Plumbing & Heating
Page 16

Intro to Medical Science
Page 23

Welding & Metal Fabrication
Page 17

Early Childhood Education
Page 22

Automotive Technology
Page 13

Plus More Classes Inside!

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Biddeford Regional Center of Technology
10 Maplewood Avenue
Biddeford, ME 04005

BIDDEFORD REGIONAL CENTER OF TECHNOLOGY

2017-2018 COURSE OF STUDIES

"The COT is a completely different environment than what a regular school has. Everyone knows each other and we all learn skills and trades and have fun doing it."

— Jimmy Williams,
Residential Construction & Remodeling

Welcome to BRCOT! Get a jump on the competition and start on your career pathway now.

The Biddeford Regional Center of Technology offers career and technical education for students from the local high schools. BRCOT provides education and training that will support and guide students on their career paths, whether they are planning on continuing their education or directly entering the workforce following graduation. In some programs, students may earn industry certifications that will bring employment opportunities and you may also earn college credits, as many of the programs have credit bearing agreements with Maine colleges.

Our classes are designed to integrate a rigorous program of academic study with a hands on career and technical education. Students work under the close supervision of competent instructors that stress "learning by doing." The atmosphere in all our classes is one simulates real working conditions that are found in the career pathway. All of our programs are college prep or honors level courses that prepare you for postsecondary education and a competitive advantage when entering the workforce. We maintain strong ties to the business community, two and four year colleges, and community based organizations. We help you work on your future and we are prepared to help you achieve the goals you have set forth for yourself in work, learning and life.

Is BRCOT right for you?

Making decisions to attend a career and technical program might be just of the most important decisions in your life thus far! But how do you know if attending BRCOT is right for you?

It simple, really. Start by answering these questions:

- Do you love a good challenge?
- Do you learn best when your mind and hands work together?
- Do you like to learn in a small class room environment?
- Do you have a particular interest or career pathway you want to pursue?
- Do you have high expectations of yourself?
- Do you believe it is never too early to map your future?

If you answered "YES" to any of these questions, then you may have found the kind of learning you have been searching for. Continue reading about our program offerings and how to apply to BRCOT. Please contact us anytime as we are always happy to talk to you about BRCOT and you!

Paulette Bonneau
Director

Career Possibilities

"COT really opened my eyes to how many good jobs go unnoticed, if it wasn't for the COT I would never have known what I wanted to do out of high school."

— Jasper Sapa,

Welding & Metal Fabrication

Career Possibilities

BRCOT classes are just the beginning! Your education and training here can launch your career path, whether you are planning on continuing your education or directly entering the workforce following graduation. In some programs, industry certifications can be earned that will bring immediate employment opportunities. You may also earn college credits, as many of the programs have credit bearing agreements with Maine colleges. Where will your BRCOT experience take you?

Business & Financial Management 6-7
- Accountant
- Business Owner or Manager
- Financial Advisor / Planner
- Sports Manager
- Insurance Agent
- Stock Broker / Analyst
- Bank Loan Officer
- Project Manager
- Purchasing Agent
- Bank Operations / Branch Manager
- Real Estate / Property Manager
- Supervisor / Mid-level Manager

Business Information Technology 8-9
- Programming Specialist
- Network Administrator
- IT Administrator

Legal Studies 10
- Crime Scene Investigator
- Game Warden
- Law Enforcement
- Lawyer
- Paralegal
- US Drug Enforcement Officer
- FBI Agent
- U.S. Marshal
- Homeland Security Agent
- Correctional / Probational Officer
- Forensics / Criminologist
- Intelligence Analyst

Medical Assisting 11
- Medical Assistant
- Nursing
- Radiography
- Veterinary Science
- Medical Sonographer
- Physician Assistant
- Occupational, Respiratory, or Physical Therapist
- Athletic Trainers
- Dentistry
- Surgical Technologists
- Physician
- Medical and Healthcare Manager
- Nutritionist or Dietician
- Pharmacist

Auto Body Technology 12
- Auto Body Repair
- Auto Dismantler
- Frame Technician
- Auto Body Restorer
- Vehicle Detailer
- Paint Preparer
- Vehicle Painter
- Shop Manager
- Used Car Reconditioner
- Auto Refinisher
- Insurance Adjuster

Automotive Technology 13
- Automotive Repair
- Service Estimator
- Small Engine Tech
- Motorcycle Tech
- ATV Tech
- Shop Owner
- Automotive Dealer
- Transmission Tech
- Service Manager
- Engine Rebuilder

Building Construction 14
- Carpenter
- General Contractor
- Project Manager
- Roofer
- Drywall Installation & Finishing
- Insulator
- Flooring Installation
- Tiler
- Cabinet Maker
- Cost Estimator

Table of Contents

Standards of Admissions

Biddeford Regional Center of Technology may admit persons eligible to receive a free public secondary education who are residents of the municipalities served by BRCOT and who are attending one of the following schools: Biddeford High School, Thornton Academy, Old Orchard Beach High School and Kennebunk High School. Others may seek enrollment on a space available basis and according to the established procedures for admission of students not attending a sending school. A potential BRCOT student should also meet the prerequisite academic requirements for the specific program he or she is requesting.

All students who would like to enroll in a BRCOT career and technical program must complete a BRCOT application for consideration. The application is online at www.biddefordregionalcenteroftechnology.com. Acceptance is a shared decision between the Guidance Department at your high school and the Center of Technology. Programs are open mainly to juniors and seniors with sophomores able to enroll with BRCOT instructor recommendation. The Engineering/ Architecture/ Drafting course and the Business Information Technology programs are open to sophomores however they are ineligible for college credits. Please note that BRCOT programs are worth 4 credits and run either all morning blocks 1 and 2 or all afternoon blocks 3 and 4 for the full year. Potential applicants are strongly encouraged to visit the BRCOT program they are interested in to make an informed decision. For more information you can contact our office at 207-282-1501 or talk with your high school guidance counselor.

