

PROGRAM OF STUDIES

North Shore Technical High School

30 Log Bridge Road

P.O. Box 806

Middleton, Massachusetts 01949

978-762-0001

www.nsths.mec.edu

School Year 2011-2012

SCHOOL PHILOSOPHY

North Shore Technical High School recognizes the importance of teaching students to become life-long learners. Our mission is to educate students to understand their rights and responsibilities within this society through rigorous academic and career-technical education. North Shore Technical High School's programs are based on the needs of our business and professional community and are designed to prepare skilled personnel in career-technical and service programs, as well as for post-secondary education.

North Shore Technical High School accepts the responsibility to prepare students to achieve high levels of competence and self-fulfillment in all aspects of their lives. We teach students to maintain high standards and to develop a strong work ethic. We strive for instruction that is differentiated to meet the needs of all students. Our integrated programs will provide students with knowledge and skills that can be applied in a global economy characterized by population diversity, continual change, advances in technology, and job mobility. The school offers students academic and career-technical options commensurate with their abilities, aptitudes and goals.

North Shore Technical High School recognizes that our students, as citizens of the future and participants in a global society, should strive to be adaptable, independent, and tolerant of diversity. This philosophy will guide the efforts of the school in both curricular and extracurricular activities. North Shore Technical High School will foster a school culture that encourages and facilitates students' personal growth, community involvement and respect for themselves and others.

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DIRECTORY

Superintendent-Director	Daniel R. O'Connell	Ext. 230
Principal	Brad M. Morgan	Ext. 224
Assistant Superintendent/ Special Education Administrator	Mary E. Kroesser	Ext. 347
Student Services Director	Vera E. Skinner	Ext. 231
Assistant Principal	Raymond J. Harrington	Ext. 222
Technology Director	Tammy E. Rodolico	Ext. 349
Director of Curriculum	Maryellen D. Rancourt	Ext. 343

Department Coordinators

English	Noreen Mullen	Ext. 262
Mathematics	Paul Worth	Ext. 264
Athletics/Phys Ed/Health/ Student Activities	John Lynch	Ext. 258
Science	Glenn Tarpinian	Ext. 235
Social Studies	Mark Hoffman	Ext. 255
Vocational Programs	Carol Sullivan	Ext. 223

Guidance Department

Guidance Counselor	10, 11, 12	Julie Montague	Ext. 233
Guidance Counselor	10, 11, 12	Kristin Doherty	Ext. 234
Guidance Counselor	9	Daniel Connors	Ext. 292

Notice of Equal Opportunity

The North Shore Regional Vocational School District hereby notifies all students, parents, employees and members of the general public that all school programs, activities, and employment opportunities are offered without regard to race, color, sex, religion, national origin, disability, sexual orientation or home status. These assurances are made in compliance with federal standards: Title VI, Title IX and Section 504. Inquires may be made to Vera Skinner at North Shore Technical High School, 30 Log Bridge Road, Middleton, MA, 978-762-0001 Ext. 231.

SCHOOL COMMITTEE

George R. Harvey, Chairman	Essex
Marcia L. Sweeney, Vice Chairman	Marblehead
William O. Nichols, Secretary	Wenham
Dean R. Porteous	Beverly
Michael S. Crowe	Boxford
Russell C. Fravel	Danvers
Melissa J. Teixeira	Gloucester
David W. Ketcham	Hamilton
Paul Anderson	Lynnfield
Joseph G. Sabella	Manchester-by-the-Sea
Ellen Weitzler	Middleton
Vacancy	Nahant
Geoffrey Small	Rockport
Thomas St. Pierre	Salem
William Jackson	Swampscott
Trudi Perry	Topsfield
Claudia Worth	District Treasurer

GUIDANCE

School guidance counselors are available to assist and advise students about academic concerns, course selections, career planning, college admissions, financial aid and personal issues. Each grade has an assigned guidance counselor who monitors student progress each year through graduation. Students, with assistance from their counselor, develop an individual career plan that relates learning to their career goals. A four year developmental guidance program offers students a series of regularly scheduled lessons and activities in a classroom setting on career planning, academic success and personal growth.

The Guidance Department also offers a number of evening programs for parents, which include: College Fair, Financial Aid Night, Freshman Exploratory Night, and Grade 10 and 11 Parent Nights. Counselors are available two evenings per year for parent meetings and discussion of students' career plans.

Every effort will be made to place students in courses that are appropriate for their abilities and future education or career interests. Maximum student and parent input will be accepted during the time that course selections are made. Once selections are made, they will be honored to the extent possible. There will be no changes made in course selections after this time.

CAREER CENTER

With the establishment of the Career Center, school counselors, academic and career vocational/technical teachers deliver an integrated approach to career pathways to all students during related classes and other academic classes. During the school day, school counselors work with students in the following activities: career development instruction, portfolio development, individual career plans, job search strategies and occupational outlook, development of resumes and work place readiness skills.

Career Cruising is an internet-based career exploration and planning tool used in the Career Center to assist students in the development of their career plans. This website can be accessed at home by students and parents.

SUPPORT SERVICES

The following academic support services are available to all students to help ensure academic success:

Directed Study – Grade 9, 11, 12 – Provides student with direct tutorial support to maximize success in on-going course work.

Homework Center – Extra help sessions and homework assistance before and after school, with certified teachers, is available three days weekly for all students. This is required of students experiencing academic difficulties.

Reading (Title I) – This is a support reading class offered to students whose reading level is below the Grade 9 norm.

ELL Tutorial – This service is provided to those students whose first language is not English. It provides students with the support needed to successfully complete the academic and technical curriculum.

SPECIAL EDUCATION

The special education department provides programs and support services which are offered to students who have been identified as eligible, and who have a current Individualized Education Plan (IEP). Specialized courses and approaches to learning are designed to meet the individual needs of students, while providing curriculum aligned with the Massachusetts Curriculum Frameworks. The special education department is comprised of a highly and diversely qualified staff dedicated to the education and inclusion of students with disabilities. A wide array of services to students includes the following:

- ✚ **Inclusion Program** – General and special education teachers and/or teaching assistants work cooperatively to deliver the curriculum, and to help students develop skills appropriate to content areas, while taking into consideration the specific needs of the special education students within the class.
- ✚ **Specialized Academic Courses** – Individualized instruction is provided by special education personnel using specialized instructional methods, assistive technology, and modified materials in accordance with students' IEP Programs. Content presented is modified and parallel to the general education curriculum.

- ✚ **Curriculum Support** – Small group and/or individualized instruction designed to help students improve skills needed for academic success. Areas of focus may include reading (decoding and comprehension), writing, math, study and organizational skills, test preparation and self-advocacy.
- ✚ **Related Services** – Reading, speech and language therapy, occupational therapy, and individual and group counseling provided by both the school adjustment counselor and a behavioral consultant, as indicated on the Individualized Education Program (IEP).

COLLEGE CREDIT PROGRAMS

Dual Enrollment

Dual enrollment is for eligible high school students who want **to earn both high school and college credits simultaneously** by taking courses at publicly funded higher education institutions. North Shore Community College and Salem State College are the area colleges participating in this program. Students must qualify for these college level classes.

Secondary-Post Secondary CVTE Linkage

Tech Prep is a federally funded grant that has been made to consortia post-secondary institutions for the development of career pathways to a two-year associate's degree, a two-year certificate or further post-secondary education. The North Shore Tech Prep consortia at North Shore Community College has established articulation agreements between high schools and post-secondary institutions, establishing career pathways that transition seamlessly from high school to college programs of study, creating opportunities for students **to earn college credits while in high school. Articulations also exist between NST and Bunker Hill Community College, Mass Bay Community College, Central Maine Community College and Southern Maine Community College.**

Advanced Credit Application Process for Tech Prep

Any student who successfully completes an articulated course in high school is eligible to apply for and receive advanced credit once enrolled at North Shore Community College. Credits can be redeemed for up to three years after high school graduation. Submit a completed application, including a high school transcript, to the Tech Prep office to expedite the review process.

