

PROGRAM OF STUDIES 2014-2015

OLDCOLONY REGIONAL VOCATIONAL TECHNICAL HIGH SCHOOL

INTRODUCTION

Old Colony Regional Vocational Technical High School is located on a 80-acre campus in Rochester, Massachusetts, the geographical center of the five-member town school district that includes Acushnet, Carver, Lakeville, Mattapoisett, and Rochester. Old Colony is committed to providing quality vocational-technical and academic programs. Graduates receive a high school diploma and a certificate of proficiency in their technical area of study. Old Colony's four-year program of studies allows students to directly enter the job market as skilled workers or to continue their education at any state college, university, or technical school. As part of the Career Technical Education Program (CVTE) our students are eligible to earn college credit through articulated credit, free courses, and early college placement at Bristol Community College. Also, college credits can be awarded for technical training received at Old Colony from a variety of post-secondary institutions including New England Tech and Johnson and Wales University. Old Colony is fully accredited by the New England Association of Schools and Colleges.

GRADUATION REQUIREMENTS

- 4 years of English
- 4 years of Math
- 2 years of Science
- 1 year of Civic Education or Physics
- 2 years of Social Studies
- 3 years of Shop Related
- 4 years of Shop
- Completion of a Student Portfolio

District will align graduation requirements with Common Core State Standards and MassCore mandates.

ENGLISH LANGUAGE ARTS

The goal of the English Language Arts Program is to provide literature-based education founded on intensive reading, writing, speaking and listening. Using the Massachusetts Common Core State Standards as its catalyst, the program provides students with a solid body of knowledge derived from the following: reading high quality works of literature; discerning characteristics of and approaches to fiction, non-fiction, pros, verse, drama, and informational texts typically augmented with audio and video resources; incorporating web-based technology on a continual basis; gaining experience in confronting human issues and conflicts; developing a strong sense of personal and social values, while attaining critical language competencies and thinking skills.

HONORS ENGLISH 9

5 credits

This course is dedicated to college preparation which builds on skills students have acquired in previous years of ELA study. This course focuses on short stories, non-fiction, poetry, drama, the novel, dystopian and science-fictional works, as well as writing, listening, and speaking skills. Students also acquire researching capabilities that incorporate how to cite sources from electronic and conventional cites using MLA documentation. The year closes with each student demonstrating a shop/vocational technique to their own English class group as part of a school-wide, ninth grade integration project. Students taking this course should anticipate an accelerated pace of instruction and work.

COLLEGE PREP ENGLISH 9

5 credits

This course is designed to develop a foundation in English Language Arts through reading classic and contemporary works, applying reading strategies, and the development of writing skills. This course focuses on short stories, non-fiction, poetry, drama, the novel, dystopian and science-fictional works, as well as writing, listening, and speaking skills. Students also acquire researching capabilities that incorporate how to cite sources from electronic and conventional cites using MLA documentation. The year closes with each student demonstrating a shop/vocational technique to their own English class group as part of a school-wide integration project.

HONORS ENGLISH 10

5 credits

This course focuses on short stories, non-fiction, poetry, drama, the novel, dystopian and science-fictional works, as well as writing, listening, and speaking skills. Students recognize and explore character relationships, conflicts, and other literary elements while developing their writing skills and analytical capabilities. As literature is analyzed, the ability to cite textual evidence when substantiating written claims is critical. Students continue to utilize their researching capabilities that incorporate how to cite sources from electronic and conventional cites using MLA documentation. Students taking this course should anticipate an accelerated pace of instruction.

COLLEGE PREP ENGLISH 10

5 credits

Through short stories, non-fiction, poetry, drama, and the novel, dystopian and science-fictional works, students recognize and explore character relationships, conflicts, and other literary elements while developing their writing skills and analytical capabilities. As literature is analyzed, the ability to cite textual evidence when substantiating written claims is critical. Students continue to utilize their researching capabilities that include how to cite sources from electronic and conventional cites using MLA documentation.