Annual Notice of Non-Discrimination

The Biddeford Regional Center of Technology offers career and technical instruction in the following Maine approved CTE programs: Business Academy courses, Health Occupations, Engineering and Design, Early Childhood Education, Residential Construction and Remodeling, Precision Machining, Electrical Technology, Plumbing & Heating, Welding & Metal Fabrication, Autobody Collision & Repair, Auto Technology. For detailed information on our programs and their associated prerequisites visit www.biddefordschooldepartment.org. It is the policy of the Biddeford Regional Center of Technology not to discriminate on the basis of race, color, national origin, sex or handicap in its educational programs and its employment practices. If you have questions, have witnessed, or have experienced acts of discrimination based on these criteria and wish to express a grievance please contact our Title IX/504 Coordinator, Tiffany Jackson, at 207-282-8281 or tjackson@biddefordschooldepartment.org.

BRCOT is Learning that Works for Life!

Meet Your Graduation Requirements

Did you know that as of January 1, 2017, a diploma indicating graduation from a secondary school must be based on a student's demonstration of proficiency? You are allowed to gain mastery through multiple pathways and successfully completing courses. BRCOT is one way to meet your graduation requirements. Many of our classes are STEM endorsed.

Rigor and Relevance

Industry Based Standards
Career Oriented Instruction

Instruction is based on standards that have been verified by the industry and taught by instructors who have been in the field and credentialed to teach the content area. Our courses provide instruction in high wage 21st century career opportunities. Learning at BRCOT is learning that works! Learning that works for life!

Save Thousands Of Dollars By Earning Free College Credits!

There are different types of these agreements, known as dual or concurrent enrollment, articulation, and advanced standing agreements. Their availability is noted in each program's description.

Many of our programs offer College Credits while you are earning your high school credits. All of courses at BRCOT are college prep level or honor level offerings and are indicated with each course description.

College credits may be earned in three ways:

❶ **Dual Enrollment** ▸ High school students are enrolled at the sponsoring post-secondary institution and BRCOT at the same time, earning credits at both. Upon completion of the course, students receive an academic transcript from the post-secondary school identical to the one received by college students who are physically attending that institution. Likewise, the credits are fully transferrable to most other post-secondary schools. **Dual enrollment courses are honor level courses.**

❷ **Articulation Agreements** ▸ An arrangement between the Center of Technology and various colleges and universities, where a successful completion of class you have taken at BRCOT will count for college credit at that specific college. This means that if you attend a post-secondary institution which BRCOT has an agreement with, you will not have to retake classes that you already have taken ... saving you time, energy, and money.

❸ **Advanced Standing Program Credits** ▸ Offers high school students the opportunity to receive university college credit for their work during high school. Upon successful completions of your high school program and passing a university approved proficiency exam, college credits will be awarded; students will receive an academic transcript from the college or university identical to the one received by college students who are physically attending the school. These credits are fully transferrable(there may be a small processing fee) to most other post-secondary colleges and universities.

Enrichment Opportunities

Do you know COT students have career enrichment opportunities through the support of the following?

Advance Auto Parts
Albert's Garage Inc.
Allen Range Road Used Auto Parts
Allergy & Asthma Assoc. of Maine
Andre Faucher Drywall
Animal Medical Center – Saco
Artistry in Bloom
Arundel Ford
Arundel Machine Tool Co. Inc.
Associated Builders and Contractors of Maine
Astro Automotive
Aube-Plamondon Electric
Aunties Day Care
Auto Zone
AVX Tantalum Corp.
Baker Company
Bank of Maine
Biddeford Animal Hospital
Biddeford Arena & Expo Center
Biddeford Athletic Association
Biddeford District Court
Biddeford Middle School
Biddeford Police Department
Biddeford Primary School
Biddeford Youth Football Assoc
Biddeford/Saco Rotary Club
Bill Automotive
Bob's Auto
Bruce's Auto Service, Inc.
Builder's Supply
Caleb Johnson Architects
Camille's Electric
Carl Goodwin Construction
CarQuest
Casco Bay Steel
Childhood Hours
CIA Salvage, Inc.
Cianbro
Cisco Systems
City of Biddeford, Parks and Rec.
City of Biddeford, Public Works
Coastal Win Air
Cumberland County Sheriff
Curlew Brothers
David Redmond-Probation Officer
David Wood, Attorney at Law
Deering Lumber
Diana Sainte, Acupuncturist
Don's Sheet Metal
Downeast Construction
Education Foundation
Dr. Beverly Stoops
Dr. Dean G. Tourigny, DDS
Dr. Denise Couture, Chiropractor
Dr. Gary Winn, D.O.
Dr. James Murray, DDS
Dr. Marc Malon, Chiropractor
Dr. Robert Vaughan, Prime Care
Dube's Drywall Supply
Dutch Elm Golf Course
Evergreen Manor
Fairfield School
German Auto Services
Gervais Dube Properties
Gilman Electric Supply
Gloria Dyer, RN - BPS
Gwenth Duffield, Nurse Practitioner
Haley Tire & Service Center
Hancock Lumber
Heart of Biddeford
Heartwood Distributors
Huntington Commons
Hussey Seating
Husson University
Independence Auto, Inc.
Integrity Composites
Jim Godbout Plumbing
Jim's Auto Salvage, Inc.
Joe McKenney Photography
Joe Troegner's Auto Service
John F. Kennedy Kindergarten Ctr.
Just for Kids Dental Associates
Katie McCarter, Athletic Trainer
Kennebunk Police Department
Kennebunk Veterinary
Kirsten Cyr, Clinical Social Worker
La Kermesse Franco-Americaine
Maine Attorney General
Maine Criminal Justice Academy
Maine Game Wardens
Maine Medical Center
Maine State Troopers
Mark Pollard Electric
McAllister Machine
Mercy Hospital
Metso
Michael Purdue, Private Investigator and Westbrook Public Safety Director
Michele Gregoire, EMT/Paramedic
Missie Adams, Cumberland County Jail
Moody's Collision Center
MotorLand
Napa Auto Parts
Neil's Motors, Inc.
New England Building Materials
Northeast Electrical Distributors
Old Orchard Beach Police Dept.
Pepperell and North Dam Mills
Plastic & Hand Surgical Assoc.
Portsmouth Naval Shipyard
Pratt & Whitney Precision Manufacturing Solutions
Prime Care Pediatrics, Biddeford
Prime Care Pediatrics, Saco
PSMP Inc.
Rod's Electric
Ruth Pierson, Nurse Practitioner, BMS
Saco & Biddeford Savings Institute
Saco Bay Orthopedics
Saco Bay Rotary
Saco Biddeford Savings Bank
Saco Community Gardens
Saco Food Pantry
Saco Parks & Rec. Department
Saco Police Department
Saco Valley Auto Care
Sanford Police Department
Saint Joseph's College
Seacoast Career School
Seal Rock Health Care Facility
SMHC Visiting Nurses
Soleras LTD.
Southern Maine Health Care
Southridge Rehab & Living Center
St. James School
Standard Electric Supply
Sue Richardson, OT
Sullivan Tire & Auto
Superior Paint & Supply
T+D Little Clouds, Scarborough
TD Bank Third Floor Nursing Unit–SMMC
TJ's Pizza
Toddler Inn, Kennebunk
Toddler Inn, Saco
University of New England Health
US ATF
US Customs, Border Enforcement
US DEA
US FBI
US Homeland Security
US Marshals
US Secret Service
Waterboro Elementary School
Wells Physical Therapy
Windham Police Department
York County District Attorney's Office
York County Superior Court