Eligibility Requirements to Earn Advanced Credit:

- *Earn a B or better in each articulated course
- *Meet any/all additional course requirements
- *Meet communications and math proficiencies in Career Vocational Technical

CO-CURRICULAR

Varsity Sports	J. V. Sports	Freshman Sports
Football	Football	Football
Soccer (Boys and Girls)	Soccer (Boys and Girls)	
Volleyball	Volleyball	Volleyball
Basketball (Boys and Girls)	Basketball (Boys and Girls)	Basketball (Boys)
Baseball	Baseball	Baseball
Softball	Softball	Softball
Cheerleading	Lacrosse (Boys and Girls)	
Winter Track (Boys and Girls)		
Lacrosse (Boys and Girls)		
Cross Country Track (Boys and Girls)		

COMMUNITY SERVICE CLUB

GSA

DRAMA CLUB

LITERARY MAGAZINE

GOLF CLUB

MATH TEAM

PEER MEDIATION

STUDENT COUNCIL

SCHOOL NEWSPAPER

NATIONAL HONOR SOCIETY

SKILLS USA

YEARBOOK STAFF

NATIONAL HONOR SOCIETY

STUDENT MENTOR

GRADUATION REQUIREMENTS

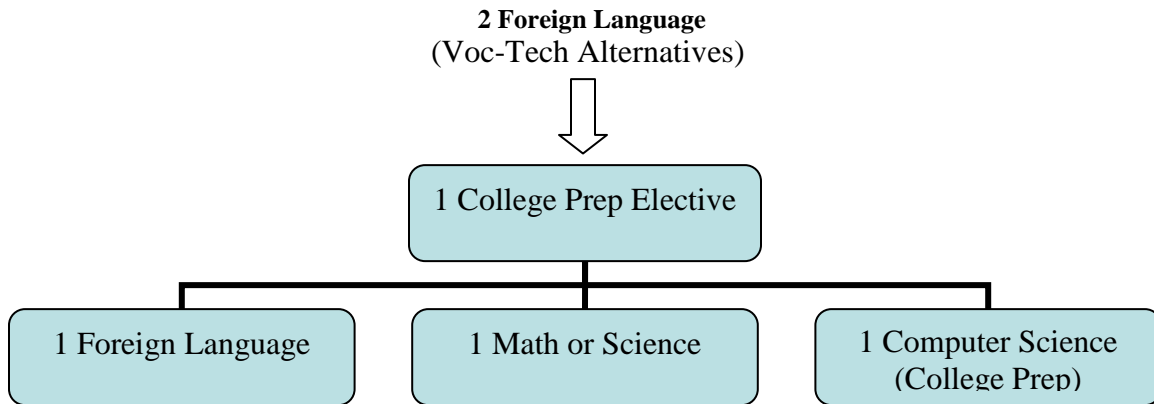
GRADE	COURSE	CREDITS PER YEAR	
GRADE 9	English	5	
	Math	5	
	Science	5	
	History	5	
	Phys Ed/Health	2.5	
	Freshmen Composition	2.5	
	Essential Strategies Math	2.5	
	Exploratory	10	
Minimum Credits Grade 9		37.5	
GRADE 10	English	5	
	Math	5	
	Science	5	
	History	2.5	
	Physical Education	1.5	
	Essential Strategies Math 10	1.0	
	Related Vocational	2.5 15	
	Minimum Credits Grade 10		37.5
GRADE 11	English	5	
	Math	5	
	History	5	
	Phys Ed/Health	2.5	
	Related Vocational	2.5 17.5	
	Minimum Credits Grade 11		37.5
	GRADE 12	English	5
Math		5	
Science		5	
Physical Education/Elective		1.25	
Elective		1.25	
Related Vocational		2.5 17.5	
Minimum Credits Grade 12			37.5
Total Minimum Credits		150.0	

Successful completion of all required courses and achievement of a passing score in the MCAS subject areas of Mathematics, English and Science. Credits may be adjusted for students receiving special services.

MASSACHUSETTS STATE COLLEGES AND UMASS ADMISSION STANDARDS

16 College Prep Courses Required (Carnegie Unit = full academic year of study)

- 4 English**
- 3 Mathematics (Algebra I or Higher)**
- 3 Science (2 with Lab Work)**
- 2 Social Science (1 Must Be U. S. History)**



2 Electives (Voc-Tech students may use two vocational technical courses)

	UMASS	State Colleges
High School GPA	3.0	2.9
SAT's	950-1150	940-1140

Sliding Scale if applicant's GPA falls below minimum **SAT** **(ACT)**

UMASS		State Colleges	
2.51-2.99	940 (20)	2.51-2.99	n/a
2.41-2.50	980 (21)	2.51-2.89	910 (19)
2.31-2.40	1020 (22)	2.41-2.50	950 (20)
2.21-2.30	1060 (23)	2.31-2.40	990 (21)
2.11-2.20	1100 (24)	2.21-2.30	1030 (22)
2.00-2.10	1140 (25)	2.11-2.20	1070 (23)
		2.00-2.10	1110 (24)

Special Admissions Applicants – Limited to 10% of new enrollees, based upon potential for success, who do not qualify for admission under standards. (Students missing a course may be considered.)

NO APPLICANT WITH A GPA BELOW 2.0 MAY BE ADMITTED. This is an absolute. Students with a GPA below 2.0 do **not** qualify for consideration as a Special Admissions applicant.

ENGLISH DEPARTMENT

The English Department at North Shore Technical High School supports a curriculum that not only reflects the various needs of students from sixteen communities in the District, but also meets the learning standards in the Massachusetts English Language Arts Curriculum Frameworks. The demands of 21st century literacy skills are more complex and challenging than ever before. The curriculum of the English Department increasingly reflects the greater use of technology while continuing to prepare students to be successful, productive citizens with highly developed skills in written and oral communication, collaboration, work ethic, critical thinking, and leadership.

Grade 9

Grade 10

Grade 11

Grade 12

American Lit-----American Lit-----World Lit I-----World Literature II
Humanities Honors

Grade 9

American Literature I Honors

Course Number: ENG 109H

5 Credits

This is an honors level college preparatory class that traces the development of American literature from Native American traditions to the Revolution. In addition, the course examines the genres of autobiography, memoir, nonfiction texts, poetry and drama. Students will analyze themes and issues from various historical periods. They will combine rhetorical strategies of narration, exposition, persuasion and description to produce essays of varying lengths. Emphasis is placed on reading and writing assignments that prepare students to meet college expectations. Public speaking skills will be taught through large and small group discussions and class presentations. Independent reading of additional texts outside of class will be required. Vocabulary study is accomplished through a study of word use in context and through the use of supplementary exercise materials.

American Literature I CP

Course Number: ENG 109

5 Credits

This is a college preparatory course that traces the development of American literature from Native American traditions to the Revolution. Students will analyze themes and issues from various historical periods through the study of literary genres including the essay, fiction, non-fiction, drama, and poetry. Students will participate in cooperative and collaborative written and oral projects and presentations. Vocabulary study is accomplished through a study of word use in context and through the use of supplementary exercise materials.

Freshmen Composition

Course Number:ENG 109C

2.5 Credits

This course is required of all freshmen and seeks to develop and improve skills in written expression. Organization of ideas, completeness of thought, correct expression, sentence

structure, and paragraph development are emphasized and strategies for answering multiple choice questions will be addressed.

Grade 10

American Literature Honors

Course Number: ENG 203

5 Credits

This is an honors level college preparatory class in which students will continue the chronological study of American literature from the Civil War to the modern age. Students analyze recognized works of American literature representing a variety of genres and traditions. They will evaluate the philosophical, political, and social influences of the historical period that shaped the characters, plots, and settings. The focus will be on word analysis, fluency, and systematic vocabulary development, reading comprehension, literary response and analysis, writing strategies, and speaking applications. Public speaking will be taught through large and small group discussions and class presentations. Independent reading of additional texts outside of class will be required. Intensive writing skills will be embedded into the curriculum.

American Literature CP

Course Number: ENG 202

5 Credits

This is a college preparatory class in which students will continue the chronological study of American literature from the Civil War to the modern age. Students will read and discuss examples from various genres, including fiction, non-fiction, poetry, and drama. Vocabulary study is accomplished through a study of word use in context and through the use of supplementary exercise materials. Students will be involved in group discussions, and oral presentations. Intensive writing skills will be embedded into the curriculum.