HONORS ENGLISH 11

5 credits

This course is designed to analyze and explore expected and out-of-the-ordinary facets of American literature in conjunction with any work's unique, historical importance. This course integrates writing, reading, creative and critical thinking practices. Through group and individual projects, oral presentations, and class discussions, students are exposed to a variety of approaches American writers have used in order to convey their ideas. One component of this course is a teacher-directed research project, whether related to American literature, or to some contemporary issue associated with modern society. Materials and resources reach far beyond printed text to include on-line primary and secondary sources. Students also create individualized, updated resume documents in preparation for possible co-operative positions of employment, and/or college and career readiness. Students taking this course should anticipate an accelerated pace of instruction and work.

COLLEGE PREP ENGLISH 11

5 credits

This course is designed to explore the many facets of American literature in conjunction with any work's unique, historical importance. This course integrates writing, reading, creative and critical thinking practices with extra instructional supports that accommodate specific student needs. Through group and individual projects, oral presentations, and class discussions, students are exposed to a variety of approaches American writers have used in order to convey their ideas. One component of this course is a teacher-directed research project, whether related to American literature, or to some contemporary issue associated with modern society. Materials and resources reach far beyond printed text to include on-line primary and secondary sources. Students also create individualized, updated resume documents in preparation for possible co-operative positions of employment, and/or college and career readiness.

COLLEGE PREP ENGLISH 12**5 credits**

This course based on British literature integrates writing, reading and analysis practices, whether from previous years or newly introduced. The history of the English language is chronicled at the outset. Various pieces of fiction, including classics by Chaucer, Dickens, and Shakespeare are analyzed through a variety of literary criticisms. In addition, short stories, non-fiction, poetry, drama, and the novel are the focus with literary connections to universal themes discussed, written about, and scrutinized. Students continue to develop on-line and traditional literacy skills that will prepare them for college and career readiness. Furthermore, students not only update their individual resume documents begun in their previous year, but they also create individual cover letters and generate reference lists as part of their career portfolio graduation requirements. Skills needed for the job/college interview and application process are learned and demonstrated. Students taking this course should anticipate an accelerated pace of instruction and work.

ENGLISH 12**5 credits**

This course may include a variety of literature from Britain, America, and beyond while continuing to integrate writing, reading, and analysis practices from previous years with extra instructional supports that accommodate specific student needs. Genres such as short stories, non-fiction, poetry, drama, the novel, and dystopian and science-fictional works may be included, always with literary connections to universal themes discussed, and written about. Students continue to develop on-line and traditional literacy skills that will prepare them for college and/or career readiness. Furthermore, students not only update their individual resume documents begun in their previous year, but they also create individual cover letters and generate reference lists as part of their career portfolio graduation requirements. Skills needed for the job/college interview and application process are learned and demonstrated.

MATHEMATICS

Honors and the College Prep Math courses are offered for students in grades 9, 10 & 11. College Prep and Standard courses are offered for students in grade 12. The Honors courses are designed for those students who have a strong background in mathematics and are planning on attending higher education. College Prep courses are designed for students planning on attending technical schools, two-year colleges or furthering their study in their chosen vocational area, entering the workforce or military service. Both levels prepare students in their Freshmen and Sophomore years for the MCAS/PARCC test. In the Junior year, the course work becomes more specific to graduation plans. Placement in all mathematics courses after Algebra I is contingent upon successful completion of the prerequisites. All students must pass four years of mathematics.

Courses for Grade 9

HONORS ALGEBRA II

2.5 Credits

Grade 9

Prerequisite: Algebra I

This course is taken simultaneously with Geometry and is recommended for students with a strong mathematical background capable of doing advanced work on a daily basis. Topics covered include an in depth study of linear and quadratic equations, inequalities, systems of equations, graphing, polynomial functions, and factoring polynomials.

HONORS ALGEBRA I

5 Credits

Grade 9

This course in algebra gives students a strong foundation of algebraic skills. Topics include fundamental properties of real numbers, linear equations, absolute value, inequalities, factoring, quadratic equations, data analysis. Modeling and problem solving skills are stressed. It is recommended for students who are capable of doing work on an advanced level and at an accelerated pace.

