CARPENTRY AND RENOVATION TECHNIQUES

Program Outline

Major: CRNT
Length: 1 Year
Delivery: 2 Semesters
Credential: Ontario College Certificate
Effective: 2017-2018
Location: Barrie, Owen Sound
Start: Fall (Barrie, Owen Sound)

Description
Students gain occupational skills for employment in the construction and renovation industry. Students practice lot layout, concrete formwork, framing, demolition, renovations, interior and exterior finish and sustainable construction techniques. Theory and applications of safety standards, building codes, blueprint reading, energy efficiency, and environmental practices are studied. Students learn to interpret the Ontario Building Code as it applies to renovations and new construction. Focus is on the residential sector. Basics of entrepreneurship are presented.

Career Opportunities
Our graduates enjoy success as employees in residential, commercial and industrial construction, as well as the renovation field. Potential opportunities may include General Carpenter, Framer, Formwork Carpenter, Renovator, or Trim Carpenter. They may wish to discuss eligibility for apprenticeship credits into the General Carpentry apprenticeship program with the Ministry of Advanced Education and Skills Development. Graduates may choose to add more specialized skills such as Cabinetmaking, Building Inspection, Interior Design, or continue their education in the Architectural field.

Program Learning Outcomes

The graduate has reliably demonstrated the ability to:

- identify and use strategies to enhance work performance and continued learning to keep pace with industry changes;
- identify and adhere to established health and safety practices that apply to specific job sites, in accordance with current legislation and regulations;
- perform building construction and renovation tasks in compliance with contracts, the Ontario and/or National Building Codes, applicable laws and industry's ethical practices;
- work in accordance with established sustainability practices;
- communicate and collaborate with diverse clients, supervisors and tradespersons to complete projects on time and to maintain effective working relationships;
- assist with maintaining accurate project documents and use computer technologies to support building construction and renovation projects;
- solve on-site trade-related building and renovation problems by applying principles of basic technical mathematics and building science;
- select, maintain and safely operate hand tools, and portable and stationary power tools, to efficiently complete building construction and renovation tasks;
- assist with the completion of building and renovation stages, from site layout and footings to the application of interior and exterior finishes, according to specifications;
- assist in the preparation of material estimations according to building construction and renovation project documents;
- employ environmentally sustainable practices;
- apply basic entrepreneurial strategies to identify and respond to new opportunities.

The Program Progression:

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Fall Intake - Barrie, Owen Sound

Sem 1 | Sem 2
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Fall  | Winter
2017  | 2018
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Admission Requirements:

OSSD or equivalent with
- Grade 12 English (C or U)

Mature students, non-secondary school applicants (19 years or older), and home school applicants may also be considered for admission. Eligibility may be met by applicants who have taken equivalent courses, upgrading, completed their GED, and equivalency testing. For complete details refer to: www.georgiancollege.ca/admissions/policies-procedures/

Applicants who have taken courses from a recognized and accredited post-secondary institution and/or have relevant life/learning experience may also be considered for admission; refer to the Credit Transfer Centre website for details: www.georgiancollege.ca/admissions/credit-transfer/

Additional Information:
Students who successfully complete this program, as well as a basic welding course may qualify for exemption Level 1 Apprenticeship, upon approval of Ministry of Advanced Education and Skills Development (MAESD) and their Employer.

Additional Opportunities:
Working at Heights certification will be offered and recommended to students (fee involved), but not required.

Graduation Requirements:
10 Mandatory Courses
1 Communications Course
1 General Education Course

Graduation Eligibility:
To graduate from this program, the passing weighted average for promotion through each semester, and to graduate is 60%. Additionally, a student must attain a minimum of 50% or a letter grade of P (Pass) or S (Satisfactory) in each course in each semester unless otherwise stated on the course outline.

Mandatory Courses
CART1011 Carpentry Fundamentals
CART1012 Applied Carpentry Fundamentals
CART1013 Construction Practices
CART1014 Formwork and Framing
CART1015 Finish Carpentry Fundamentals

CART1016 Interior and Exterior Finishes
CART1017 Advanced Framing and Sustainability
CART1018 Blueprint Reading
CART1019 CAD Drafting
MATH1007 Mathematics Techniques

Communications Course
To be selected at time of registration from the College list, as determined by testing.

General Education Course
To be selected from College list

Course Descriptions:

CART1011 Carpentry Fundamentals 56.0 Hours
Students study components that make up a construction project, with a priority on standard safety procedures. They are introduced to the laws and regulations that govern construction within Ontario. Classroom topics include measurement, layout, assembly, and building code applications for the residential and renovation sectors. Students are able to research, analyze and select appropriate materials for various construction applications.

CART1012 Applied Carpentry Fundamentals 84.0 Hours
Students are provided with an opportunity for practical application of CART1011 Carpentry Fundamentals, which involves the safe use of hand tools, portable power tools and stationary power tools, materials and methods, with emphasis on the Ontario Building Code through site layout, framing and forming, and a demolition project.

CART1013 Construction Practices 70.0 Hours
Students further their knowledge of wood-frame construction, site preparation, building layout, a variety of footing, foundation and other concrete applications, engineered building products, exterior doors and windows, a variety of roof styles, and a look at post and beam construction. Energy efficiency is emphasized. Sustainable construction techniques, entrepreneurship and construction management are explored. Hoisting and rigging, and scaffolds and ladders are introduced.

CART1014 Formwork and Framing 84.0 Hours
Students are provided with opportunity for practical application of CART1013 Construction Practices. Basic survey skills are practiced. Residential concrete forming is assembled. A framed structure is completed, with emphasis on floor, wall and roof framing. The safe use of power tools, ladders and scaffolds is a principal focus.

CART1015 Finish Carpentry Fundamentals 84.0 Hours
Students study the finishing stages of residential construction. Topics include metal framing, drywall, interior finishing, stairs, exterior finishing, fences and decks. Renovations and retrofit are also researched.

CART1016 Interior and Exterior Finishes 84.0 Hours
In this practical course the students will hang and finish drywall, install interior doors, and install a variety of interior trim and exterior finishes. Suspended ceilings will also be studied.
C- CART1012 Applied Carpentry Fundamentals

CART1017 Advanced Framing and Sustainability 84.0 Hours
Students frame dormers, and are introduced to passive solar design, as well as energy efficiency driven upgrades and emerging green technologies. Fences and decks are also studied. Personal safety and safe environmental practices are reinforced.
C- CART1012 Applied Carpentry Fundamentals

CART1018 Blueprint Reading 42.0 Hours
Students read and interpret architectural drawings for residential and light commercial structures. Students demonstrate a comprehension of design and the building code through the study of plan, elevation, and section views.

CART1019 CAD Drafting 42.0 Hours
Students interpret architectural drawings, applying these skills through the use of software, to develop house plans that meet specifications of the building code.

MATH1007 Mathematics Techniques 42.0 Hours
In this course, students consolidate and review the principles and techniques of mathematics required for the technical trades. Emphasis is placed on developing and promoting the use of mental arithmetic, estimation skills, problem solving, and reasoning skills.

Course Description Legend
P = Prerequisite; C = Concurrent prerequisite; CO= Corequisite

Information contained in College documents respecting programs is correct at the time of publication. Academic content of programs and courses is revised on an ongoing basis to ensure relevance to changing educational objectives and employment market needs. The college reserves the right to add or delete programs, options, courses, timetables or campus locations subject to sufficient enrolment, and the availability of courses.