Did you know two-thirds of COT graduates attend post-secondary schools?

Recent Graduates Attended:

Bentley University
Carrol College
Montana Central Maine
Community College
College of Central Florida
Eastern Maine Community College
Endicott College
Framingham State University
Husson University
La'James College
Mason City
IA Landmark University
Utah
Lasell College
Lynn University
Florida State University
Maine College of Art
Maine Maritime Academy
Massasoit Community College
Mercyhurst University
New Hampshire Technical Institute
Northeastern University Northern
Maine Community College
Norwich University
Nova Southeastern University
Plymouth State University
Rensselaer Polytechnic Institute
Rivier College
Southern Maine Community
College
Southern New Hampshire
University
St. Joseph's College
St. Michael's College
Suffolk University
Thomas College
United States Army
United States Marine Corp
University of Colorado
University of Maine at Orono
University of Maine—Farmington
University of New England
University of Southern Maine
Unity College
York County Community College
Wentworth Institute of Technology
Stonehill College

Student Leadership Council

- Would you like to represent the student body to the community and school officials?
- Do you want to identify and advocate students' concerns?
- Are you interested in assisting the school in advancing its mission?

An active Student Leadership Council (SLC) represents students from each program at the Center of Technology. SLC is involved in community projects, fund-raising, student advising on COT policies, and special events—such as the annual COT Awards Banquet. This voluntary group represents both morning and afternoon students.

Scholarships

To encourage post-secondary learning, the BRCOT is proud to provide and support an impressive amount of scholarship opportunities. Last year, more than $25,000 worth of scholarships were awarded at our annual year-end banquet. Local business and community organizations continue to recognize the value of investing in our students and their post-secondary education. Last year's scholarship offerings included some of the following but not limited to:

Cheryl D'Amico Scholarship
Biddeford-Saco Rotary Scholarship
YCCC Rotary Scholarship
Chantigny's Family Scholarship
Raymond Cyr Memorial
Dutch Elm Golf Course
Don Elie Scholarship
Kerry Anton Memorial
Saco Bay Rotary
St. Louis Alumni
Normand J. Audie Memorial
John Gelinas Memorial Scholarship
Pratt and Whitney
Mel Gay Memorial
Gerard Chantigny Scholarship
Joanna WRBA Scholarship
Saco & Biddeford Savings Institution

The Business Academy
for College Credits and Career Opportunities

The Business Academy is located on the second floor of the Biddeford Regional Center of Technology and offers juniors and seniors from BHS, TA, and OOB who have maintained a B- or better GPA the opportunity to earn FREE college credits in the familiar setting and pace of regular high school classes, during normal high school hours.

Our Business Academy offers four pathways that students can choose from:

> "Understanding how to operate a business opens all the doors to all careers, not just ONE!"
>
> — Jacob Kolar,
>
> Business & Financial Management; Business Academy

Business & Financial Management

Do you want to learn how to run a business and make a profit? Do you like working with and managing money? This Business Academy career program will provide you with broad knowledge to help you excel in any business related field or college program. Courses include Accounting I & II, Business Management/Entrepreneurship, Investing & Personal Finance that lead to an industry verified and recognized Program Certificate and possible internship opportunities. Students will participate in statewide and national finance and management competitions such as Junior Achievement's computerized statewide business competition – The JA TITAN Challenge and SIMFA's Stock Market Game. Real-world applications and computer programs, MS Excel and QuickBooks will be used. Students will explore the vast world of Business and the possible career paths and compensation expected. Career path possibilities include: Accountant/CPA, Auditing, Forensic Accounting, Business Owners/Managers, Financial Advisors/ Planners, Sports Management, Customer Relation Representatives, Insurance Agents, Risk Management, Stock Brokers/Analysts, Bank Loan Officers, Project Managers, Operations/Branch Managers, Real Estate/ Property Managers, and Payroll, Accounts Payable or Receivable Clerks. This is a Dual Enrollment program where Juniors and Seniors who have maintained a 2.5 GPA may earn free college credits offered (see below) that are transferable to most post-secondary institutions.