HONORS GEOMETRY

2.5 Credits

Grade 9

Prerequisite: Algebra I

This course is recommended for those students who are capable of doing challenging work on a regular basis. Topics include plane geometry, coordinate geometry, area, perimeter, volume and other properties of polygons, parallels, triangle congruence, geometric proofs, circles, and special right triangles including Pythagorean Theorem.

COLLEGE PREP ALGEBRA I

5 Credits

Grade 9

This course covers the traditional topics in algebra focusing on fundamental properties of real numbers, linear equations, absolute value, inequalities, factoring, quadratic equations, data analysis and problem solving.

Courses for Grade 10

HONORS ADVANCED ALGEBRA II with Trigonometry

5 Credits

Grade 10

Prerequisite: Algebra II, and Geometry

This is a very intensive course in algebra II covering new topics such as powers, roots, radicals, exponential and logarithmic functions, polynomial functions and rational functions, conic sections, right triangle trigonometry, general angles and radian measures, inverse trigonometric functions, solving right triangles, laws of sines and cosines, graphs of trigonometric functions and their translations, and trigonometric identities.

HONORS GEOMETRY

2.5 Credits

Grade 10

Prerequisite: Algebra I

This course is recommended for those students who are capable of doing challenging work on a regular basis. Topics include plane geometry, formal proofs, coordinate geometry, area, perimeter, volume and other properties of polygons, parallels, triangle congruence, circles, and special right triangles including Pythagorean Theorem.

HONORS ALGEBRA II

2.5 Credits

Grade 10

Prerequisite: Algebra I

This course is taken simultaneously with Geometry and is recommended for students with a strong mathematical background capable of doing advanced work on a daily basis. Topics covered include an in depth study of linear and quadratic equations, inequalities, systems of equations, graphing, polynomial functions, and factoring, operations with rational expressions, polynomial division and synthetic division.

COLLEGE PREP GEOMETRY

5 Credits

Grade 10

Prerequisite: Algebra I

This course covers properties of angles, parallel lines, triangles, geometric proofs, circles, area, perimeter and volume of polygons, congruence and similarity of triangles, special right triangles and Pythagorean Theorem.

Courses for Grade 11

HONORS PRECALCULUS

5 Credits

Grade 11

Prerequisite: Honors Advanced Algebra II/Trigonometry

This course is recommended for students with strong mathematical ability who are planning to further their education at a four year college. It reviews algebra topics necessary for success in calculus and further study of coordinate geometry, polynomial functions of higher degree, synthetic division, complex numbers, the fundamental theorem of algebra, rational functions, and partial fractions.

HONORS ADVANCED ALGEBRA II/ Trigonometry

5 Credits

Grade 11

Prerequisite: Algebra II, and Geometry

This is a very intensive course in algebra II covering new topics such as powers, roots, radicals, exponential and logarithmic functions, polynomial functions and rational functions, conic sections, right triangle trigonometry, general angles and radian measures, inverse trigonometric functions, solving right triangles, laws of sines and cosines, graphs of trigonometric functions and their translations, and trigonometric identities.

COLLEGE PREP ALGEBRA II

5 Credits

Grade 11

Prerequisites: CP Algebra I and CP Geometry

This course provides a continuation of the study of algebra for those students planning on additional education after graduation. It reviews in depth topics from Algebra I such as properties of real numbers, linear and quadratic equations, inequalities, graphing functions, add, subtract, multiply and divide polynomials, factoring, operations with rational expressions, polynomial division and synthetic division. A good foundation in Algebra I is recommended for success in this course.

Courses for Grade 12

CALCULUS (Honors Level)

5 Credits

Grade 12

Prerequisite: Honors Precalculus

This course covers all of the topics of differential calculus of a single variable: limits and their properties, rules of differentiation, applications of differentiation, Rolle's Theorem, Mean-Value Theorem, first and second derivative tests, Newton's Method and differentials.

PRECALCULUS (Honors Level)

5 Credits

Grade 12

Prerequisite: Honors Advanced Algebra II/Trigonometry

This course is recommended for students with strong mathematical ability who are planning to further their education at a four year college. It reviews algebra topics necessary for success in calculus and further study of coordinate geometry, polynomial functions of higher degree, synthetic division, complex numbers, the fundamental theorem of algebra, rational functions, and partial fractions.