Grade 11

World Literature I Honors

Course Number: ENG 303

5 Credits

This is an honors college preparatory class in which students undertake a chronological approach to the study of World Literature beginning with ancient civilizations and ending with the Roman Empire. The development of both writing skills and independent thinking is emphasized. Highlights from significant art periods may be incorporated into the course through classroom presentations and student research. Standard English usage skills and vocabulary development will continue to be taught in conjunction with both reading and writing. Critical analysis is an integral part of this course, as is participation in class discussion

World Literature I CP

Course Number: ENG 302

5 Credits

This is a college preparatory class in which the students explore the study of World Literature chronologically, beginning with ancient civilizations and ending with the Roman Empire.

Writing skills will be reinforced through expository writing based on works read. The development of listening skills and critical thinking skills are incorporated into the various activities in this course. Standard English usage skills and vocabulary development will continue to be taught in conjunction with both reading and writing. The relation between historical events and literature will be emphasized.

English 12

Humanities Honors

Course Number: ENG 412H

5 Credits

This is an honors level college preparatory course for the student who has consistently demonstrated strong reading and writing skills. Students will read and respond to historically or culturally significant works of world literature including a wide variety of classic and contemporary literature. Emphasis is placed on student understanding of the interrelationships among literature, art, and music of the various time periods. Public speaking skills will be taught through large and small group discussions and class presentations. Independent reading of additional texts outside of class will be required.

World Literature II CP

Course Number: ENG 412

5 Credits

This college preparatory course is a broad-based survey of cultures and literature. Traditional and contemporary literature is the basis for integrating reading, writing, listening and speaking skills. The literature selections include fiction, non-fiction, drama, short stories, and poetry. Students will demonstrate an understanding of literary devices through both short and long writing assignments. Public speaking skills will be taught through large and small group discussions and class presentations.

World Literature II

Course Number: ENG 512

5 Credits

This modified content of World Literature II CP is a broad based survey of cultures and literature. It is designed for students with special needs, who have Individualized Education Programs. A parallel World Literature II CP curriculum is presented using specialized instructional methods, assistive technology, and modified materials, and instruction is conducted at a slower pace. Traditional and contemporary literature is the basis for integrating reading, writing, listening and speaking skills. The literature selections include fiction, non-fiction, drama, short stories and poetry.

MATHEMATICS DEPARTMENT

All mathematics courses are open to all students. Placement in the ninth grade is based on previous courses taken and a placement exam that is administered prior to entering. Geometry will only be offered in the ninth grade if a minimum number of students are qualified to enroll. Students that enroll in Geometry as freshmen are expected to take Pre-Calculus and Calculus. This is a demanding mathematics curriculum and students and parents should discuss this sequence with guidance counselors and mathematics instructors before electing to enroll.

Mathematics courses are sequenced to prepare students for the MCAS test taken at the end of their sophomore year. In addition to our regular curriculum all freshmen and sophomores are required to take Essential Strategies for Improving Math in preparation for the MCAS test.

The Mathematics department uses two guides to set curriculum. The National Council of Teachers of Mathematics Standards and the Massachusetts Mathematics Frameworks are used extensively throughout. The need to understand and be able to use mathematics in everyday life and in the workplace has never been greater. With this in mind, we believe students should be learning important mathematical concepts and processes with understanding. Our focus on understanding comes from the connections of mathematics to the real world. Throughout our curriculum we show these connections: Graphic designers routinely use geometry, carpenters often apply the principles of trigonometry, as do surveyors, navigators, and architects. Algebra is used throughout computing and business modeling, from everyday spreadsheets to sophisticated scheduling systems and financial planning. With these experiences we hope to prepare students to be able to adapt flexibly to the changing needs of the workplace.

Grade 9

Grade 10

Grade 11

Grade 12

Algebra I-----Geometry-----Algebra II-----Adv. Geometry/Trig
Joy of Math
Pre Calculus

Geometry-----Algebra II-----Pre-Calculus-----Calculus
Joy of Math

Grade 9

Geometry Honors

Course Number: MAT 104

5 Credits

This is an honors college preparatory course which covers the core geometric concepts of points, lines, planes, angles, and similar and congruent triangles, properties of polygons, right triangles, circle and right triangle trigonometry. This is a formal course with an emphasis on precise definition of terms, logical argument, and a significant treatment of proof. Algebraic skills are reviewed and strengthened through application to problems in geometry. This is a fast paced class with the expectation of strong student performance. Because of these high expectations and the track students must follow after this class, there will be an evaluation after the first quarter as to whether or not the placement is correct. The completion of extra projects will be expected.

Algebra I Honors

Course Number: MAT 103

5 Credits

This is an honors college preparatory class which covers the course topics in Algebra I at a much faster pace. It will be followed by an in-depth and extensive treatment of inequalities, polynomials, factoring, linear equations, systems of equations, and quadratic equations.

Algebra I CP

Course Number: MAT 101

5 Credits

This is a college preparatory class which includes the topics real numbers, polynomial operations, linear equations and inequalities, linear functions and graphing, probability and statistics, algebraic applications in the workplace and other content material included in the Massachusetts Mathematics Frameworks and the National Council of Teachers of Mathematics Standards.

Essential Strategies for Improving Math 9

Course Number: MC 102

2.5 Credits

In this required class, students will review the fundamental math concepts found in the Massachusetts Frameworks. The course will reinforce many of the basic concepts students will be studying in their regularly sequenced ninth grade math courses. The course will also reinforce test-taking strategies such as how to answer open-response questions, and how to anticipate and successfully answer the objective questions commonly found on standardized examinations.

Grade 10

Geometry Honors

Course Number: MAT 203

5 Credits

This is a college preparatory course which covers the same topics as MA 202 and 201 but at a faster pace, in greater depth, and with the expectation of stronger student performance.

Additional topics, such as right triangle trigonometry, will be included. There will be a greater emphasis on formal proof, and the completion of extra projects will be expected.

Geometry CP

Course Number: MAT 202

5 Credits

This is a college level course which includes the topics include inductive and deductive reasoning along with the study of logic. The core concepts of points, lines, planes, angles, similarity and congruence, properties of polygons, circles, area, and volume will be studied. Algebra skills will be reinforced through their application to geometric problems. The course is aligned with the Massachusetts Mathematics Frameworks and the National Council of Teachers of Mathematics Standards.

Algebra II Honors

Course Number: MAT 204

5 Credits

This is an honors college preparatory course which begins with a review of Algebra I and develops into a consideration of equations, polynomials, functions, irrational numbers, and quadratics. Emphasis is on the utility and power of algebra in problem solving. This is a fast-paced course, with the expectation of strong student performance. Additional topics, such as complex numbers and trigonometry will be included. The completion of extra projects will be expected.

Essential Strategies for Improving Math 10

Course Number: MC 202

1.25 Credits

In this required class, students will continue reviewing the Mathematics concepts found in the Massachusetts Frameworks. The course will reinforce many of the basic concepts students are studying in their regularly sequenced tenth grade mathematics courses. The course will continue reviewing test-taking strategies in order to prepare students for the types of questions most commonly found on standardized examinations. This course is supported with state-of-the-art computer technology that can address students' individualized needs based on previous test results.

Grade 11

Pre-Calculus II Honors

Course Number: MAT 304

5 Credits

This is a demanding honors college preparatory course intended for the advanced mathematics student, especially one who wishes to further his/her education in a technical field. Pre-Calculus covers coordinate geometry, conic sections, linear programming, triangle and analytical trigonometry, and logarithms and exponential equations. Applications in the physical and social sciences are emphasized, as well as the methodology of mathematical modeling. This course is specifically designed to prepare students for Calculus in grade 12. Consequently, this is a rigorous and challenging curriculum.

Algebra II Honors**Course Number: MAT 303****5 Credits**

This is an honors college preparatory course which covers the same topics as MA302 and 301, but at a faster pace and in greater depth, with the expectation of stronger student performance. Additional topics, such as complex numbers and trigonometry, will be included. A greater emphasis will be placed on algebraic approaches to problem solving. The completion of extra projects will be expected.