Introduction to Medical Sciences 24056 & 24066

This rigorous academic program prepares students to further their education on the professional or technical level in any of the 300+ health career fields. Students in this course learn human anatomy, physiology, and pathophysiology. Students earn four credits: two science credits are awarded for anatomy and physiology and two additional credits are earned studying patient care skills, human growth and development, nutrition, CPR and first aid. Students may choose to complete the nursing assistant curriculum or complete independent study and job-shadow (subject to availability) in the health field of their choice. Students who choose to complete the nursing assistant curriculum will spend 80 hours caring for patients at a local nursing home and at Southern Maine Health Care. The nursing assistant curriculum saves the student the tuition (approximately $1200) needed to become certified. Successful students will become a Maine Certified Nursing Assistant with a well-paying, marketable skill upon graduation. In addition, students who continue their education will have already experienced caring for patients before they graduate from their nursing or other health science program. Students who choose job shadowing will complete 40 hours of independent study followed by 20 hours of job-shadowing in various healthcare fields (e.g. dental, therapy, dietary, radiology, etc.). These students will take the National Healthcare Foundations Skills Assessment certification exam and will be prepared to make an informed decision regarding their healthcare career choice and their college major. Students may also earn dual enrollment credits.

Level: CP/Honors
Open to: Grade 12
Credit: 4 (Honors level earn college credits)
Prerequisite: Chemistry or biology, great attendance, good interpersonal skills, and a strong work ethic

Early Childhood Education 25016 & 25026

This program is an exploration of a career working with children, from infancy to school age. This class prepares students for further education as a teacher or for an entry- level position in a childcare program. Classroom instruction includes child development theory and research, child care management, and is complemented with an on-site nursery school operated by the students. Students plan and manage the on-site child care program. Students also have an opportunity to job shadow or intern at one of our local schools or community based programs. Excellent attendance is very important as our young children depend on you! Students will begin working towards their Child Development Associate (CDA) credential with the opportunity for an independent study for a second year in order to complete the requirements for the CDA.

Level: CP
Open to: Grades 11 & 12 (Blocks 1 & 2 or 3 & 4)
Credit: 4
Prerequisite: Ability to work independently and as part of a team, Grade level reading and writing skills.

Health Assistant/CNA 24016 & 24026

This college preparatory course is for students who enjoy working with people and are considering a career in the healthcare field. All students in this program pursue nursing assistant training. Students have classroom and laboratory classes at the Center of Technology and 80 hours of clinical experience at a local nursing home and Southern Maine Healthcare. Two science credits are awarded for anatomy, physiology & pathophysiology. The other two credits are for the nursing assistant curriculum, growth and development, nutrition, CPR and first aid certification. This program provides a solid science foundation that prepares students to continue their education in any of the health care fields or to work as a certified nursing assistant. This course saves the student the tuition (approximately $1,200) usually needed to become a nursing assistant. All successful students will take the Maine State Nursing Assistant exam. After passing the exam, students will easily gain employment as CNAs. In addition, students who continue their education will have the experience of caring for patients before they graduate from their nursing or other health science program. Students may also earn college credits through dual enrollment.

Level: CP/Honors
Open to: Grades 11 & 12 (Blocks 1 & 2 or 3 & 4)
Credit: 4 (Honors level earn college credits)
Prerequisite: Science courses in chemistry or biology, good interpersonal skills, good attendance & a strong work ethic.

Accounting I

Learn to properly maintain business financial records according to Generally Accepted Accounting Principles (GAAP). Students will become familiar with the basic accounting system used in the United States today. Students will be introduced to the complete accounting cycle for service businesses organized as sole proprietorships as well as merchandising businesses (sells a product) organized as a corporation. Fulfills a math requirement for graduation.

Earns 3 transferable college credits at Thomas College for AC111.

Accounting II

A continuation of the concepts covered in Accounting I, with a focus on preparing and analyzing the financial statements for merchandising businesses organized as partnerships and corporations. Students will also learn how to calculate and enter employees' payroll and employer's payroll taxes. There will be an emphasis on the special accounting procedures for uncollectible accounts, loans, depreciation, inventory and taxes. Financial statement analysis of the business' liquidity, profitability and financial strength which promote intelligent decision-making will occur throughout. Fulfills a math requirement for graduation.

Earns 3 transferable college credits at Thomas College for AC112.

Business Management/ Entrepreneurship

Learn how to establish, organize, promote and manage a business. Students will gain the fundamental understanding of skills needed to start and manage any trade or business venture. Topics include creating and presenting a business plan, related legal issues, marketing products or services, financial record-keeping, protecting assets, and managing human resources. Special emphasis will be placed on the key Management Functions of Leading, Planning, Organizing, Staffing and Controlling as well as techniques to become effective communicators and decision-makers.

Earns 3 transferable college credits at Thomas College for MG224.

Investing & Personal Finance

Learn sound economic principles to handle your money, as well as intelligent investing in stocks, bonds or mutual funds. Students will learn the complete record-keeping, planning and money management activities necessary for successful completion of personal and family financial matters. Topics include making a budget, using credit wisely, and preparing income taxes. An introduction to the fundamentals of knowledgeable investing will follow, focusing on stocks, bonds, mutual funds and real estate.

Earns 3 transferable college credits at Southern Maine Community College for BUSN115.

Open to: Grades 11 & 12
Level: CP / Honors
Credit: 4 (Honors level may earn 12 college credits)
Prerequisite: For the motivated students interested in owning their own business, working in supervisory management or attending college for Accounting, Finance, or Management which are some of the fasting growing fields for employment.
For Honors/college credits you must have a minimum 2.5 cumulative GPA and satisfactory attendance records.

