

**PUTNAM ACADEMY VOCATIONAL SHOPS**

1. **Automotive Collision Repair**
2. **Automotive Technology**
3. **Business Technology**
4. **Carpentry**
5. **Construction Craft Laborer**
6. **Cosmetology**
7. **Criminal Justice**
8. **Culinary Arts**
9. **Design and Visual Communications**
10. **Early Education & Care**
11. **Electricity**
12. **Graphic Communications**
13. **Health Assisting**
14. **Heating, Ventilation, Air Conditioning and Refrigeration**
15. **\*Horticulture**
16. **Hospitality Management**
17. **Information Support Services and Networking**
18. **Machine Technology**
19. **Marketing**
20. **\*Radio & Television Broadcasting**
21. **Robotics and Automation Technology**
22. **Sheet Metalworking**

**\*Currently 11th and 12th grade students only**

**Automotive Collision Repair**
Using the latest techniques, Putnam student’s study and practice collision repair, non-structural repair, refinishing, airbrushing, reconditioning, auto trim, glass replacement, frame straightening, and alignment.  Students are taught all phases of collision repair using state-of-the-art equipment.  They are also taught the proper techniques and safety practices when working with pneumatic tools and various types of painting systems.  Students repair and refinish damaged automobiles.  This helps them to gain hands-on experience and requires them to learn to do their best work.
Through related and integrated classes in math and science, students’ knowledge is challenged to meet today’s industry requirements. This experience opens up opportunities for students in collaborative education in the trade and to further their education with post-secondary education.

**Automotive Technology**
The Automotive Technology program is conducted in modern, well-equipped classroom/laboratory and shop. Students practice with modern computer diagnostic tooling, high tech alignment and undercarriage service equipment, and 8 vehicle hoists. We provide A-Tech training simulators in the class/lab and shop vehicles. Students also service and repair customer owned vehicles.
Overview
The Putnam Automotive Technology program prepares students to service, diagnose, and repair modern automobiles.
Automotive classes combine operational theory with hands on lab activities for Engine Repair, Automatic/Manual Transmission and Drive Train Service, Suspension and Steering, Brakes, Electrical and Electronic Systems, Heating and Air Conditioning and Engine Performance. These classes prepare students to pass ASE certification tests and begin a career as an automotive service technician.
Student Learning OutcomesStudents who successfully complete the Automotive Technology program will:
• Practice safety precautions, to protect yourself, vehicles and the environment.
• Communicate clearly, with team members and customers.
• Conduct yourself on the job with a high degree of professionalism.
• Use service literature and tools efficiently.
• Practice a systematic diagnostic and repair strategy to maintain modern automobiles and light trucks

**Business Technology**

Business Technology is a cutting-edge business vocational program, dedicated to preparing students to enter today’s challenging business fields.
This program introduces students to the growing field of business careers, emphasizing on the development of skills in office procedures and practices, business software applications, and oral/written communication.
Students learn how a modern office functions and develop the interpersonal and professional skills needed for a career in business.  They become skilled in such office equipment as computers, printers, copiers, fax machines, electronic calculators, telephones and hand- held devices in hands on simulations.  Theory and application are blended in teaching skills such as computer applications, proofreading, business communication, record keeping, filing, problem solving, accounting and office etiquette.
Students who successfully complete this program are employable in areas above entry level in most types of businesses and will have the background to rapidly advance to supervisory and administrative positions.

**Carpentry**

The philosophy of the Carpentry Department is to develop a positive work attitude, along with the various hand and power tool skills. Trade knowledge and vocabulary will enable students to achieve gainful employment in the carpentry field.  The program will teach students to interact professionally with other workers in a safe and competent manner.
This philosophy will be applied to all grades 9-12, and in all areas: shop, related class and outside work projects
The carpentry program is based on proven local methods, “green” technology, OSHA regulations and the Massachusetts State building codes.  Student instruction begins with basic competencies such as shop safety, basic layout, hand tool identification, proper usage, care and maintenance.  Students will progress from introductory knowledge of shop safety and basic woodworking with small projects such as common wood joints, to working with portable and stationary power tools to residential home construction --concrete form work to finish. 11th and 12th grade students gain valuable experience working off-site on projects such as building a home for Habitat for Humanity and other outside projects.