Algebra II CP**Course Number: MAT 302****5 Credits**

This is a college preparatory course which begins with a review of Algebra I and develops into a consideration of systems of equations, polynomials, functions, irrational numbers, and quadratics. Emphasis is on the utility and power of algebra in problem solving.

Grade 12**Calculus Honors****Course Number: MAT 403****5 Credits**

This is an honors college preparatory introductory course in calculus, equivalent to a one-semester college course. The course will include a brief review of critical concepts and skills from Pre-Calculus followed by a discussion of the concepts of limit, derivative, and definite integral. Techniques of integration and applications of the definite integral will be studied.

Pre-Calculus CP**Course Number: MAT 402****5 Credits**

This is a demanding college preparatory course designed for the advanced mathematics student, especially one who wishes to further his/her education in a technical field. Pre-Calculus covers coordinate geometry, conic sections, linear programming, and triangle and analytical trigonometry. A problem-based approach is utilized. Applications in the physical and social sciences are emphasized, as well as the methodology of mathematical modeling.

Joy of Math**Course Number: MAT 404****5 Credits**

This is a college preparatory course for students who are not planning to major in a field that requires advanced mathematical skills. This course will prepare students for the mathematics they will encounter in college courses, particularly core courses in social and natural sciences. It will develop a student's ability to reason with quantitative information in a way that will help them achieve success in their career. This course will also provide students with the critical thinking and quantitative reasoning skills needed to understand major issues in life. A context-driven approach to teaching mathematics is used in this course. That is, applications drive the course, and mathematical ideas are presented as needed to support the applications.

Advanced Geometry – Trigonometry CP**Course Number: MAT 411****5 Credits**

This is a college preparatory course for students who have successfully completed Algebra II. This course includes a review of the Pythagorean Theorem and the critical relationships about right triangles. Right triangle Trigonometry is introduced and its applications are studied. The concepts of circles, area and volume are studied in detail along with their applications. Constructions are introduced and their applications are studied. Coordinate Geometry is introduced and the study of Geometry and Algebra is reinforced through applications. Transformations are studied along with their applications.

Advanced Geometry – Trigonometry**Course Number: MAT 500****5 Credits**

This course contains a modified content of Advanced Geometry-Trigonometry CP is designed for students with identified special needs who have Individualized Education Programs. A parallel Advanced Geometry-Trigonometry CP curriculum is presented using specialized instructional methods, assistive technology and modified materials, and instruction is conducted at a slower pace. This course includes a review of the Pythagorean Theorem and the critical relationships about right triangles. Also included are an introduction to the concepts of right triangle Trigonometry, Constructions, and coordinate geometry, as well as in-depth study of circles, area and volume. Through the course topics, the study of Geometry and Algebra are reinforced through applications.

SCIENCE DEPARTMENT

The science program uses curriculum that is designed to engage students in the science process by exploring concepts through investigation and experimentation. The use of inquiry or hands-on strategies by all science classes, along with high expectations and a technology rich environment, will help provide students with knowledge and skills necessary for success with their career and education endeavors. All science classes follow the Massachusetts Science Curriculum Frameworks and are sequenced to prepare students for the required MCAS test taken at the end of the sophomore year.

Grade 9

Grade 10

Grade 12

Biology I-----Biology II-----Physics
Natural Studies
Human Biology

Grade 9

Biology I CP

Course Number: SCI 101

5 Credits

This is a college preparatory laboratory course which is designed to give students a basic understanding of scientific method, process and inquiry. Content standards included are: the chemistry of living things, the study of cell structure and function, and introduction to genetics. This class is aligned with the Massachusetts State Framework for Biology and is the first part of preparation for the Biology MCAS exam.

Grade 10

Biology II CP

Course Number: SCI 201

5 Credits

This is a college preparatory laboratory course which emphasizes understanding of the diversity, complexity, and interconnectedness of life on earth. Content standards included are: human anatomy and physiology, evolution, biodiversity and ecology. This class is aligned with the Massachusetts State Framework for Biology and is the second part of preparation for the Biology MCAS exam.

Grade 12

Physics CP

Course Number: SCI 405

5 Credits

This is a college preparatory senior elective which helps students to apply concepts in physics to their vocational and technical areas of study, as well to their everyday life experiences. The topics include: mechanics, motion, energy, heat engines, heating and cooling principles, acoustics and music, light and laser technology, and electricity. This is a practical but extensive course that emphasizes the use of traditional and computerized laboratory experiments to reinforce concepts.

Human Biology CP

Course Number: SCI 402

5 Credits

This is a college preparatory senior elective laboratory class which provides an in-depth study of human biology which is an inquiry-based study that emphasizes: cell physiology and the affect of drugs and medicines, genetics and the processes of heredity that influence disease, and human behavioral biology. Topics of study also include the latest in biotechnology instruction with real life biotech laboratory activities. Concepts are developed around human anatomy and physiology and in consideration of how ecological factors influence all humanity.

Human Biology

Course Number: SCI 400

5 Credits

This course contains a modified content of Human Biology CP is designed for students with identified special needs who have Individualized Education Programs. A parallel Human Biology CP curriculum is presented using specialized instructional methods, assistive technology and modified materials, and instruction is conducted at a slower pace. The domain of life science is the focus of this laboratory course. Students will develop an understanding of the nature and continuity of life and systems of the human body, including the chemistry of living things, the structure of cells, the fundamentals of genetics, and the processes of heredity that influence disease and human behavior.

Natural Studies CP

Course Number: SCI 401

5 Credits

This college preparatory senior elective is a field biology class that introduces students to the integrated principles of biology, chemistry and geology with emphasis on the environmental sciences through inquiry and investigations. This course uses a hands-on approach, requiring a considerable amount of time with field and laboratory work in order to investigate and discover scientific principles. Field excursions include a 3 day, 2 night trip to the White Mountains, hiking and canoeing along the Ipswich River, cross-country skiing into woodlands, and investigations of coastal ecosystems.

SOCIAL STUDIES DEPARTMENT

The history curriculum at North Shore Technical High School, which follows the Massachusetts History and Social Science Curriculum Frameworks, is designed to prepare students with the knowledge and skills needed to become responsible citizens. Emphasis will be placed on students not only acquiring factual information, but on the ability to independently gather, analyze, evaluate, and communicate information and ideas.

Grade 9	Grade 10	Grade 11	Grade 12
U.S. History I -----	U.S. History II -----	U.S. History II ----- (1 Semester) World History I (1 Semester)	Electives Psychology Current Events

Grade 9

United States History I 1754-1877 **5 Credits**
Course Number: HIS 109

This college preparatory course covers United States History from the pre-revolution period to the end of Reconstruction. The political, economic and philosophical origins of the United States, American Revolution and its aftermath, the development of political parties, foreign affairs, Manifest Destiny, sectionalism, industrial development, women’s rights movement, events leading to the Civil War and the Reconstruction period after the war are discussed. A major emphasis will be placed on the study of the United States Constitution.

Grade 10

United States History II 1877 – 1930 **2.5 Credits**
Course Number: HIS 210

This college preparatory course examines the domestic issues of industrialization, immigration in the late 19th and early 20th centuries, the change to an urban society and its effect on racial and gender issues, both the Populist and Progressive movements, and the social and cultural changes of the 1920s. Foreign affairs issues will include the Spanish-American War, relations in Latin America and Asia, and World War I.

Grade 11

United States History II 1930 – Present

2.5 Credits

Course Number: HIS 311

This college preparatory course is designed to develop an understanding of the political, economic, social and cultural themes of the twentieth century beginning with the Great Depression of the 1930s. Examples of specific topics include the causes of the depression and New Deal, the Cold War both at home and abroad, the civil rights and women's movements, the policies of Presidents Nixon, Ford, Carter and Reagan and America's involvement in World War II, Korea, and Vietnam.