Business Information Technology

Would you like to get things done faster and more efficiently? Do you want the skills to succeed in today's technological world? Biddeford Regional COT is offering two comprehensive programs in the field of technology to prepare students to become highly marketable employees in today's computer world, acquiring skills currently in demand by employers and for success at the college level. Several of the components in these program(s) may lead to industry certifications. Completion of these program(s) earn a COT Certificate of Completion in Business Information Technology: Computer Technology or Business Technology: Business Technology. Career path possibilities include: Programmer, Software Engineer, Tech. Support Specialist, Video Game Designer, Information Architect, Hardware Specialist, Graphic Designer, Business Manager, Computer Office Assistant. Up to 12 free college credits offered transferable to most post-secondary institutions.

Level: CP/Honors STEM Endorsed
Open to: Grades 10, 11 & 12
Prerequisite: Motivated students interested in acquiring the technological skills to efficiently operate their own business or assist in college coursework.

Computer Technology

Being educated in current technology is repeatedly listed as one of the top ten skills employers are looking for in today's workers. The Computer Technology career program prepares students to meet this challenge and for successful preparation for college level courses. Students will learn the ins and outs of computer hardware and software, explore the IT area of networking, including VMWare (virtual desktop and server applications), and learn basic coding languages necessary for an entry-level job in IT, such as Ruby, Python, and Perl.

**Coding language may change as trends in technology evolve.*

Level: CP/Honors STEM Endorsed
Open to: Grades 10, 11 & 12 (Blocks 1 & 2)
Credit: 4
Prerequisite: None

Engineering & Architectural Design 23066

This course will involve the production of 2D and 3D technical drawings that meet industry standards using AutoCAD and Revit CAD software. 3D printing, model building, sketching, and mechanical tool drawing will be covered. As students create drawings in different formats, emphasis will be placed on precision and accuracy, use of symbols, line types, line weights, orthographic projection, multiview placement, text format, dimensions, section views, auxiliary views, isometric views, and plotting accuracy. A variety of design fields will be reviewed with an emphasis on ASME graphics standards. This course is dual enrolled with SMCC for 3 college credits. Qualified juniors and seniors will earn 3 transferable college credits at SMCC for AEDD 105. These college credits are approved for transfer as core electives to: UMO, USM, UMA, UMM, YCCC, and CMCC.

Level: CP/Honors STEM ENDORSED
Open to: Grades 11&12
Credit: 2*
Prerequisite: No prerequisite (for Honors/college credits you must meet the enrollment qualifications for SMCC - see the instructor for details).
*Honors level may earn 3 college credits - Jr/Sr only.

Engineering & Architectural Design Independent Study 23076

For students with a strong desire to enter into an engineering or architectural career. This is a project based course for advanced students who often work with businesses and community members on design projects. Depending on availability, students may also intern in local businesses to further explore their opportunities in the field such as Mechanical, Computer, Electrical, Civil, Engineering, Architecture, Interior Design, Landscape Design, etc.

Level: CP
Open to: Grades 11 & 12
Credit: up to 4
Prerequisite: Engineering & Architectural Design and Instructor Approval.

Engineering, Architecture, and Design Program at the BRCOT

Do you have an interest in career fields that use Computer Aided Design known as CAD? These career fields include: All disciplines of Engineering (Mechanical, Computer, Electrical, Nuclear, Civil, etc.) Architecture, Interior Design, Landscape Design, Industrial Design and more. Do you like to invent, design, and create? Do you want to earn 6 college credits while in high school? If you have an interest in the most powerful design software, this is a course to for you! Be a part of "The Next Industrial Revolution." Design and make complex objects with our state of the art 3D printer. Join the rapidly emerging field of Additive Manufacturing and Rapid Prototyping that will revolutionize the way we live. Students in this program are job shadowing at local engineering and architecture firms and experiencing first hand what their future careers will look like. You will learn the newest versions of Computer Aided Drawing (CAD) software, and also learn hand drafting, sketching, and architectural model building. The course includes field trips to local engineering and architecture firms and hosts engineers and architects as guest speakers. We offer two courses in Engineering:

See more about the program and Like us on Facebook @ Biddeford Regional Center of Technology Drafting

Project Lead The Way: Introduction to Engineering Design 23056

In Project Lead The Way Engineering, students engage in open-ended problem solving, learn and apply the engineering design process, and use the same industry-leading technology and software as are used in the world's top companies. Students are immersed in design as they investigate topics such as sustainability, mechatronics, forces, structures, aerodynamics, digital electronics and circuit design, manufacturing, and the environment, which gives them an opportunity to learn about different engineering disciplines before beginning post-secondary education or careers. Students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems using 3D modeling software, and use an engineering notebook to document their work.

Level: CP STEM Endorsed
Open to: Grades 9, 10, 11 & 12
Credit: 2
Prerequisite: None

> "...I was allowed to take this course as a sophomore. Take this class if you are interested in engineering or architecture. It's a great way to learn career-centered skills."
>
> — Emily Doyon,
>
> Engineering, Architecture, & Drafting

Business Technology

Being educated in current technology is repeatedly listed as one of the top ten skills employers are looking for in today's workers. This career cluster prepares students to meet this challenge and for successful preparation for college level courses. Students will learn the ins and outs of the Microsoft Office Suite with an in-depth look at Excel and its uses for various calculations and financials required in businesses. Students will also learn Adobe InDesign and Illustrator with HTML to create professional websites to draw customers attention and meet the needs of business and clients. Students will learn how to design professional looking documents and create eye-catching artwork for print, presentations and the web using these graphic design tools. Successful students may earn their national certification as a Microsoft Office Specialist.

This is a Dual Enrollment course - Juniors & Seniors may earn 9 free college credits offered from Thomas College (CS115, CS140, and MS120) transferable to most post-secondary institutions.