COLLEGE PREP ADVANCED ALGEBRA II/TRIGONOMETRY

5 Credits

Grade 12

Prerequisite: College Prep Algebra II

This course is recommended for students planning to further their education at a technical school or two year college. It covers new topics in algebra such as powers, roots, radicals, conic sections, right triangle trigonometry, general angles and radian measures, inverse trigonometric functions, solving right triangles, laws of sines and cosines, graphs of sine and cosine functions, translations of their graphs, and applications of trigonometry to solving real world problems.

TRIGONOMETRY

5 Credits

Grade 12

Prerequisites: College Prep Algebra I and College Prep Geometry

This course is recommended for students planning to further their education at a technical school, two year college, or the military. It covers right triangle trigonometry, general angles and radian measures, inverse trigonometric functions, solving right triangles, laws of sines and cosines, graphs of sine and cosine functions, translations of their graphs, applications of trigonometry to solving real world problems, and use of formulas involving trigonometric functions.

SCIENCE

In all of the science courses students are expected to demonstrate an understanding of the basic principles of science, demonstrate the ability to work safely and effectively with equipment while conducting experiments, and employ problem solving skills. Courses in grades 9 are designed to meet the requirements of the MCAS Technology & Engineering Test.

Courses for Grade 9 & 10

HONORS Technology & Engineering

5 credits

This is an accelerated course. Students are expected to do advanced work, project based/ technology based assessments, on a daily basis. Technology Engineering is an engaging, project based course incorporating the Massachusetts state frameworks. Students will learn the steps in the engineering design process, develop a rich understanding of technology, understand how advances in technology affect human society, and solve real world problems using the engineering design process. The course focuses on teamwork, collaboration, communication and individual work. There are four main projects; Project 1: Design the best organizer in the world, Project 2: Design a building of the future, Project 3: Improve a patented boat design, and Project 4: Electricity and communication systems.

COLLEGE PREP Technology & Engineering

5 credits

Technology Engineering is an engaging, project based course incorporating the Massachusetts state frameworks. Students will learn the steps in the engineering design process, develop a rich understanding of technology, understand how advances in technology affect human society, and solve real world problems using the engineering design process. The course focuses on teamwork, collaboration, communication and individual work. There are four main projects; Project 1: Design the best organizer in the world, Project 2: Design a building of the future, Project 3: Improve a patented boat design, and Project 4: Electricity and communication systems.

Courses for Grade 11

HONORS CHEMISTRY

2.5 credits

This course will study in depth the physical and chemical properties of matter, atomic structure, periodicity, chemical bonding, chemical reactions and stoichiometry, states of matter, Kinetic Molecular Theory, and Thermochemistry, solutions, rates of reaction, equilibrium, acids and bases, and Oxidation-Reduction Reactions

Courses for Grade 12

COLLEGE PREP PHYSICS

2.5 credits

This accelerated course stresses the study of energy and the laws of motion that govern all objects in the universe. It provides an introduction to electricity, magnetism, sound and light. Students perform lab experiments that are designed to reinforce topics and challenge their ability to solve problems.

CHEMISTRY

2.5 credits

This course will cover the physical and chemical properties of matter, atomic structure, periodicity, chemical bonding, chemical reactions and stoichiometry, states of matter, Kinetic Molecular Theory, and Thermochemistry, solutions, rates of reaction, equilibrium, acids and bases, and Oxidation-Reduction Reactions.

SOCIAL STUDIES

In all social studies courses, students analyze cause and effect of social issues. Research and writing skills are developed through papers and essays along with oral and visual projects. Students discuss the significance, bias, and reliability of historical evidence. In honors courses, more emphasis is placed on critical thinking of the subject matter in addition to comparing and contrasting the various aspects of controversial issues.

