

Building and Construction Technology III - Surveying & Management

Instructor: Frank Medio

Email: fmedio@delsearegional.us

Delsea One Hours: Wednesday and Friday

2019-2020

Elective, 5 Credits

Period B

Course Description: This course is designed to allow students to expand and apply technical knowledge and skills in the fields of carpentry, plumbing, electricity, and HVAC. Learners will be exposed to a broad range of architecture and construction careers. Major units of study include basic safety, plan reading, framing styles, windows doors & trim, flooring, electrical wiring, heating & cooling, stairs and stairwell calculations, interior walls and exterior sheathing, fixtures, roofing siding & water protection systems. Assessments include, but are not limited to: quizzes, tests, MPA's, lab activities, skill mastery demonstrations, logbooks, and project estimation research. An emphasis will be placed on professionalism and demonstrating a positive work ethic on a job site. Participation in TSA will reinforce cluster knowledge and skills. The course addresses the NJSL Standard 9.3 for Architecture & Construction, the Career Ready Practices

Prerequisite: Building & Construction Technology I: Fix It, Building Construction Technology II: Construction Technology

Objectives: Upon completion of this course, students will be able to:

- Understand principles and methods used to perform distance measurement and leveling.
- Gain experience in creating design solutions, choosing and purchasing a lot, developing contracts and agreements, and drafting property descriptions. This will also include the layout responsibilities of surveyors, site engineers, and carpenters Learning will also cover titles, deeds, project financing, types of insurance, scheduling project timelines, and purchasing construction equipment.
- Complete the following tasks with proficiency in: electrical safety, residential electrical service, an introduction to drain, waste, and vent (DWV) systems, traps, sizing drains and vents including plastic pipes and fittings, measuring, cutting, and joining plastic pipes and fittings, pressure testing, copper tubing, fittings, and valve measuring, cutting, bending, joining, and grooving, insulating tubes, cabinet woods, shop tools, cabinet construction, cabinet assembly, and finishing.

Projects: Build a small structure, Electrical Panel installation, Site layout for a small structure, Cabinet installation in a classroom, and other assignments as needed.

Resources: NCCER curriculum, Youtube, Google Classroom, how-to manuals, relationships with local contractors

Career Ready Practices

CRP1 - Act as a responsible and contributing citizen and employee **CRP2** - Apply appropriate academic and technical skills **CRP4** - Communicate clearly and effectively and with reason **CRP6** - Demonstrate creativity and innovation **CRP8** - Utilize critical thinking to make sense of problems and persevere in solving them. **CRP9** - Model integrity, ethical leadership, and effective management. **CRP10** - Plan education and career paths aligned to personal goals. **CRP11** - Use technology to enhance productivity. **CRP12** - Work productively in teams while using cultural global competence.

Building and Construction Technology III - Surveying & Management

PATHWAY: CONSTRUCTION (AC-CST)

- 9.3.12.AC-CST.1 Describe contractual relationships between all parties involved in the building process.
- 9.3.12.AC-CST.2 Describe the approval procedures required for the successful completion of a construction project.
- 9.3.12.AC-CST.3 Implement testing and inspection procedures to ensure the successful completion of a construction project.
- 9.3.12.AC-CST.4 Apply scheduling practices to ensure the successful completion of a construction project.
- 9.3.12.AC-CST.5 Apply practices and procedures required to maintain job site safety.
- 9.3.12.AC-CST.6 Manage relationships with internal and external parties to successfully complete construction projects.
- 9.3.12.AC-CST.7 Compare and contrast the building systems and components required for a construction project.
- 9.3.12.AC-CST.8 Demonstrate the construction crafts required for each phase of a construction project.
- 9.3.12.AC-CST.9 Safely use and maintain appropriate tools, machinery, equipment, and resources to accomplish construction project goals.

PATHWAY: MAINTENANCE/OPERATIONS (AC-MO)

- 9.3.12.AC-MO.1 Recognize and employ universal construction signs and symbols to function safely in the workplace.
- 9.3.12.AC-MO.2 Use troubleshooting procedures when solving a maintenance problem in buildings.
- 9.3.12.AC-MO.3 Apply construction skills when repairing, restoring, or renovating existing buildings.
- 9.3.12.AC-MO.4 Determine work required to repair or renovate an existing building.
- 9.3.12.AC-MO.5 Plan and practice preventative maintenance activities to service existing buildings.
- 9.3.12.AC-MO.6 Maintain and inspect building systems to achieve safe and efficient operation of buildings.

GRADING

- Safety First (including cell phones) 20%
- Participation (individual and group) 20%
- Projects 30%
- Testing/Certifications 30%

CLASSROOM NEEDS

- Chromebook
- Pencils and Pens
- 1- Three Subject Spiral Notebook
- 3 Pairs of Rubber Coated Work Gloves (available at Home Depot, Lowes)