Level: CP/H
Open to: Grades 10, 11 & 12 (Blocks 3 & 4)
Credit: 4*
Prerequisite: None
*Honors level may earn 9 college credits; Jr/Sr only

> "Even if you don't want to pursue a business career, the Business Information Technology program is useful to take because it teaches you concepts that can be used on a daily basis and in any career. You learn everything from the basics of formatting resumes, letters, etc. to even learning how to create your own website."
>
> — Cassie Kimball,
>
> Business Information Technology; Business Academy

Technical Writing 21066

Using a learn-by-doing approach, students are introduced to the methods of writing used in business and technical documents. They will study and practice various forms of technical communication such as brief correspondence, informative reports, investigative reports, instructions, employment communication, recommendation reports, and proposals. Students will also study workplace ethics. This course meets the Senior English requirement.

Level: CP
Open To: Grade 12
Credit: 1
Prerequisite: Preference is given to students enrolled in COT programs.

Legal Studies 26016 & 26026

This Business Academy Career Program prepares students to be a step ahead in their college classes in pursuit of careers in law, criminal justice or in the business world, and/or to help prepare for entry-level positions in these fields. Even if you are not sure on what career is best for you, this is the program to take! It covers legal terminology, business, consumer, civil and criminal law. Court procedures, Internet legal research, current events, learning your rights and computer/legal applications and employment skills inclusive of resumes, cover letters and interview skills are also covered. Numerous speakers in these fields: attorneys, State Police, U.S. Marshals, DEA, Homeland Security, District Attorneys, FBI, detectives, CSI, game wardens and others will be invited to class to facilitate career exploration. Field trips are anticipated to be taken to Biddeford District Court, York County Superior Court and the Saco Police Station. Job shadows may be available subject to business approvals.

A business education certificate for Legal Studies and four high school credits will be issued upon successful completion of this program. Additionally, FREE college credits may be earned by taking this class. Currently up to nine (9)+ credits may be earned for dual enrollment, advanced standing & articulated college credits as available - see instructor for specific details. Dual enrollment/advanced standing college credits are transferable to most other colleges and universities. Currently agreements with the following colleges/universities are set up: SMCC, YCCC, CMCC and Husson University. Other college agreements may be added throughout the school year; check with the instructor for specific details.

Level: CP/ Honors
Open to: Grades 11 & 12 (Blocks 1 & 2)
Credit: 4 (Honors level earns college credits)
Prerequisite: A good work ethic and a genuine interest in a career in the legal/criminal justice or business fields.

Precision Machining II 27196 & 27206

Precision Machining II is a continuation of the first course where students will continue to improve their skills for employment. This year you will learn how to program those computerized milling machines (CNC) by learning its computer language (FANUC) to create metal parts to an accuracy of plus or minus the thickness of a sheet of paper. We will take field trips to local manufacturing facilities to see state of the art equipment being used to make high quality (and high value) parts for the aerospace, military, and medical industry. Students may also co-enroll in the Engineering program at COT to further expand their experience. Students who successfully complete this program can enter the workforce with a valued trade skill or continue their education at the community college with free articulated college credits available at Southern Maine Community College, Central Maine Community College and York County Community College.

Level: CP
Open to: Grade 12
Credit: 4
Prerequisite: Successful completion of Precision Machining I.

> "This is a class that will prepare me for the future in a career that is in high demand. We have learned to machine parts using the lathe and milling machines."
>
> — Chad Ouellette,
> Precision Machining

Precision Machining I
27176 & 27186

Do you like to make or create things from raw materials using machines? Do you know that many local companies like AVX, General Dynamics, Pratt & Whitney, Arundel Machine, FMI, and more are currently hiring in this career field. This course provides and excellent foundation for careers in mechanical Engineering, Industrial Robotics, and CNC Programming. This course will allow you to practice, entry level skills that are in high demand in our community, and throughout the nation. You will learn how to apply the math (fractions/decimal inches, X Y Z coordinates) and geometry that you've studied in school to create parts from a variety of materials like steel, aluminum, brass, wood, and plastic. When skills are developed during the school year, you will have the opportunity to apply for part time work after school working in this trade. This is a program where you will learn how to set-up, and operate a variety of machines to remove material (subtractive machining) to make finished parts from start to end, while reading blueprints. You will learn how to use and run CNC (Computer Numerical Control) machines.

This program has recently acquired four new, modern, Proto TRAK- 3 axis (X Y Z) milling machines. Learn how to use these fantastic, computer driven machines to make three-dimensional parts, that are used in all types of industries, such as Medical, Automotive, Robotics, Aviation, and more. Learn the fundamental skills in operating machinery like: a manual lathe, milling machine, surface grinder, CNC lathe, and CNC Milling Centers. Related classroom discussions will stress safety, blueprint reading, the Cartesian coordinate system and correctly using precision measuring tools.

Level: CP
Open to: Grades 11 & 12 (Blocks 1 & 2)
Credits: 4
Prerequisite: Strong Math Skills, successful completion of Pre-Algebra/Algebra 1 & Geometry recommended.

Medical Assisting 24036 & 24046

This Business Academy career program prepares students to be a step ahead in their college classes in pursuit of careers in the medical field, the business world and/or to help prepare for entry-level positions in these fields. Even if you are not sure on what career is best for you this is the program to take! Students are eligible to choose from an area of career interest (subject to business availability) to do a clinical/job shadow, experiencing actual work in that field. Numerous speakers are invited into class and tours of local health care facilities will expose students to a variety of future health care career possibilities.

Topics covered are: patient care, medical terminology, basic anatomy and physiology, diagnostic clinical procedures, CPR and BLS certifications; Microsoft - Word, Excel, PowerPoint & Access; medical laws, ethics, scheduling, medical coding, billing, current events, varied medical office procedures and much more! Additionally, employment skills inclusive of resumes, cover letters, reference lists and interview skills are also covered.