United States History II (Honors) 1930 – Present

2.5 Credits

Course Number: HIS 311H

This honors college preparatory course is designed to develop an understanding of the political, economic, social and cultural themes of the twentieth century beginning with the Great Depression of the 1930s. Examples of specific topics include the causes of the depression and New Deal, the Cold War both at home and abroad, the civil rights and women's movements, the policies of Presidents Nixon, Ford, Carter and Reagan and America's involvement in World War II, Korea, and Vietnam. Additional independent work and summer reading will be required.

World History I

2.5 Credits

Course Number: HIS 311W

This college preparatory course begins with a look at the revolutions in Europe in the mid nineteenth century including both German and Italian unification. An examination of the causes and consequences of European imperialism takes place as well as developments in India, China, Japan Africa, and Latin America from the middle of the 19th century until and including the Russian Revolution.

World History I (Honors)

2.5 Credits

Course Number: HIS 311WH

This honors college preparatory course begins with a look at the revolutions in Europe in the mid nineteenth century including both German and Italian unification. An examination of the causes and consequences of European imperialism takes place as well as developments in India, China, Japan Africa, and Latin America from the middle of the 19th century until and including the Russian Revolution. Additional independent work and summer reading will be required.

PHYSICAL EDUCATION

The Physical Education / Health program provides a learning environment to promote, develop and improve a student's physical, emotional and social well being. Through a variety of physical activities and classroom instruction students will learn what is needed to develop good health, well-being and fitness.

Grade 9

Physical Education / Health

Course Number: PE 101

2.5 Credits

Students will be engaged in the Fitness for Life curriculum that will enhance socialization skills, an understanding of the fundamentals of fitness and common sports. They will also receive instruction in health topics such as: Substance Abuse and Treatment, Disease Prevention, Violence Prevention, and Healthy Decision Making.

Grade 10

Physical Education

Course Number: PE 201

2.5 Credits

Students will participate in a program designed to provide advanced instruction in group activities, physical fitness, team and individual sports.

Grade 11

Physical Education / Health

Course Number: PE 301

2.5 Credits

A comprehensive wellness program will be offered combining advanced topics from the Fitness for Life curriculum, individualized fitness programs, and health topics such as: Diet and Nutrition, Human Sexuality and Development, Consumer Health, and Substance Abuse and Treatment.

Grade 12

Students will participate in one of the following electives for their physical education program as seniors. Students will rank their preferences 1, 2, and 3 and every effort will be made to place them in their number one choice.

Weightlifting**Course Number: PE 402****Credits: 1.25**

Students will learn the benefits of resistance training in a lifelong fitness regime in this physical education class. They will study and practice different exercises for all muscle groups. Activities will include use of free weights, resistance bands, calisthenics, weight machines, aerobic machines and more. At the end of this course students will be able to create their own weight training program. A health education component which includes information on bullying prevention will be included.

Competitive Games**Course Number: PE 403****Credits: 1.25**

Students will engage in activities in this physical education class that include but are not limited to: flag football, soccer, volleyball, basketball, handball, floor hockey, softball/baseball, lacrosse, pickleball. At the end of this course, students will be able to understand the rules as a viewer of the game as well as follow the rules themselves and engage in each of these games. A health education component which includes information on bullying prevention will be included.

Group Fitness Activities**Course Number: PE 404****Credits: 1.25**

In this physical education course, different group activities that get students physically active will be explored and practiced. These group activities can include kickboxing, aerobic dance, yoga, resistance training, core work, Pilates, walking, jogging, aerobic machines, spinning, and more. At the end of this course, students will be able to understand the importance of different exercises and activities, and include them in their own healthy lifestyle. A health education component which includes information on bullying prevention will be included.

CAREER AND TECHNICAL PROGRAMS

North Shore Technical High School provides technical training for students who desire the skills required for successful employment with a career and technical curriculum that combines health and safety, theory (related) and practical application.

All career and technical programs align with the Career and Technical Education Frameworks and focus on health and safety, technical skills, embedded academics, employability skills, management and entrepreneurship and the principles of technology.

Service Cluster

Cosmetology
Culinary Arts
Design and Visual Communications
Graphic Communications
Health Assisting

Technical Cluster

Automotive Technology
Automotive Collision Repair/Refinishing
Carpentry
Electricity
Information Technology Services
Machine Tool Technology
Masonry and Tile Setting

COOPERATIVE EDUCATION

Cooperative Education provides seniors the opportunity to develop academic, technical and employability skills in a work-based setting. Alternating weekly between work and classroom study, students in good academic/technical standing and discipline record may participate in this program. Students participating in this program are paid for their work in their chosen technical field.

This program requires a formal agreement signed by the employer, school, student and parent. Employers must abide by all state and federal labor laws and regulations which include worker compensation insurance, equal employment opportunity and occupational health and safety. The North Shore Regional Vocational School District requires all employers to be subject to a CORI check. The Co-op Coordinator supervises all work sites and oversees the evaluation of students by employers.

Cooperative Education help students develop proficiency in a trade area and promote a smoother transition into a career of their choice.

OFF CAMPUS CONSTRUCTION PROGRAMS

Off Campus Construction

During their junior and senior years, students majoring in Carpentry, Masonry or Electrical spend the majority of their time working on off-campus construction projects. These students have an opportunity to work within our district applying their theoretical knowledge to projects while providing a service to the community. The students receive credit for their “on the job” experiences. The students are all involved with project planning, estimating, building permit processing, customer relations, job safety, and other real world situations.

EXPLORATORY

Freshman Exploratory

Course Number: EX 100

10 Credits

Students participate in a career/technical exploratory program in the ninth grade. Throughout the exploratory program, each student will participate in career awareness exercises designed to assist him or her in making a realistic, informed career decision. Guidance staff will meet regularly with freshmen to provide support services and the information necessary for students to make their final decisions. Every freshman student is scheduled to participate in this process. After completing the rotation of career/technical programs, each student chooses three to re-explore. After re-exploring three programs, each student will indicate his or her preferred career/technical area. The guidance counselor reviews the students' final preferences and each student is assigned to a career/technical area based on the point total of their re-explore evaluations. When a technical program exceeds its capacity for enrollment, the following steps are taken:

1. Students are admitted by rank order of the average of their re-explore evaluations.
2. Tie scores are broken by the re-exploratory evaluation, students' GPA, attendance and their first choice shop in rank order.
3. Students are placed in their 2nd and 3rd choices according to their preference.
4. Wait lists are created and are ranked ordered by the re-explore evaluation.
5. Wait lists are maintained and if an opening occurs, students are informed and given the option to change shops or remain in their current placement.

Automotive Technology

Course Numbers: AT 200, 300, 400,

15 - 17.5 Credits

Students will perform hands-on repairs on actual vehicles. Students will learn to use the latest automotive shop tools and equipment available. Topics included in the course are: basic knowledge of automobiles, all phases of engine diagnostics and repair, lubrication and maintenance, cooling systems, heating and air conditioning, drive line, electrical systems, ignition systems, steering, suspension, tire care, and complete brake systems.

Today's automobiles are equipped with on-board computers that control everything from the amount of fuel entering the engine to the comfort of the passengers. The Automotive Technology course at North Shore Tech has the latest in sophisticated equipment, such as engine analyzers, scan tools, wheel alignment systems, wheel balancers, as well as hand held testers.

Auto Technology Related 10, 11, 12

Course Number: RE 201, 301, 401

2.5 Credits

The Automotive Technology Related course is designed to meet the theory needs of the students enrolled in the Automotive Technology Shop. This course includes, engine mechanical repair, brakes and antilock brake system, steering and suspension systems, electrical and electronics, heating ventilation and air conditioning and engine performance and diagnosis. The Related Theory follows, as close as possible, to actual shop experiences.