Courses for Grade 9

HONORS U.S. HISTORY I

2.5 credits

In U.S. History I, students examine the historical and intellectual origins of the United States during the Revolutionary and Constitutional eras. They learn about the important political and economic factors that contributed to the outbreak of the Revolution as well as the consequences of the Revolution, including the writing and key ideas of the U.S. Constitution. Students also study the basic framework of American democracy and the basic concepts of America government such as popular sovereignty, federalism, separation of powers, and individual rights. Students study America's westward expansion, the establishment of political parties, and economic and social change. Finally, students will learn about the growth of sectional conflict, how sectional conflict led to the Civil War, and the consequences of the Civil War, including Reconstruction. Students taking this course should anticipate an accelerated pace of instruction and be able to do advanced work independently.

COLLEGE PREP U.S. HISTORY I

2.5 credits

In U.S. History I, students examine the historical and intellectual origins of the United States during the Revolutionary and Constitutional eras. They learn about the important political and economic factors that contributed to the outbreak of the Revolution as well as the consequences of the Revolution, including the writing and key ideas of the U.S. Constitution. Students also study the basic framework of American democracy and the basic concepts of America government such as popular sovereignty, federalism, separation of powers, and individual rights. Students study America's westward expansion, the establishment of political parties, and

economic and social change. Finally, students will learn about the growth of sectional conflict, how sectional conflict led to the Civil War, and the consequences of the Civil War, including Reconstruction.

Courses for Grade 10

HONORS U.S. HISTORY II

2.5 credits

In U.S. History II, students analyze the causes and consequences of the Industrial Revolution and America's growing role in international relations. Students study the goals and accomplishments of the Progressive movement and the New Deal. Students also learn about the various factors that led to America's entry into World War I and World War II as well as the consequences of World War II for American life. Finally, students study the causes and course of the Cold War, important economic and political changes during the Cold War, such as the Civil Rights movement, and recent events and trends that have shaped modern-day America. Students taking this course should anticipate an accelerated pace of instruction and be able to do advanced work independently.

COLLEGE PREP U.S. HISTORY II

2.5 credits

In U.S. History II, students analyze the causes and consequences of the Industrial Revolution and America's growing role in international relations. Students study the goals and accomplishments of the Progressive movement and the New Deal. Students also learn about the various factors that led to America's entry into World War I and World War II as well as the consequences of World War II for American life. Finally, students study the causes and course of the Cold War, important economic and political changes during the Cold War, such as the Civil Rights movement, and recent events and trends that have shaped modern-day America

Courses for Grade 11

HONORS WORLD HISTORY

2.5 credits

In World History students study the rise of the nation state in Europe and the economic and political roots of the modern world, including the Industrial Revolution, 19th century political reform in Western Europe, and European imperialism in Africa, Asia, and South America. They also examine the causes and consequences of the great military and economic events of the past century, including World War I, the Great Depression, World War II, the Cold War, the Russian and Chinese revolutions, the rise of nationalism, and the continuing persistence of political, ethnic, and religious conflict in many parts of the world. Students taking this course should

anticipate an accelerated pace of instruction and be able to do advanced work independently.

COLLEGE PREP WORLD HISTORY

2.5 credits

In World History students study the rise of the nation state in Europe and the economic and political roots of the modern world, including the Industrial Revolution, 19th century political reform in Western Europe, and European imperialism in Africa, Asia, and South America. They also examine the causes and consequences of the great military and economic events of the past century, including World War I, the Great Depression, World War II, the Cold War, the Russian and Chinese revolutions, the rise of nationalism, and the continuing persistence of political, ethnic, and religious conflict in many parts of the world.

Courses for Grade 12

CIVIC EDUCATION

2.5 credits

Civic Education provides a framework for understanding personal finance including setting goals, creating a financial plan, making the most of your money, understanding debt, using credit wisely, protecting the assets you have and doing what matters most in selecting a career path. Students will also understand economic decisions and the global economy. Finally, students will learn about entrepreneurship and small business management. There is also a strong emphasis throughout the program on oral communication and presentation.

PHYSICAL EDUCATION and HEALTH

Physical Education at Old Colony is that integral part of the total education which contributes to the development of the individual through the natural medium of physical activity. It encompasses a well-balanced program that provides experience that will stimulate growth and the development of appropriate social and psychological behavior. It will teach what physical fitness is and how students can maintain physical fitness throughout their adult lives.