A business education certificate for medical studies and four high school credits will be issued upon successful completion of this program. Additionally, FREE college credits may be earned by taking this class. Currently up to six (6)+ credits may be earned for dual enrollment & articulated college credits as available - see instructor for specific details. Seniors are eligible to earn three (3) Central Maine Community College dual enrollment credits for Medical Terminology (MET 111) and three (3) credits for Introduction to Computer Applications (BCA 120) which are transferable to most other colleges. Currently agreements with the following colleges/universities are set up: SMCC, YCCC, and CMCC. Other college agreements may be added throughout the school year; check with the instructor for specific details.

Level: CP/Honors
Open to: Grades 11 & 12 (Blocks 3 & 4)
Credit: 4 (Honors level earns college credit)
Prerequisite: A good work ethic and a genuine interest in a career in the medical or business fields.

Auto Body Technology I 27016 & 27026

Students should be self-motivated and able to work in a group or individually. Students will spend time each day in the classroom learning Auto Body repairs through industry recognized I-Car curriculum in the areas of body repair, power tools, hand tools, welding, surface preparation, plastic repair, and vehicle technology and then develop the skills in the shop to be able to repair automobiles to today's standards.

Level: CP
Open to: Grades 11 & 12 (Blocks 3 & 4)
Credit: 4
Prerequisite: Strong Math and Writing skills are suggested. Students with respiratory ailments need medical doctor's permission.

I-CAR CERTIFIED

ASE CERTIFIED

Auto Body Technology II 27036 & 27046

Auto Body II covers the refinishing part of the industry. Students learn proper metal treatment, priming, paint mixing, alternate colors, paint matching, paint blending, basecoat and clear-coat finishes through industry recognized I-Car curriculum. Students will spend time each day in the classroom and then further develop their body repair skills in the shop, and refinish automobile to today's standards. Upon successful completion of Auto Body II the student will be employable at the entry level technician or further their education in a technical college.

Students are eligible to earn Automotive Service Excellence (ASE) certification while taking Autobody I and II; an industry recognized credential.

Level: CP
Open to: Grade 12 (Blocks 1 & 2)
Credit: 4
Prerequisite: Strong Math and Writing skills are suggested. Successful completion of Auto Body Technology I and Instructor recommendation.

Welding and Metal Fabrication I 27216 & 27226

The first year will provide the student with the fundamentals and basic skills in the field of welding and metal fabrication. Actual shop work will include all aspects of oxyacetylene welding, arc welding, light structural fabrication, safety equipment, and practice for promoting safety. Also included are welding in three positions on all five-fabrication joints as well as setting up and operating the flame-cutting torch. The curriculum follows the standards of the American Welding Society and the National Center for Construction Education and Research each of which offers students nationally recognized credentials. Successful students may earn their OSHA 10 Certification.

Level: CP
Open to: Grades 11 & 12 (Block 3 & 4)
Credit: 4
Prerequisite: Basic math skills. Students with respiratory/medical issues need a medical doctor's permission.

Welding and Metal Fabrication II 27236 & 27246

The second year classroom instruction will include complete coverage of blueprint reading and welding symbol interpretation. The lab work and practice will include Tungsten Inert Gas (TIG), Metal Inert Gas (MIG), Shielded metal arc welding, flux core arc pipe welding, heavy structural fabrication, and all areas of forming, cutting, and assembly. Students will be able to take the AWS welding performance tests at the end of the program for national certification. Upon successful completion of Welding and Metal Fabrication I & II, the student will be employable at the entry level in any local welding/ fabrication shop. Articulated college credits are available to students who continue their education at Southern Maine Community College.

Level: CP
Open to: Grade 12 (Blocks 1 &2)
Credit: 4
Prerequisite: Successful completion of Welding and Metal Fabrication I and instructor recommendation.

Plumbing Technology 27256 & 27266

Have you considered pursuing a challenging and a high-paying career in the plumbing and/or heating field? The plumbing and heating trades are one of the most attractive sectors of the skilled trades industry thanks to the good pay, varied work, and potential for advancement.

The first year of this program offers students a nationally recognized educational training curriculum that provides students a pathway to become a licensed plumber. This program also benefits students who are interested in mechanical engineering, HVAC and green power technologies. Through classroom activities and hands-on labs, students will study on-the-job safety, plumbing theory, residential and commercial plumbing techniques, and plumbing installation requirements. Seniors may elect to return for year two as a post grad. The NCCER curriculum offers students the ability to continue their training after high school at locations across the country. Projects may include work outside the lab on new construction or renovation sites with actual on-the job training. The plumbing course includes education in: jobsite safety, proper trade tool operation, plumbing materials, drainage and venting systems, storm drainage systems, potable water systems, plumbing fixture installations, backflow principles, reading and creating construction plans, estimating project materials and costs, and understanding the State of Maine Uniform Plumbing Code. Positive work habits and employable skills are stressed in this program.

Level: CP
Open to: Grades 11 & 12 or instructor permission
Credit: 4
Prerequisite: Strong math, reading and interpersonal skills. Able to work both independently and as part of a team.

Heating Technology

Year two of the program, you can enjoy a fast track to a career in heating technology. This challenging and relevant heating program prepares you for the State of Maine Journeyman's License Exam for heating technologies. Heating Technology is a continuation of the first year plumbing course that expands into domestic water heating and space heating. Areas of study include building on plumbing principles and expanding into learning the basics of oil and gas heating systems. Students will learn to use the necessary tools to maintain, install, and troubleshoot heating systems. Boilers and furnaces will be worked on in the lab or at offsite locations. Students will be involved in the installation, maintenance, and adjustment of oil-fired and gas fired equipment. The heating labs will also involve learning piping, wiring, and control circuitry for domestic and space heating systems. Hydronic heat distribution units, such as baseboard and radiant floor tubing, will be installed as functioning heat zones in the lab. Solar, wood, and refrigeration will be explored as heating sources.