<p>Articulation agreements with North Shore Technical High School exist at the following colleges and institutions:</p> <p>Central Maine Community College Southern Maine Community College Mass Bay Community College Benjamin Franklin Institute Mass Bay Community College Middlesex Community College</p>	<p>Graduates are working at the following companies:</p> <p>Hyundai of Danvers IRA Dealerships Thomas Ford Land Rover Mini-Cooper Scott's Auto Clinic Stutz Volvo</p>
<p>Licenses, Certifications and Affiliations</p> <p>National Automotive Technicians Education Foundation (NATEF), Certification; Automotive Youth Education Systems (AYES) Certification OSHA 10 Hour Career Safe Training; SP2 Safety and Prevention Certificate ACDelco On-Line Training Certification; ASE Refrigerant and Handling Licenses</p>	

Automotive Collision Repair and Refinishing

Course Numbers: CR 200, 300, 400

15 - 17.5 Credits

This program has been evaluated by the National Automotive Technicians Education Foundation Incorporated and certified by the National Institute of Automotive Service Excellence (ASE). The instructors are Automotive Service Excellence (ASE) master certified and are Massachusetts Licensed appraisers. Using the latest procedures and the most up-to-date technology, this program focuses on teaching students how to repair motor vehicles with collision or cosmetic damage. Students gain experience in all areas of the industry including but not limited to: welding, metal straightening, frames repair, refinishing, plastic repairing, computerized paint mixing and damage estimating. The goal of this program is to train students for entry into the collision repair field as qualified apprentices, with a sound basic knowledge of the trade and exposure to the Automotive Service Excellence (ASE) certification requirements. Graduates from this program can be employed by dealerships, independent body shops, insurance companies or open a shop of their own. Some students who complete this program may seek further education in college or specialized technical schools.

Automotive Collision Repair and Refinishing Related 10, 11, 12

Course Numbers: RE 202, 302, 402

2.5 Credits

The Collision Repair Technology Related Curriculum is National Automotive Technicians Education Foundation (NATEF) certified and taught by an Automotive Service Excellence (ASE) master certified technician. The Inter-Industry Conference on Auto Collision Repair (I-CAR), professional automotive collision repair text is used along with I-CAR technician manuals for each student. This course includes, but is not limited to, the following areas: body shop operation, auto body construction, hand and power tools, welding, metal and plastic repair, frame straightening and structural repairs, panel replacement, refinishing and damage estimating. This course utilizes the most up-to-date theory and equipment available. The Related Theory follows, as closely as possible, actual shop experiences.

<p>Articulation agreements with North Shore Technical High School exist at the following colleges and institutions:</p> <p>Lincoln Tech NEIT (pending)</p>	<p>Graduates are working at the following companies:</p> <p>MAACO Dent Wizard HMA Car Care IRA Dealerships Premier Insurance Company Gloucester Auto Body Winslow Auto Body</p>
<p>Licenses, Certifications and Affiliations</p> <p>Automotive Service Excellence (ASE), National Automotive Technicians Education Foundation (NATEF), National Institute of Automotive Excellence OSHA 10 Hour Career Safe Training Sp/2 Safety Online</p>	

Carpentry

Course Numbers: CP 200, 300, 400

15 - 17.5 Credits

Students in this program learn carpentry skills as they relate to residential construction. Sophomore carpentry students learn basic carpentry skills beginning with projects and exercises designed to introduce them to the use of hand and power tools. As their skills and experiences progress, the projects and exercises become more demanding.

Junior and senior carpentry students work on off-campus construction projects. The building of a house or comparable project gives students on-the-job experience as part of the program's hands-on curriculum. Employability skills are also emphasized.

Graduates should be prepared to enter the workforce as entry-level carpenters.

Carpentry Related 10, 11, 12

Course Number: RE 203, 303, 403

2.5 Credits

This related class is a logical extension to the shop. Students are taught the theoretical background needed for them to be successful in the carpentry trade. Emphasis is placed upon building design, blueprint drawings, construction materials, building site preparation, and the laws impacting the overall construction trade. An extensive review of critical terms and vocabulary is also integrated into the curriculum. Students are expected to become proficient in technical writing related to the field of carpentry.

<p>Articulation agreements with North Shore Technical High School exist at the following colleges and institutions:</p> <p>Central Maine Community College</p>	<p>Graduates are working at the following companies:</p> <p>Local 26, Carpenter's Union Favreau Construction Mario Custom Wood Working Essex Builders T. Berube Construction Baystate Remodeling</p>
<p>Licenses, Certifications and Affiliations</p> <p>1 year credit toward MA Supervisor's License Ramset Operator's License OSHA 10 Hour Career Safe Training</p>	

Cosmetology

Course Number: CO 200, 300, 400

15 - 17.5 Credits

Students in the program develop the creative and technical skills required to be successful in the cosmetology field. Students are taught how to perform all aspects of the program, which include hair, skin, nail care and personal responsibility, as well as the professional work ethics needed to secure employment in outside industry. Students have the opportunity to further develop skills in a supervised salon setting.

The goal is to prepare the students to pass the Massachusetts State Board Exam. Shop hours are recorded with the State once the student turns 16 years of age. Upon the completion of 1000 theory and practical shop hours, students take the State Board Exam and receive their operator's license to become contributing professionals in the industry. Students may go out on Co-op during the senior year, once these requirements have been met.

In the field of Cosmetology there are many career possibilities: Salon Stylist, Hair Color and Chemical Hair Texture Specialist, Nail Technician, Skin Care Specialist, Educator, Sales Representative, Salon Manager or Owner. The possibilities are unlimited for females and males.

Cosmetology Related 10, 11, 12

Course Number: RE 200, 300, 400

2.5 Credit

The Cosmetology related class is designed to cover the theoretical portion of the curriculum to ensure students have the necessary knowledge in manicuring, cutting, styling, coloring, and chemical texture services, as well as the skin care. Students are also trained in sanitation and safety procedures relating to all areas of study.

	<p>Graduates are working at the following companies: Peacock Alley Salon-Salem Karen Sutton Hair Studio-Marblehead Noggins Hair Salon-Middleton En Vogue Day Spa-Danvers Ambiance-Rockport</p>
<p>Licenses, Certifications and Affiliations Massachusetts State Board of Cosmetology Operator's License OSHA 10 Hour Career Safe Training</p>	

Culinary Arts

Course Numbers: CU 200, 300, 400,

15 - 17.5 Credits

This program provides students with knowledge in the Food Service, Culinary Arts and Baking Industry. The program simulates a live working laboratory (i.e., Restaurant, Commercial Bake Shop, Table Service, Banquet and Catering). Students will become familiar with industry standards, safety and quality workmanship. Exposure to fundamental cooking, baking and “front of the house” service will be taught. Skills associated with the purchase and the storage and safety of foods and related products will be covered.

The course of study includes personal responsibilities and professional work ethics. Also presented will be the importance of cleanliness, personal hygiene, along with food safety, cooking and baking techniques. The techniques and skills associated with a job search including interviewing skills, resume writing and methods in securing employment in the food service industry will be covered.

Students will rotate through assigned workstations while simulating a working environment. The student-run restaurant “The Log Bridge Inn” will provide a work place experience fostering the leadership skills necessary to be successful in the food service industry. The Log Bridge Inn Bakery Program will provide training in the working of a commercial and retail bake shop.

Culinary Arts Related 10, 11, 12

Course Number: RE 207, 307, 407

2.5 Credits

The integration of theory and practical instruction will be delivered in a classroom setting, supporting the food service and hospitality program. Students will follow the National Restaurant Association’s “ProStart Curriculum”. ServSafe and Hazard Analysis and Critical Control Points (HAACP) national programs in food safety and sanitation will also be presented. Certifications will be received upon successful completion of both programs.

Instruction and student support will be offered in food service mathematics, front of the house hospitality and administration, cooking methods and techniques in Culinary Arts and food service preparation. In addition, Baking and Pastry Arts Sciences will be covered with the emphasis placed on chemistry and the processes involved in food and baked goods preparation.

<p>Articulation agreements with North Shore Technical High School exist at the following colleges and institutions:</p> <p>Central Maine Community College North Shore Community College Johnson & Wales Dual Enrollment</p>	<p>Graduates are working at the following companies:</p> <p>The Landing Sheraton Ferncroft Lobsta Land (Seasonal) Brooksby Village Market Basket Bakery</p>
<p>Licenses, Certifications and Affiliations ServSafe, Pro-Start Certification, OSHA 10 Hour Career Safe Training</p>	

Design and Visual Communications

Course Number: CA 200, 300, 400

15 - 17.5 Credits

The Design and Visual Communications program provides training to students in all aspects of digital and visual communications. Students will learn the basics of page layout and design, elements and principals of art, typography, digital photography, storyboarding, and web design. They will learn to take an idea from concept to preflight, and understand the principles of prepress and outsourcing.

