

SUSTAINABLE CONSTRUCTION

CERTIFICATES AND ASSOCIATE IN APPLIED SCIENCE DEGREE PROGRAMS

The two-year Sustainable Construction program provides students with the technical knowledge and hands-on skills needed to pursue employment across many areas of the construction industry including carpentry, project management, design, building inspection, and renewable energy installation. The coursework is designed to fast-track graduates to leadership positions from construction supervisor to business owner. Students learn through a design/build process that combines conventional stick framing and the millennia-old craft of timber frame joinery with the latest in building systems technology. We challenge students to think about how buildings in New England can be constructed at a higher but achievable level of quality and energy efficiency. Key sustainability concepts include sourcing local materials, reduction of energy loads, optimization of systems, and the generation of on-site renewable energy.

“It’s been a great program for me so far. I didn’t think we would get into the shop as soon as we did. That was great.”



Tradition and innovation at the heart of Maine building practices



What Sustainable Construction professionals do:

- Conventional construction, timber framing, or green building
- Finish carpentry and historic restoration carpentry
- Design and drafting in architecture or engineering firms
- Installation of renewable energy and weatherization

Career Opportunities:

- Contracting firms on a project management or design path
- Small timber frame or conventional construction businesses
- Housing non-profits and building inspection agencies
- Renewable energy and weatherization services

For further questions about this program, please contact: enrollment@kvcc.me.edu

SUSTAINABLE CONSTRUCTION

Framing and Craftsmanship Certificate

First Semester

BPT125*	Blue Print Reading	3
MAT114	Technical Math	3
SDB101*	Tool Use, Maintenance, and Safety with OSHA 10	3
SDB103*	Stick Framing and Building Concepts I	3
SDB107*	Stick Framing and Building Concepts II	3

Second Semester

ENG108	Technical Writing	3
HIS205	Architectural Style and Construction in New England	3
SDB102*	Timber Frame Craftsmanship I	3
SDB104*	Timber Frame Craftsmanship II	3
SDB105*	3D Modeling for Construction	3

Total Credits **30**

Carpentry and Building Science Certificate

First Semester

BPT125*	Blue Print Reading	3
MAT114	Technical Math	3
SDB101*	Tool Use, Maintenance, and Safety with OSHA 10	3
SDB103*	Stick Framing and Building Concepts I	3
SDB107*	Stick Framing and Building Concepts II	3

Second Semester

SDB102*	Timber Frame Craftsmanship I	3
SDB104*	Timber Frame Craftsmanship II	3
SDB105*	3D Modeling for Construction	3
SDB209*	Construction Supervisor	3

Total Credits **27**

Associate in Applied Science Degree

First Semester

BPT125*	Blue Print Reading	3
MAT114	Technical Math	3
SDB101*	Tool Use, Maintenance, and Safety with OSHA 10	3
SDB103*	Stick Framing and Building Concepts I	3
SDB107*	Stick Framing and Building Concepts II	3

Second Semester

ENG108	Technical Writing	3
HIS205	Architectural Style and Construction in New England	3
SDB102*	Timber Frame Craftsmanship I	3
SDB104*	Timber Frame Craftsmanship II	3
SDB105*	3D Modeling for Construction	3

Summer session

SDB150*	Residential Construction Apprenticeship	5
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Third Semester

COM105	Interpersonal Communication	3
SDB130	Construction Details	2
SDB207*	Finish Carpentry	2
SDB209*	Construction Supervisor	3
WSC110	Wood Science	3
_____	Social Sciences Elective	3

Fourth Semester

SDB202*	Residential Building Codes	3
SDB210*	Green Building Codes	1
SDB250*	Commercial Construction Apprenticeship	5

Total Credits **60**

CRITERIA FOR GRADUATION

Students must complete 60 credits in the Sustainable Construction Associate in Applied Science degree program, 30 credits in the Framing and Craftsmanship Certificate program, or 27 credits in the Carpentry and Building Science Certificate program, and achieve a minimum grade of "C" in all core courses (*). Students must attain a final GPA of 2.0 or higher.

SUSTAINABLE CONSTRUCTION

Associate in Applied Science Degree

DESCRIPTION

The Sustainable Construction program provides students with the technical knowledge and hands-on skills needed to gain employment across many areas of the construction industry. Timber frame carpentry with its fine joinery techniques is the framework through which our students develop as craftsmen while our complimentary stick framing course acclimates students to efficient, industry-standard framing methods. Students will complete two paid apprenticeships: one specializing in residential construction, the other specializing in commercial construction. Basic hand and power tool proficiency, proper maintenance, and safe work practices are stressed at all times. Students will also study modern building code, plan reading, drafting, and construction management. Graduating students will hold multiple industry certifications.

A cornerstone of this curriculum is our emphasis on sustainability and the need to raise design and build standards throughout Maine and New England. Our program reinforces the importance of considering a structure's lifespan through smart design, structural integrity, and historic preservation. The value of sourcing materials locally, designing a tight, energy efficient building envelope, and generating renewable energy are all practically examined. All of this is put into the context of the American building and carpentry tradition through the Architectural Style and Construction in New England course.

PROGRAM MISSION

To prepare students to be lifelong learners and help them achieve various professional and personal goals that may arise over a lifetime. Upon graduation, students will be poised to enter the workforce as entry-level craftsmen, builders, and technicians or transfer to other college and university programs. Our graduates will develop as skilled professionals who value both tradition and innovation at the heart of sustainable building practices today, and who actively participate in reinvigorating Maine's construction industry.

EDUCATIONAL OUTCOMES

Program Goals and Student Learning Outcomes

Upon successful completion of the Sustainable Construction program, a graduate is expected to:

- Practice the 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 while listening and responding appropriately to a variety of building construction situations.
- Think critically and use their acquired analytical skills to solve problems encountered in a building construction environment.

COLLEGE ADMISSION

General admission guidelines can be found on [page 34](#) in the catalog.