**Construction Craft Laborer**

Students in the Construction Craft Laborer shop at Putnam will study about and perform a wide variety of manual labor tasks including preparation, building, dismantling and the operation of construction machines. Construction Craft Laborers have the ability to work in several areas or aspects of the construction field. Internships and Co-op are available from 11th grade on as well as working off-site at jobs such as building a house for Habitat for Humanity. Career options in the Construction Craft Laborer field include; Construction, Carpenter, Electrician, Mason, Plumber, Welder, Glazier and Plasterer.

**Cosmetology**

Roger L. Putnam Vocational Technical Academy offers a Licensed Cosmetology program to those students interested in studying the art and science of hair, skin, and nails. Students are exposed to all areas of cosmetology, an industry that has experienced enormous growth and success. From the advent of permanent waving to the development of nail enhancements, new skills and tools have transformed and expanded the roll of the cosmetologist.
This course will start you on a journey that can take you in many different directions, and holds the potential to make you a confident, successful licensed professional in cosmetology. We will be using the Massachusetts Vocational Technical Education Frameworks to update curriculum and equip students with the skills required for passing the Massachusetts Board of Cosmetology Exam. After completion of this course, the opportunities for employment are many, and include Nail Technician, Hairdresser, Texture services, Make-up artist, Skin Care Specialist, as well as a Cosmetology Instructor.
If you enjoy working with people and being creative, this is the program for you!

**Criminal Justice**

The Criminal Justice shop here at Putnam Academy is an introduction to the inner workings of the three significant criminal justice functions in the United States – Law Enforcement, Court Systems and Corrections. The course will give the students an overview of policing in America, the historical development of policing internationally and locally and the implementation of community-based policing and criminal investigations. The program will focus on the realities of law enforcement and the apprehension of criminals at the federal, state and local level. This course will also discuss and explain the prosecution, disposition and incarceration of those suspected of committing criminal offenses.

During the year, an emphasis will be placed on developing reading, writing and interpersonal communication skills, critical thinking, logical reasoning and problem-solving skills. The ability of the students to deal with stress and interact with people in various settings will be emphasized as well. Students will learn the value of honesty and integrity as it relates to working in law enforcement. Additionally, students will participate in physical fitness training daily to ensure they are up to the physical demands of the many careers in Criminal Justice.

Throughout the year, students will interact with members of law enforcement, corrections and the court system and they will be able to learn from their experiences. Use of video, audio and slide presentations will expose students to the realities of law enforcement.

Students will earn a certification in CPR and First Aid in this program.

**Culinary Arts**

The Culinary Program is designed to provide students with training for a successful career in the food service/hospitality industry. As one of the fastest growing service areas, students are trained for entry-level employment.
Culinary Arts also offers a ServSafe (Food Safety) certification and a ten-hour OSHA (Occupational Safety and Health Administration) card to all students. Students are encouraged to pursue advance training in post-secondary schools and/or colleges.
Articulation Agreement:
Students who have fulfilled the learning outcome objectives in Putnam’s Culinary Arts/Hospitality Management program, and who are recommended as being competent in this subject matter, will be recognized for 14 credits in Hospitality Management at Holyoke Community College.

**Design and Visual Communications**

Design & Visual Communication is an exciting career that combines technology, talent, creativity imagination and fun. It requires some artistic talent, skill and knowledge. People who are imaginative, creative and enjoy problem-solving may be well suited to a creative career.
Creative artists use computers and software to design a wide variety of printed materials, websites, animations, multimedia presentations and more. The elements (line, shape, form, color, value, texture and space) and principles of design (balance, rhythm, movement, contrast emphasis, pattern and unity) are the foundational concepts used to teach design and visual communications.
Instruction in the Commercial Art program is guided by the State developed and Massachusetts Board of Education approved Career and Technical Education Frameworks. Each frameworks strand identifies specific competencies regarding health and safety, technical skills, embedded academics, employability, management and underlying principles of technology. Skill proficiency is tracked over four years.

**Early Education & Care**

The Early Education and Care program currently enrolls 9th, 10th, 11th and 12th grade students. In the 11th and 12th grade, students work as teacher assistants in a fully-functioning child care center with twelve infant, toddler, preschool and kindergarten classrooms. Twelfth grade students have also completed practical hours at local schools where they have assisted teachers in Preschool, Kindergarten, First Grade, Gym classes and Special Education classes.