Both courses use a nationally recognized curriculum with a national registry for qualified students (NCCER). Graduates have basic entry-level skills to enter the workforce or continue their education in plumbing and heating at a technical college.

Level: CP
Open to: Grade 12
Credit: 4
Prerequisite: Successful completion of Plumbing Technology or permission of instructor. Students need to have strong math, reading, and interpersonal skills, and be able to work both independently and as part of a team.

Auto Technology I 27056 & 27066

Due to the highly technical nature of today's automotive industry students will need to be able to locate, identify and understand automotive related nomenclature. While not a writing intensive course, students will be expected to complete short writing assignments and clearly articulate technically written text. Students must be self-motivated, and able to work independently as well as in groups. Automotive theory learned in the classroom will be applied in the Automotive Technology laboratory. This program follows the automotive standards set by National Automotive Technicians Education Foundation (NATEF) and Automotive Service Excellence (ASE). The first year curriculum includes: career paths available in the automotive industry, communication, problem solving, customer relations, technical writing, reference material use, diagrams, shop safety, tool orientation, vehicle maintenance, tire theory and service, brake theory and service for drum, disc and brakes, cooling system theory and service, electrical theory fundamentals, charging systems, cranking systems, and related math and science topics.

Level: CP
Open to: Grades 11 & 12 (Block 3 & 4)
Credit: 4
Prerequisite: Must have successfully completed Algebra 1 or Pre-Algebra. Must be on grade level with their reading, writing, and science skills. Have good gross and fine motor coordination. Have excellent high school attendance and discipline record.

Auto Technology II 27076 & 27086

Automotive Technology II will build on skills that were acquired in Automotive Technology I. The second year of the automotive technology program includes review of proper shop safety and procedure. Students will progress through the more advanced stages of drivetrain, brakes, electrical/electronics, handheld meter theory, engine tune up theory and service, emission system theory and service, engine performance, computer controls theory and use, air conditioning theory and service, and alternative energy vehicles and biofuels. Students will learn how to troubleshoot performance issues using hand held scanners and researching online automotive repair manuals and databases. Articulated college credits are available to students who continue their education at Southern Maine Community College, Central Maine Community College, and Lakes Region Community College.

Level: CP
Open to: Grade 12 (Blocks 1 & 2)
Credit: 4
Prerequisite: Permission of instructor, successful completion of Automotive Technology I, continued excellent high school attendance and discipline record.

Residential Construction & Remodeling I 27096 & 27106

The curriculum follows the national standards established by the National Association of Home Builders. . Students learn applied academic skills required to perform hands on tasks. The program is designed to instruct students in house construction and remodeling. Students work with a variety of building and finishing products, and become familiar with modern methods and styles of residential construction. An integral part of the curriculum involves shop work or live work community projects, allowing students to practice all phases of house construction. The program is based on community projects. Projects may include new construction or renovation with an emphasis on residential carpentry skills.

RC & R I covers: safety, proper tool use, scaffolding, building materials and building planning. Project components will focus on the structure and exterior shell including framing, roofing, windows, siding and trim, safety, basic blueprint reading. Positive work habits and employable skills are stressed in this program. Successful students can earn OSHA 10 certification.

Level: CP
Open to: Grades 11 & 12 (Block 3 & 4)
Credit: 4
Prerequisite: Strong math and ability to work independently and within a team.

"When I came here I could only hammer a nail. Now I'm building a house."

— Courtney Auger,

Residential Construction & Remodeling

Residential Construction & Remodeling II 27116 & 27126

The curriculum of the Residential Construction and Remodelling II program continues to center on national standards established by the National Association of Home Builders. Building Trades II continues to pursue community-based projects with an eye to choosing projects of greater complexity. Instruction will focus on more advanced areas of residential construction including; design process, architectural blueprint reading, material estimating, stair construction and advanced roof framing. Project components will focus on interior finish including insulation and air sealing, drywall, interior doors, finish trim and cabinetry. At the conclusion of the two-year program students will have the skills to enter the field of residential construction and/or continue their education at the college level.

Level: CP
Open to: Grade 12 (Blocks 1 & 2)
Credit: 4
Prerequisite: Successful completion of Residential Construction and Remodeling I or instructor permission.

Electrical Technology I 27136 & 27146

This program offers students a state and nationally recognized educational training curriculum that allows students to become licensed electricians, after successfully completing both years of the program and the necessary related works hours in the field. This program also benefits students who are interested in electrical engineering, HVAC and alternative power careers. Through classroom activities and hands-on labs, students will study on-the-job safety, electrical theory, residential and commercial wiring techniques and standards. Seniors may elect to return for year two as a post grad. The NCCER curriculum offers students the ability to continue their training after high school at locations across the country. Successful students also can earn OSHA 10 certification.Go online to visit www. nccer. org to read more about the curriculum and its benefits.

Level: CP
Open to: Grades 11 & 12 (Block 3 & 4)
Credit: 4
Prerequisite: Strong math, reading and interpersonal skills. Able to work both independently and as part of a team.

Electrical Technology II 27156 & 27166

This is the second year of the two-year Electrical program. Areas of study include commercial and industrial wiring practices including mechanical conduit bending, motors transformers and motor controls. Successful students in this program will meet the educational requirements for a State of Maine Journeyman's Electrician's license. Up to five college credits are available to successful two-year program completers who choose to continue their education at any Maine Community College in the electrical field.

Level: CP
Open to: Grade 12 (Block 1 & 2)
Credit: 4
Prerequisite: Successful completion of Electrical Technology I and instructor recommendation.

"COT teaches you skills that are helpful for you now and in the future."

— Josh Kennie,

2016 Electrical Technology