require a significant commitment both in and out of the classroom, and previous training in their area of concentration. The student will concentrate on 2-Dimensional Design, Drawing, or 3-Dimensional Design. Students who elect the AP Studio Art will sign up for an advanced course in their chosen area (Sculpture, Ceramics, Drawing/Design), as well as the AP Studio Art class. Interested students will go through an evaluative process on a letter of intent, portfolio review and teacher recommendation. Students accepted into this program will be expected to do independent work over the summer. Students who do not complete the required summer work or attend meetings will not be a part of the AP Studio Art class in the fall. For additional information, students should contact Mrs. Troutman. **Students should have a B+ or better in their area of concentration.**

## WELLNESS

### Course Offerings:

### Graduation Requirements

## **Health I Grade 9**

### **3 periods per cycle (1 semester)**

**160110**

Health I is a **required** course for all 9th grade students. The major objective is to prepare all students to become more informed and responsible members of the Somerset Berkley Regional High School community. Areas discussed include: social and emotional health issues, suicide, teen depression, stress management, reproductive anatomy, physiology and current issues including bullying, violence prevention and disease. .

## **Health II Grade 11**

### **3 periods per cycle (1 semester)**

**360110**

Health II is a **required** course for all 11th grade students. The major objective is to help prepare students to become informed, responsible adults regarding their health, behaviors, issues and choices. Topics include: social and emotional issues, nutrition, alcohol/tobacco and other drugs, sexuality issues especially those dealing with decision-making, violence and society.

## **Physical Education Grade 9**

### **2 periods per cycle**

#### **Program of Study**

**168001**

Physical Education is a required course for all Somerset Berkley Regional High School students. Every student must pass 4 years of physical education. Physical education is an integral part of the school curriculum. Freshmen will begin their wellness path by being introduced to CPR/AED training, team building and cooperative games, fitness, low impact sports and team sports. **A complete change of clothing (proper gym attire) is required for all classes. Student should bring a lock to class to lock up their belongings. Clothes will be taken home at the end of each class.**

## **Physical Education Grades 10-12**

### **2 periods per cycle**

**368001**

Physical Education is a required course for all Somerset-Berkley Regional High School students. Every student must pass 4 years of physical education. Physical education is an integral part of the school curriculum. The goal is to prepare students for a productive and healthy life through the presentation of units of study on fitness, wellness, activities, and lifetime sports. Upper classmen will be given the opportunity to select from a competitive or non competitive activity for each unit. **A complete change of clothing (proper gym attire) is required for all classes. Student should bring a lock to class to lock up their belongings. Clothes will be taken home at the end of each class.**

## **Wellness Department Electives**

### **Food, Nutrition & Consumerism Grades 9-12**

#### **6 periods per cycle**

**220213**

This course is designed for students who have a genuine interest in food cuisines, customs and its nutritional values. Students will be exposed to a wide range of foods through research, demonstrations, preparation and related activities, while continuing to develop an understanding of My Plate/US Dietary Guidelines and its relationship to food selection. Areas of study include: basic nutrition, kitchen safety and sanitation, cooking terminology, preparation techniques, comparative food shopping and analysis of food market strategies, food culture and cuisine, impacts on global food supply, and organic and socially responsible products. Classroom activities will include not only the planning and preparation of food but participation in food related projects, such as menu planning, budgeting, and dietary/allergen restricted diets. Emphasis is also placed on community involvement with relations to preparation of foods for events at SBRHS and the surrounding communities. **Students will be required to complete independent weekly homework assignments relating to current events in the food industry. One project per term will be assigned.**

### **Culinary Essentials 6 periods per cycle Grades 11-12**

**320213**

This course will provide students who have a generous interest in the food service industry an in depth approach to culinary methods and techniques, along with a greater emphasis on nutrition analysis, large scale food production, careers and job skills

within the industry. By utilizing the "Culinary Essentials" course book produced by Johnson & Wales University – a leader in the foodservice industry – students will be eligible for college course credit if they pursue a degree at JWU. This course will develop the skills needed for employment in the food service and related industries along with broadening students' career prospects and contacts within this field. Students will be eligible to take the ServSafe Food Handler's Certificate through this course, an employable asset that is good for five years. **\*Prerequisite: Successful completion of Food, Nutrition and Consumerism – passing grade of 70% or higher**

## **Life and Relationships**

**6 periods per cycle**

**Grades 11, 12**

**320210**

This elective course is designed to help students gain a deeper understanding of the development of relationships and responsibilities one faces throughout a lifetime. The course begins with discussions on the nature of relationships and the natural progression to marriage and the decisions and implications of starting a family. Next is an in-depth study of the normal sequences of human development from conception to death. Issues covered include decision making, pregnancy, birth, child development, adolescence, aging, death and dying. Students are expected to keep accurate notes, perform to the best of their ability on all tests, projects and quizzes, students will be required to write opinion papers based on core concepts, principles of learning with fact based support.

## **Mind Body Wellness**

**Classroom and Lab**

**Grades 11, 12**

**4 periods per cycle - (2 periods in the gymnasium and 2 periods in the classroom)** **308016**

This elective is designed to provide opportunities for students to develop the knowledge and skills of lifetime exercise and fitness. Students will be exposed to the key components of fitness: cardiovascular, muscular strength and endurance, flexibility and body composition. Mind Body Wellness Lab will provide students with the opportunity to increase their level of fitness and understanding. Students will take part in activities such as yoga, meditation, pilates, fitness walking, stability ball training, cardio fitness, strength training, circuit training, body rolling and other based fitness classes.