Health Education addresses physical, social and emotional issues facing students to help them develop healthy life styles. Freshmen and sophomores will spend 60% of curriculum time in health education and 40% in physical education class.

Courses for Grade 9

PHYSICAL EDUCATION – 9

.5 credits

Physical Education as an instructional program emphasizes the mental, emotional, and social aspects of living, as well as the physical developmental aspects necessary for a satisfying and active life. The program emphasizes the relationship of physical activity to the physical, mental, social, and emotional maturity of the students. Participation is the primary requirement.

HEALTH – 9

.5 credits

Health Education addresses physical, social and emotional issues facing students to help them develop healthy life styles.

Courses for Grade 10

PHYSICAL EDUCATION – 10

.5 credits

Physical Education as an instructional program emphasizes the mental, emotional, and social aspects of living, as well as the physical developmental aspects necessary for a satisfying and active life. The program emphasizes the relationship of physical activity to the physical, mental, social, and emotional maturity of the students. Participation is the primary requirement.

HEALTH – 10

.5 credits

Health Education addresses physical, social and emotional issues facing students to help them develop healthy life styles.

Courses for Grade 11

PHYSICAL EDUCATION – 11

1 credit

Physical Education as an instructional program emphasizes the mental, emotional, and social aspects of living, as well as the physical developmental aspects necessary for a satisfying and active life. The program emphasizes the relationship of physical activity to the physical, mental, social, and emotional maturity of the students. Participation is the primary requirement.

Courses for Grade 12

PHYSICAL EDUCATION – 12

1 credit

Physical Education as an instructional program emphasizes the mental, emotional, and social aspects of living, as well as the physical developmental aspects necessary for a satisfying and active life. The program emphasizes the relationship of physical activity to the physical, mental, social, and emotional maturity of the students. Participation is the primary requirement.

PROGRAM OF STUDIES

VOCATIONAL PROGRAMS:

AUTOMOTIVE TECHNOLOGY

As a student of Old Colony's Automotive Technology Program you will be a highly skilled automotive technician when you graduate. Students in the ASE Master Automotive Technology Program learn how to diagnose, service and repair both domestic and foreign automobiles. They also learn how to troubleshoot problems of all kinds, using the latest engine analyzers, hand-held scanners, and other computerized diagnostic equipment. Students learn it all from basic engine systems, to computerized fuel injection, anti-lock brakes, computerized engine control, air condition repair and testing, chassis, and front end repair. Old Colony's Automotive Technology Program is NATEF certified (National Automotive Technicians Education Foundation)

CAD DRAFTING

Computer Aided Drafting students are trained in architectural and technical drafting. They acquire skills essential to achieve success in a productive career, as well as, become a qualified and prepared member of the workforce in the drafting field. In addition, our students are provided with knowledge to reach further academic goals should they choose to continue their education at the postsecondary level. In their freshman year, students develop fundamental technical and architectural/engineering drafting techniques using free-hand sketching and AutoCAD. In their sophomore year, students develop critical thinking skills to solve design problems associated with manufacturing and engineering and further refine fundamental technical drafting skills using SolidWorks. In their junior year, CAD students are introduced to all phases of architectural design using AutoCAD and Chief Architect create a full set of residential construction drawings. In their senior year, students are introduced to civil drafting principles and light commercial building. In addition, our seniors complete "live work" projects and a senior project of their choice

HOUSE and MILL CARPENTRY

The House and Mill Carpentry Department offers students educational experiences in all aspects of residential construction. The main goal of the House and Mill Carpentry program continues to be preparation for our students to work in the residential building and remodeling industry but it also allows them to work in entry level positions in commercial construction and millworking. Students will be prepared to pass the Construction Proficiency Assessment when that test is implemented by the State. During the past year our students have been involved with many carpentry/cabinet making projects that offer a wide variety of hands-on educational experiences. Some recent projects include: The building of a 12' x 32' concession stand at Gifford Park in Rochester, two ticket booths for the Rochester Fair, major remodeling and structural work at the Ted Williams Camp, mail boxes for the Acushnet Elementary school, three community bulletin boards for an ocean community on the cape, tables for the Graphics Communication Shop, and many other projects within and outside of Old Colony. The House and Mill Shop has many projects that are already in place for the next school year which will serve the towns in our school district.