**Electricity**

The Electricity program at Putnam Vocational Academy is designed to teach you the modern electrical theory critical to understanding the science of electrical power transmission and distribution, the safety requirements involved in working in this field via hundreds of hours of real world, hands-on training and experience in the use of electrician’s tools, devices, and meters and how the NEC and MEC governs this technology.
The Electricity program prepares students for entry level positions in the electrical field. Graduates from this program will be skilled in the installation and maintenance of various residential, commercial, and industrial electrical systems. All State of Massachusetts electrical licensing educational requirements are met or exceeded in this program.  Students are supplied with the tools and equipment necessary to properly complete the hands-on portion of the program, and computers and reference material to aid in their related theory education.
*Educational Outcomes*
Upon successful completion of the Electricity program, graduates are expected to:
• Practice the electrical skills of the profession in a conscientious, responsible, and accountable manner while recognizing the need to continue to expand their technical knowledge and skills
• Communicate effectively and listen and respond appropriately to a variety of residential, commercial and industrial electrical situations.
• Think critically and use their acquired analytical skills to solve problems encountered in a residential, commercial or industrial electrical environment.
*Career Opportunities*
Graduates will find employment as entry level Construction Electricians, Maintenance Electricians, Electrical/Instrumentation Technicians, and in other positions that require familiarity with electrical equipment and devices and their uses.

**Graphic Communications**

The Graphic Communications Program teaches the student a wide variety of skills and competencies that will prepare them for the world of work, and/or higher education in their chosen field. The course will provide the student with an introduction into the theoretical and practical aspects of the Commercial Printing industry. Graphic Communications is a visual form of information, so the student will have “hands-on” training in the classroom, as well as the shop area.

**Health Assisting**
The Health Assisting program at Putnam consists of a rigorous academic focus in order to prepare our students for higher education in the medical field.  Students are also required to keep a minimum classroom GPA of 75% in order to be eligible for clinical rotation in the 11th grade year and must successfully pass their 10th grade shop to move onto the 11th grade C.N.A. curriculum.
In the Health Assisting program, students learn in a simulated hospital setting, working with qualified instructors of various educational and medical backgrounds.   Students learn techniques to improve patient comfort in hospitals, homes, nursing homes, skilled care and day care facilities.  The overall program focus consists of certifications in C.P.R, OSHA, C N A (certified nursing assisting), Home Health Aide, and Alzheimer’s.

**Heating, Ventilation, Air Conditioning and Refrigeration**

Heating, Ventilation and Air Conditioning is an all-seasons profession.  Workers in these areas install, maintain, and repair home heating and central air conditioning systems, as well as domestic water, heating, humidification, and air cleaning equipment.  HVAC technicians diagnose problems and make repairs.  They must follow blueprints, design specifications, and manufacturers’ instructions to install parts.  They install compressors, condensing units, evaporators, piping, and other components.  The also use a variety of tools including hammers, wrenches, metal snips, electric drills, pipe cutters and benders, and torches.

**\*Horticulture**

Students in Horticulture are trained in Landscape Maintenance, Floriculture, Arboriculture and Greenhouse Maintenance.   They are also introduced to Landscape Design, Turf management and Natural Resource and Parks Management.  Students are trained for entrance into the workforce and are strongly encouraged to continue training at a two or four year college.  Students learn about plant requirements, plant propagation, cultural practices to maintain existing plants, employability skills and how to manage a small business.  In addition, students receive a hands-on training in landscape equipment operation and maintenance, tree climbing techniques and procedures, and greenhouse operations and management.  Students work on campus as well as the grounds of other Springfield schools and on private residencies in the Springfield metropolitan area.
Depending on teacher assignments students in grades 10-11 will study one of three concentrations: Arboriculture, Landscaping, or Floriculture/Greenhouse Management.  Arboriculture is the study of woody plant care and primarily tree maintenance.   Arboriculture students will learn chainsaw safety and operations as well as tree climbing safety and operations.  Once students are proficient, they will begin doing live tree work in the Springfield area.  Students in Landscaping will focus heavily on grounds and turf maintenance.  These students will also use a wide range of equipment from a leaf blower to a ride on lawn mower.  Floriculture/Greenhouse Maintenance students will be working mostly indoors and will learn the practice and principles of flower arranging and maintaining our new state-of-the-art greenhouse.