Students have access to the latest industry standard Adobe and Macromedia software and develop practical skills that translate into a solid foundation for employment and higher education. They will not only develop techniques in marketing of products they create, they will learn to market themselves and the ability to meet tight deadlines.

Graduates are able to find employment in advertising, desktop publishing, illustration, web design, animation, and other graphic related fields. Many Design and Visual Communication students enter college to further their education.

Design and Visual Communications Related 10, 11, 12

Course Number: RE 205, 305, 405

2.5 Credits

Students will gain a basic understanding of the following programs: Adobe Illustrator, Adobe Photoshop, Adobe In Design, Hypertext Markup Language (HTML) Web Coding, Flash Animation and critique skills.

Seniors will be given a general overview of computer maintenance including software installation, PC/Mac platforms, file sharing, networking and troubleshooting. Second semester students will concentrate on professional business skills, job readiness, and legal responsibilities such as copywriting and trade marking.

Articulation agreements with North Shore Technical High School exist at the following colleges and institutions:	Graduates are attending the following colleges and/or working at the following companies:
North Shore Community College New England Institute of Art (Pending) Introduction to Computer Graphics Fundamentals of Design : Fundamentals of Design II and types of Layout : Introduction to printing	Mass College of Art Montserrat College of Art Art Institute of Boston CDIA at Boston University Peabody Essex Museum New England Lettering Cricket Press Charette Corporation
Licenses, Certifications and Affiliations	
Occupational Safety and Health Association General Safety OSHA 10 Hour Career Safe Training	

Electricity

Course Numbers: EL 200, 300, 400

15 - 17.5 Credits

Electrical students learn and develop skills required of a licensed electrician. A student graduating from the electrical program will earn credit toward the requirement for a Massachusetts Journeyman Electrician License. All aspects of the electrical industry are studied. Wiring systems, from simple single-family homes to large commercial and industrial buildings, are analyzed, diagrammed and built. Magnetic starters, motor controls, transformers, logic controls, alarm and signaling circuits, cable TV, telephone, home theatre, and computer network wiring are all studied. Practical installations are fabricated in the shop. Science, Math and English are applied and integrated to the curriculum and the National Electrical Code is introduced as a text. Other important aspects of the electrical trade such as permits, inspections, insurance and proper licensing are also studied. Graduates are well prepared to serve as electrical apprentices and continue their education in the Electrical Trade.

Electrical Related 10, 11, 12

Course Numbers: RE 212, 312, 412

2.5 Credits

The Electrical Related class introduces electrical and electronic principles, practices, and uses in residential, commercial and industrial applications. Curriculum is based on scientific, mathematical, and Electrical Code materials. Coursework is focused on discovery of electricity, matter, elements, atoms, molecules, laws of electrical charges and electron flow. Math concepts include Ohm's law, building calculations, construction theory, and job estimation. The National Electrical Code is introduced and studied. Code work includes preparation for additional State required school hours and preparation for the Journeyman Electrician Examination.

<p>Articulation agreements with North Shore Technical High School exist at the following colleges and institutions: NSTAR/NSCC Ben Franklin Institute</p>	<p>Graduates are working at the following companies: Cranney Companies Paras Electric Anthony Humerian Electric Parr Electric Amore Electric Waterline Industries Essex Electric</p>
<p>Licenses, Certifications and Affiliations Up to 200 hours of 600 required classroom for MA Journeyman License Up to 2000 hours of 8000 required work experience for MA Journeyman License OSHA 10 Hour Career Safe Training</p>	

Graphic Communications

Course Number: GA 200, 300, 400

15 - 17.5 Credits

Graphic Communications is a course of study that prepares students for a multitude of employment and educational opportunities in the Visual Communications fields of both traditional publishing methods and new and emerging electronic media, including video, video editing and digital photography. Students design effective communications using the latest design software and advanced computer hardware.

This course will provide students with a basic understanding of the printing industry, its history and the impact that printing has had on society. Students will obtain entry-level skills in all aspects of graphic communications; get exposure and hands-on experience with digital printing, offset press operations and bindery operations. Students will learn how to operate and maintain digital printing equipment, small single color and two color offset press equipment and small binding equipment.

Students are also trained in the electronic field of DTP, WEB development, video and digital photography, using up-to-date advanced software and equipment. Scanning procedures, image manipulation and color correction for both digital and printed photographs are taught.

Pre-press operations are taught to output and manage files. Students also learn to use the Genesis computer-to-plate system.

Students will work on developing a personal portfolio to showcase their strengths and prepare them for entry to either the job or college arena.

Graphic Communications Related 10, 11, 12

Course Number: RE 213, 313, 413

2.5 Credits

Students will gain a basic to proficient understanding and skill level in the following programs: Adobe Photoshop, Illustrator, InDesign, Dreamweaver, and Fireworks. Students will also work from textbooks and workbooks.

Topics covered will include a general overview of computer maintenance including software installation, PC/Mac platforms, file sharing, networking and troubleshooting. During their senior year, students will concentrate on professional business skills, job readiness, legal responsibilities and design a web portfolio.

<p>Articulation agreements with North Shore Technical High School exist at the following colleges and institutions:</p> <p>North Shore Community College Central Maine Community College NE Institute of Art, Brookline (pending) Southern Maine Community College</p>	<p>Graduates are working at the following companies:</p> <p>Shawmut Printing, Danvers, MA Peabody Essex Museum, Salem, MA Ink Cups, Danvers, MA New England Lettering B & W Press Kwik Kopy Staples</p>
<p style="text-align: center;">Licenses, Certifications and Affiliations Print Ed Accreditation; OSHA 10 Hour Career Safe Training</p>	

Health Assisting

Course Number: HS 200, 300 400

15 - 17.5 Credits

Health Assisting students are prepared as entry level health care workers. Students have a strong knowledge of anatomy and physiology, nursing assisting, medical terminology and pre-hospital emergencies. Students are able to care for individuals with developmental disabilities, Alzheimer's disease, and individuals who cannot care for themselves.

Sophomore Year:

Anatomy and Physiology*
 Nutrition and Diet Therapy*
 Pre-Hospital Emergencies
 Developmental Disabilities

Clinical Internship

2-3 days per week in a Healthcare Facility

Junior Year:

Nursing Assistant
 Alzheimer's Care

Clinical Internship

2-3 day per week in a Healthcare Facility

Senior Year:

Co-op (Cooperative Education)
 Introduction to Phlebotomy
 Introduction to EKG
 Medical Ethics
 Medical Office
 Medical Terminology*†

Internship

1 day per week in a Healthcare Facility

Health Assisting Related 10, 11, 12

2.5 Credit

Course Number: RE 209, 309, 409

Sophomore Year: Keyboarding and Microsoft Office

Junior Year: Nursing Assistant

Senior Year: Introduction to Athletic Training

<p>Articulation agreements with North Shore Technical High School exist at the following colleges and institutions:</p> <p>North Shore Community College* Central Maine Community College*†</p> <p>Student are working at: Brooksby Village, Putman Farm at Danvers, Brightview Danvers</p>	<p>Graduates are working at the following companies: Seacoast Nursing Center Greycliff Nursing Center Salem Hospital, Denmar Nursing and Rehabilitation Beverly Hospital Ledgewood Nursing Center Essex Cardiology Brooksby Village Brightview Danvers</p>
<p>Licenses, Certifications and Affiliations First Aid: American Safety & Health Institute Basic CPR: American Heart Association Healthcare Provider Developmental Disabilities; Alzheimer's Care OSHA 10 Hour Certificate; Blood borne Pathogens Certificate Eligible to sit for Certified Nursing Assistant exam through the Department of Public Health</p>	

Information Technology Services

Course Numbers: IT 200, 300, 400

15 - 17.5 Credits

This technical program prepares students for A+ Computer Certification, Net+ Certification, and Cisco Certified Network Associate (CCNA) Certification. Students will actively learn in a hands-on environment the fundamentals of Computer and Networking Technologies in order to meet the demands found in the fast growing industry of Information Technology and Telecommunications. Introduction to Computer Programming, Hypertext Markup Language (HTML), Visual Basic, and Flash MX are included in the program, as well as an opportunity for students to work at the Help Desk which is responsible for maintaining, upgrading, and repairing over 200 computers and printers on our Local Area Network (LAN).