COMPUTER INFORMATION SYSTEMS

Computer Programming

Students will be trained in all aspects of software development. Students are introduced to the applications development life cycle, as well as development concepts. Hands-on training includes:

- Intro to Video Game Design
- VB.net (VisualBasic.net)
- Java

Web Design

All Old Colony CIS students will become proficient in Web Design & Development employing a variety of Internet technologies through a four-year program of study. Students will learn how to play, construct, and design web sites. Coursework includes hands-on training with:

- XHTML, CSS, JavaScript, Query, WordPress [Web Languages]
- Adobe Creative Suite (PhotoShop, Flash, Dreamweaver, Indesign]

Office Administration

The Office Technology students will strengthen their skills in the more complex operations of Microsoft Office applications. Additionally, students will reinforce their office skills with project-based activities that integrate multiple aspects of today's modern office. Hands-on training includes: Microsoft Office Business Edition-Word, Excel, Access, PowerPoint Publisher, and Outlook. In addition, curriculums in Accounting I & II, Financial and Banking Concepts, and Customer Service are taught to all office students.

COSMETOLOGY

The Old Colony Cosmetology department trains all of our students for the successful achievement of their State Board of Cosmetology operator's license. All students are trained for entry level positions in hair, nail & skin care salons.

Students may also graduate with their state board manicuring license. Licensed students in cosmetology and manicuring may work in a salon prior to graduation.

Career Opportunities:

- Hair Stylist
- Platform Artist/ Demonstrator
- Competition Stylist
- Hair Colorist
- Salon Trainer
- Distributor Sales Consultant
- Salon/Spa Owner
- Salon/Spa Manager
- State Board Examiner
- State Board Inspector
- Cosmetology Instructor
- Hairpiece/extension Specialist
- Make-up Artist
- Nail Technician
- Skin Care Specialist

CULINARY ARTS

There are many programs offered in the Culinary Department, such as:

- Bakery
- Kitchen
- Short Order/Grilling
- Dining Room Skills
- Register and Bakery Counter

We use modern equipment that is updated with the industry standards. Culinary is a production shop. We serve the community needs and school functions. Plus, we also have an everyday hands on dining room operation serving 50-100 people a day. Our full bakery wholesale department is open to the public from 11:00am -12:15.p.m. most Wednesdays-Fridays.

ELECTRICAL

In the modern high tech electrical field, there is a need for quality people who are technically skilled to meet today's requirements for great paying positions. To meet these demands, we work with an electrical advisory board to maintain cutting edge training for our electrical students using the latest equipment. An on-campus residential dwelling is also used by our students to facilitate practice wiring for new work wiring, services, alarm systems, and heating systems. The department works with the school to install and maintain the electrical infrastructure of the school including the computer network wiring. The department also utilizes an active co-op program with electrical contractors and companies in the area to provide our students with actual trade experience.

ELECTRONIC ENGINEERING TECHNOLOGIES

The Electronic Technologies program at Old Colony is designed to establish a solid foundation for students to either continue their education in the field of Electrical Engineering and related disciplines or seek employment as an entry level electronic technician. Stop. Look around you. Electronics impact almost every aspect of our life today. On the fun side we have Ipods, video games, and mobile audio. On the more practical side we have computers, wireless communication, security, robotics, green technologies, aerospace, automated manufacturing, and advanced medical applications that all rely on electronics to perform their "magic". Each of these areas requires a team of engineers and technicians with specialized training in electronics to design, develop, build, repair and market their technology. In order to enter this arena, students are taught the basic concepts that provide a common foundation for all of these technologies.