**Hospitality Management**
Hospitality and Tourism Management (H&T) offers new exciting opportunities for students from freshman year to graduation.
Over the past several years, our program has grown considerably—with 72 enrolled students by year end.  Areas of concentration include; health and safety; sanitation; fundamentals of food service; hospitality sales and marketing; menu planning; restaurant management; dining room service activities; banquet and catering services; hospitality and travel destinations; customer service; rooms division management and operations; housekeeping; security and facilities management.
It is our goal to train students for entry level employment and encourage hospitality management post-secondary education.

**Information Support Services & Networking**

The Information Technology and Networking Department (InfoTech) will cover such topic as, CompTIA A+ Certification, CISCO CCENT Certification, Exploring Computer Science (ECS) curriculum, and AP Computer Science. The overarching curriculum is designed to introduce students to the breath of computer science through the exploration of problem solving by using real world applications. The program is designed to use student’s informal knowledge, technology skills and beliefs about computing to anchor the students to the theoretical and foundational tenets of computer science. Students develop foundational skills in Computer Science while acquiring vital 21st-century career skills in problem solving, collaboration, and critical thinking. The general theme of the InfoTech shop also focuses on technology as a tool for solving problems and the impact of computer science on society will help prepare your son or daughter for tomorrow’s technological challenges while preparing them for a career in the ever-growing field of computer science.

**Machine Technology**

**Students in the Machine Technology program will learn hands-on skills with machines such as lathes, milling machines, surface grinders and computer numerical control machines. Learning includes computer-aided design, computer numerical programming, quality control and blueprint reading. Internships and Co-op are available for 11th and 12th graders. Career options after being in this program include; Precision Machining, CNC Programming, CAD Design, Mechanical Engineering and Quality Control Technician.**

**Marketing**

The Marketing Program at Putnam Academy prepares students for careers in the field of Marketing through both classroom instruction as well as hands-on experience working in the school store.
The Marketing shop at Putnam will prepare students for careers in business while concentrating in the areas of marketing, accounting, finance, advertising, management and entrepreneurship. This shop will prepare students for both entry-level and management positions in business by getting hands-on training in our school store as well as preparing students who are looking to further their education at a two or four-year college. Students will earn certifications in the following areas;

* Retail Marketing
* Finance
* Management
* Accounting

In addition, students will learn how to market themselves through the use of resumes, cover letters and proper interviewing techniques to become hirable both while in school and after graduation.

**\*Radio and Television Broadcasting**

Students in the Radio and Television Broadcasting shop will be responsible for combining their creative and artistic abilities with the technical competencies outlines in the state mandated frameworks. Students will be responsible for using media such as audio and video to create media content for a wide variety of audiences. Internships and Co-op are available to students during their junior and senior years.

Career options include; Digital Camera Operator, Photographer, Multimedia artist, Game Designer, Sound Effect Editor, Digital Graphic Designer and Film and Video Editor.

**Robotics and Automation Technology**

**Robotics and Automation Students will learn basic electronics and the utilization of electronic test equipment robotic construction and programming are also introduced in this program. Students will program into factory automation such as industry-standard robots and logic controllers. Students are exposed to various engineering tasks, allowing them to properly decide on a possible career in the field of engineering. Internships and Co-op positions are available from the 11th grade on. Options for college include; Electronic Technology, Electronic Engineering, Robotic Engineering and Video Game Design. Career Options in Robotics include; Electronic Technician, Robotic Engineer, Software Programmer, Factory Automation Engineer and Video Game Designer.**

**Sheet Metalworking**

In Sheet Metalworking, students will learn the basics in layouts, cutting, bending, forming and the fabrication of sheet metal ductwork. They will use these skills in the heating, ventilation and air conditioning industry. Students will receive specialized instruction on oxyacetylene (gas) welding and arc welding, TIG and MIG welding and computer assisted sign making. Career options for students graduating from the Sheet Metal shop here at Putnam include; HVAC/R Technicians, Installers, Maintenance Repair Technicians and Engineers. Co-Op and outside work is available for qualified juniors and seniors.