

Course of Study Construction Technology

Freshman

Program Specializations (only one program of specialization will be assigned) 10 credits

Carpentry Specialization I	
Electrical Construction Specialization I	
HVACR Specialization I	
Welding Technology Specialization I	
Plumbing/Pipe Fitting Specialization I	
Financial Literacy or Performing Arts	5 credits
CP or Honors English I	5 credits
CP or Honors U.S. History I	5 credits
CP or Honors Level Mathematics	5 credits
CP Honors Lab Biology	5 credits
CP or Honors Spanish I or Italian I	5 credits
Fitness for Life I	5 credits

Sophomore

Program Specialization (<i>continue in program specialization</i>):	15 credits
Carpentry Specialization II	
Electrical Construction Specialization II	
HVACR Specialization II	
Welding Technology Specialization II	
Plumbing/Pipe Fitting Specialization II	
CP Honors English II	5 credits
CP or Honors U.S. History II	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Chemistry	5 credits
Performing Arts or Financial Literacy	5 credits
Fitness for Life II	5 credits

Junior

Program Specialization (<i>continue in program specialization</i>):	15 credits
Carpentry Specialization III	
Electrical Construction Specialization III	
HVACR Specialization III	
Welding Technology Specialization III	
Plumbing/Pipe Fitting Specialization III	
CP or Honors English III	5 credits
CP, Honors or College Level World History	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Science	5 credits
Fitness for Life III or Fitness for Life III – Indep/Sports	5 credits

One Elective (Performing Arts, World Language)

5 credits

Senior

College Level Phys Fitness/Contemporary Health at RCSJ, Fitness for Life IV or Fitness for Life IV-Indep/Sports

5 credits

CP, Honors or College Level English Composition 101 at RCSJ

5 credits

Performing Arts or World Language IV or Electives

5-30 credits

Attention: Understand that registering for a college-level course, means college level credit will be awarded. Regardless of the final grade, this information will be posted to the student's PERMANENT academic transcript at Rowan College of South Jersey. Be aware that unsuccessful completion of these courses may negatively affect a students' eligibility for financial aid in the future.

CONSTRUCTION TECHNOLOGY

Construction Technology – Freshman

10 credits

Carpentry Specialization I

This course is designed to give each student the opportunity to achieve the skills needed to perform the duties of an entry-level worker in the Building Trades. These basic skills are: shop and job safety, measurement skills, math skills, hand tool skills, portable power tool skills, and stationary power tool skills. The student will gain these skills through daily hands-on experience.

Electrical Construction Specialization I

Freshman and sophomore students will complete 26 lessons of instruction over a period of 1 semester. These lessons will include electrical safety, materials, tools, basic applied skills and familiarization with the National Electrical Code. While working with various circuits, the student will learn to work safely around electricity and to use the proper tools for construction wiring.

Heating, Ventilation & Air Conditioning Specialization I

This course covers the equipment and tools found in the Plumbing, Heating and Air Conditioning fields. The students will learn the proper use of the tools and instruments of this trade. Through a combination of classroom and hands-on work, the student will learn to install and service the equipment of these trades.

Welding Specialization I

This introduction course introduces students to welding and oxy-fuel safety. Students will learn the basic concepts of the Shielded Metal Arc Welding, Gas Metal Arc Welding and Gas Tungsten Arc Welding processes including machine set-up, electrode classifications and fillet welds in the flat and

horizontal positions. Students will learn how to assemble an oxyfuel cutting station and learn how to cut a mild steel plate safely and properly.

Plumbing/Pipe Fitting Specialization I

This course is designed to give each student the opportunity to achieve the skills needed to perform the work of a Plumber/Pipe Fitter. The student will gain these skills through daily hands-on experience and the introduction of information related to the installation/service of plumbing fixtures and systems. The student will learn how to safely use the tools/materials and safely operate the equipment to perform these tasks.

Construction Technology - Sophomore, Junior, and Senior Program Specialization Level II, III, and level IV as elective option

Carpentry Specialization

15 credits/year

This course is designed to give the student realistic shop experience and related experience. The course will build upon the skills learned in Introduction to Building Trades. Units of study will include a review of topics learned in that course and will expand into new areas such as shop awareness, career awareness, job safety, materials of construction, hardware of construction, blueprint reading, estimation, scaffolding and ladders, leveling instruments and site work. The student will gain these skills through daily hands-on experience in a well-equipped shop setting. Safety is stressed in every phase of the program. This approach leads to the development of a strong base from which the student can successfully enter the construction industry.

Electrical Specialization

15 credits/year

This is the second, third and fourth level of a program that covers major topics in residential electrical construction including basic electrical theory (DC), National and Local Electrical Codes, wiring methods and materials, blueprint reading and layout. Classroom experiences will emphasize splicing, receptacle and switching circuits, new and old house wiring, testing equipment, troubleshooting, and proper care and safe use of tools used in residential wiring.

HVAC Specialization**15 credits/year**

This course covers the equipment and tools found in the Heating and Air Conditioning fields. The students will learn the proper use of the tools and instruments of this trade. Through a combination of classroom and hands-on work the student will learn to install and service the equipment of these trades. The individual employed in this position will be expected to have a pre-requisite amount of knowledge, attitude, skills and habits required to perform procedures that involve routine, predictable, repetitive, proceduralized tasks involving motor skills and limited theoretical knowledge, while working under close supervision.

Welding Specialization**15 credits/year**

The entry-level welder will be able to accomplish common work assignments, interpret drawing and welding symbols, set up shielded metal arc welding operations, set up and perform manual oxyfuel gas cutting operations, remove metal using the air carbon arc cutting process, and visually examine all personal welding and cutting assignments for unfavorable weld and cut edge surfaces. Students will be required to complete AWS Level I written exams and practical welding assignments to receive AWS SENSE Level I certifications. The individual employed in this position will be expected to have a pre-requisite amount of knowledge, attitude, skills and habits required to perform procedures that involve routine, predictable, repetitive, procedural type tasks involving motor skills and limited theoretical knowledge, while working under close supervision.

Plumbing/Pipe Fitting Specialization**15 credits/year**

This course is designed to give each student the opportunity to achieve the skills needed to perform the tasks of a Plumber/Pipe Fitter. The student will gain the skills necessary to perform these tasks through the study of the various systems related to plumbing and pipefitting installed in residential and commercial buildings. Through daily hands-on experience the student will practice the installation, repair and service of the components of these systems. Safe operation and handling of the tools, materials and equipment used in these trades is an essential requirement of this course.