Topics include:

- Basic AC and DC Theory
- Analog Circuits
- Digital Circuits
- Microcontroller Programming
- Programmable Logic Controllers (PLC's)
- Preparation for the Certified Electronic Technician (C.E.T./ETA) Exam
- Robotics Programming & Construction
- Surface Mount Technology
- PCB Design and Layout
- Audio Systems

Students will also become proficient with the use of:

- Basic Hand Tools
- Digital and Analog Multimeters
- Logic Probes
- AC and DC Power Supplies
- Soldering and Desoldering Equipment
- Digital and Analog Oscilloscopes
- Frequency Counters
- LCR Meters

GRAPHIC COMMUNICATIONS and DESIGN

Communications & Design is a program designed to instruct students in the many areas of the Graphic Communication/Printing Industries. Areas include Design Fundamentals, Graphic Design, Electronic Prepress, Press Technologies through Binding & Finishing Operations. Students will use 21" iMac computers to learn the latest versions of Adobe's Creative Suite Software which includes InDesign, Illustrator, and Photoshop. Students are introduced to Digital Photography, Image Capture and Photo Retouching. Students will also learn current Printing Technologies, as well as Binding & Finishing Techniques as required by the Massachusetts VTE Curriculum Frameworks for Graphic Communication. As part of their training, students work on required projects as well as real life work assignments. The Graphic Communication & Design Department operates as a live production shop which produces print materials for the surrounding communities.

HEALTH CAREERS

The Health Careers program at Old Colony provides students with an introduction to the diversity of opportunities in the field of allied health care, as well as quality preparation to enter the world of employment and/or further training and education within the health field. These goals are accomplished through applied theory, instruction within the clinical laboratory, and relevant clinical affiliations. The Health Careers curriculum meets the Massachusetts Vocational Technical Frameworks for Health Assisting. All students enrolled in the Health Careers program receive instruction leading to state certification as a nursing assistant. Supervised externship experience is provided in both long term and acute care settings. Co-operative education and placement opportunities are available to all senior students. This experience provides students with further development of their competencies, and a realistic work environment. Academic preparation includes a solid foundation in the principals of anatomy and physiology, understanding the disease process, investigation into the concepts of health promotion and disease prevention, and attention to relevant and contemporary health issues.

MACHINE and TOOL TECHNOLOGY

The main function of this course of study is to teach the safe and proper set-up and operation of equipment common to the machine tool industry. In addition, technical information relating to trade and industrial practices is part of the program. The curriculum is designed to produce a well-rounded entry level machinist. This is accomplished by a series of projects set up by instructors, as well as projects brought in by local industries. Some machine used in completing these projects are, lathes, milling machines, grinders, drill presses, and Computerized Numerical Control equipment (C.N.C.).

Our Machine Shop Technology Program is nationally certified by National Institute for Metalworking Skills (NIMS). Students enrolled in the program can earn credentials in NIMS Level 1 credential program starting in their junior year.

METAL FABRICATION and JOINING TECHNOLOGIES

We perform many types of welding processes in the Metal Fabrication & Joining Technologies Department, such as Shielded Metal Arc Welding (SMAW) Gas Metal Arc Welding (GMAW), Flux Cored Arc Welding (FCAW), Gas Tungsten Arc Welding (GTAW) Oxy-Fuel Welding, Brazing, and soft soldering. (OFW, OFB, TS) along with Pipe Welding. The cutting processes are OxyFuel Cutting (OFC) Plasma Arc Cutting-Air (PAC-A) and Carbon Arc Cutting-Air (CAC-A).

We also teach ornamental iron work, sheet metal, frame work, railing layout and design, and metal repair on existing parts and equipment. The students learn how to operate and work with tools and the following equipment.

- A drop shear that will cut Mild Steel, Aluminum, and Stainless Steel up to 1/4" x 10'.
- A hydraulic press brake that will bend Mild Steel, Aluminum, and Stainless Steel 1/4" x 10'.
- A variety of other metal working machines such as a Box and Pan Brake, Pedestal Grinder, Band Saws, Hossfeld Bender Iron Worker, Power Rolls Drill Presses and an ornamental iron forming machine. The students also learn the art of Blacksmithing to understand how metal fabrication and welding started centuries ago.

The Welding/Fabrication shop fabricates a variety of projects for different businesses in the surrounding area, as well as for residents of the community. Our welding students can receive their welding qualification also known as a Welding Certification in compliance with (D1.1 Structural Welding Code – Steel) by the AWS (American Welding Society) in the Shielded Metal Arc Welding process. This is a legal Certification and future qualifications to follow in the GMAW and GTAW process.