Information Technology Services Related 10, 11, 12

Course Numbers: RE 214, 314, 414

2.5 Credits

ITS students are encouraged to work independently on large scale projects using the tools they have learned in shop. Projects that have potential for school administrative use or projects related to individual shops are especially helpful. Past projects have included a menu conversion table for Culinary Shop, installation of a bar code scanning system for Auto Technology, a printer inventory system for Marketing and other projects pertinent to school operations. Students are exposed to the entire life cycle of a project, from inception to turnover.

Information Technology Services (Topic and Sequence)

Grade 9	Introduction to Windows Operating System	Introduction to Hardware	Intro to Programming (Q-Basic)	Introduction to Webpage Design		
Grade 10	IT Foundations Course	A+ Hardware and Operating Systems	Adobe Certified Associate Program	Programming (Visual Basic, Java Script)	Microsoft Technology Specialist Certification	Help Desk
Grade 11	Network +	CCENT	Adobe Certified Associate Program	Programming (Flash, JavaScript)	Help Desk	Co-op for Qualified Students
Grade 12	CCENT	Adobe Certified Expert Program	Programming (Flash, JavaScript)	Help Desk	Co-op for Qualified Students	

Information Technology Services (Continued)

<p>Articulation agreements with North Shore Technical High School exist at the following colleges and institutions:</p> <p>North Shore Community College Bunker Hill Community College Central Maine Community College Johnson & Wales Dual Enrollment Ben Franklin Institute</p>	<p>Graduates are working at the following companies:</p> <p>Tech Evolutions HC Pro Micro Support Group, Inc. HRMP Cartridge World Filter Sense Gomez, Inc.</p>
<p>Licenses, Certifications and Affiliations</p> <p>Comptia A+ (Hardware & Software), Comptia Network + Cisco Certified Network Associate (CCNA) Microsoft Certified Desktop Support Tech (MCDST) OSHA 10 Hour Career Safe Training</p>	

Machine Tool Technology

Course Numbers: MT 200, 300, 400

15 - 17.5 Credits

This program covers a variety of subjects that are important to the designing and building of everything mechanical. Extensive standard manufacturing practices will be experienced. These skills are common in all countries where machines or other mechanical products are designed and manufactured.

This program exposes students to the multi-faceted field of manufacturing, machines, and tools. Students receive training on state-of-the-art software in Computer Aided Drafting (CAD) and Computer Assisted Manufacturing (CAM); and participate in actual industrial jobs and teacher-assigned manufacturing projects which will include using manual machines, Computer Numerical Control (CNC) machining and a limited amount of welding. Students will get certifications in (NIMS), National Institute Metal Working and Mastercam Certificates.

Upon completion of this program, students will have acquired skills that are marketable at the world economy level.

Machine Tool Technology Related 10, 11, 12

Course Numbers: RE 206, 306, 406

2.5 Credits

Skills common to the design and manufacturing of mechanical products are reinforced in a related classroom environment in the areas of mathematics, machine science, computer science, (CNC, Auto Cad, Master Cam), and blueprint interpretation.

Articulation agreements with North Shore Technical High School exist at the following colleges and institutions: Central Maine Community College Southern Maine Community College	Graduates are working at the following companies: GTG Woodman Machining CPI Salem Sheet Metal Screw Matic Corporation
Dual Enrollment with Central Maine Community College	
Licenses, Certifications and Affiliations National Institute for Metal Working Skills (NIMS) OSHA 10 Hour Career Safe Training	

Masonry and Tile Setting

Course Numbers: MS 200, 300, 400,

15 - 17.5 Credits

The Masonry program gives students experience in working with brick, block, stone, tile and concrete. The curriculum includes studies in areas ranging from brick veneering to poured concrete slab work. The students will be exposed to community work projects in their junior and senior years. Careers as bricklayers, cement finishers, stone masons and tile setters await the successful graduate. Other related jobs include salesperson, inspector, material buyer, estimator, job superintendent, and contractor.

Masonry Related and Tile Setting 10, 11, 12

Course Numbers: RE 204, 304, 404

2.5 Credits

This course covers the following: Building design, reading blue print drawings, estimation of masonry materials and labor, building site preparation, and the laws and codes impacting the overall masonry trade. An extensive review of trade safety, critical terms, and vocabulary is also integrated into the curriculum. Students are expected to become proficient in technical writing related to the field of masonry.

	<p>Graduates are working at the following companies: M. O'Mahoney Company Accurate Concrete Cutting and Coring Local 3, Bricklayer's Union Zampell Refractories Imperial Masonry Martignetti Enterprises Northeast Nursery</p>
<p>Licenses, Certifications and Affiliations Ramset Fastener License OSHA 10 Hour Career Safe Training</p>	

ELECTIVES

The following electives will be offered to the senior class contingent upon enrollment.

Journalism

Course Number: ENG 411

1.25 Credits

This is a one semester course where students will study the concepts of journalism and read the work of many outstanding journalists. In addition to the reading assignments, students will write articles, columns and editorials as well as creative pieces which may be published in the school newspaper or literary magazine. Students will be exposed to the technology involved in laying out a newspaper and publishing it. The class will also be involved with the planning and development of the school's yearbook.

Current Events

Course Number: HI 403

2.5 Credits

This course is designed to introduce students to contemporary issues that have local, state, national and/or international importance. Knowledge of and the ability to analyze current events are vital for an individual to be an informed citizen. This course will allow students to gain an understanding of significant current events and people in order to help them make rational informed decisions, now and in the future, in order to become contributing adults in American Society.

Psychology

Course Number: HIS 411

2.5 Credits

The study of psychology is designed to foster a greater understanding of human behavior as it applies to the individual. This is a one period full year course. Topics include a look at various psychological theories, personality development, learning theory, sleep and dreams, social psychology and additional topics depending on student interest. Case study discussions and analysis will make up a major part of the course.

Personal Financial Planning

Course Number: VTE 413

1.25 Credits

This course will cover the importance of creating SMART financial goals, learning the importance of budgeting, investing, using credit wisely, keeping your money safe and secure and the value of insurance. Students will gain exposure to the stock market and participate in the stock game. The goal of this course is to help students know and understand financial planning, understand the difference between a need or a want and how to get the most out of their money. The students will learn how to use all the services of financial institutions to their advantage and realize that they need to protect what they have by insuring it. This course will meet one period a day for one semester.

ELECTIVES

CAD (Computer and Drafting)

Course Number: VTE 410

1.25 Credits

This course introduces the student to the basic concepts of CAD drafting and design. The purpose of this program is to further educate a student in drafting. The basic building blocks of drafting are reviewed and applied to computer aided design projects. Instruction is directed toward the beginner and includes an introduction to computer aided drafting, geometric constructions, single view drawings, orthographic projection and dimensioning.

Spanish I

Course Number: SP 100

5 Credits

Spanish I is the first of a two-part foreign language program offered as an elective to eligible students. The purpose and objective of this course is to teach students to read, write and speak the language; as well as foster an understanding and respect for other cultures. Students are introduced to basic vocabulary and grammatical structures in the classroom. This course meets the standards set by the Massachusetts World Languages Frameworks.

Spanish II

Course Number: SP 200

5 Credits

Spanish II is a continuation of Spanish I with more emphasis on developing writing skills and oral proficiency. A closer examination of the grammatical structure of the Spanish language will be made, in conjunction with the Massachusetts World Languages Frameworks.

Guidance Elective

Senior College and Career Planning

Course Number: GUI 410

Pass/Fail

This mini-course is designed to help senior students develop a plan for their post-secondary pursuits. Students are guided through all aspects of the college and career search, application, and selection process, which lead to decision-making and completion of the college application. Students will learn about college majors and related careers, college admissions tests, development of a list of colleges to which they will apply for admissions, the application process, resumes, essays, letters of recommendation, interviews, community service, financial aid and scholarships, etc.