

Sustainable Building Design and Construction



Program Location:	Haliburton
Program Code:	SBD
Co-ordinator:	Patrick Marcotte
Credential:	Ontario College Certificate
Start Date:	May 06, 2013
Tuition Fees:	\$3,995.35 per semester. Tuition and fees subject to change.

The Sustainable Building Design and Construction program is an intensive, hands-on experience that puts students at the centre of the construction of a full-sized and cutting-edge sustainable building.

Program Highlights

Fleming is the first College in Canada to offer a Sustainable Building Design and Construction program. The 20-week program, based out of the Haliburton Campus, is an intensive, hands-on experience where approximately 26 students from across Canada will design and construct a new sustainable building, showcasing green building technologies and new energy-saving techniques.

In the new project starting in April 2012, students will partner with the Abbey Gardens Community Trust in the construction of a Creative Exchange Mart.

Located in West Guilford, Ontario, this unique facility will be a place for local growers, artisans and Haliburton Highland's residents to sell goods produced and created in the local region.

The Creative Exchange Mart will feature a safety certified kitchen for food artists to prepare their products, an area that will showcase the works of local artisans, quilters, weavers, spinners, authors and musicians and a green roof will be the home for a few goats to attract visitors from afar.

The project is envisioned to include greenhouses, solar power generation, aquaculture, flower gardens, composting and an expansion of the existing vegetable gardens. It is intended that the site would also offer environmental education opportunities and a venue for the performing arts.

Established in 2005, students in the Sustainable Building Design and Construction program have successfully completed a wide variety of sustainable projects including the ones listed below.

Past Projects:

- **2011 Camp Maple Leaf for Military Families, Jacob's Island, Pigeon Lake**
- 2010: Habitat for Humanity LEED Platinum Certified Home
- 2009: Camp Kawartha Environment Centre
- 2008: Madoc Performing Arts Centre
- 2007: R.D. Lawrence Place
- 2006: Classroom for Kinark Outdoor Centre
- 2005: Haliburton 4C's Food Bank and Thrift Shop

What You Learn

The curriculum of this program is unique in the world. Rather than focusing on specialization within the sustainable building field, we hope to graduate people who are strong generalists.

- You get direct experience with the design and complete construction of a project
- You will take on direct responsibility for one structural, one mechanical and one administrative role within the project
- From design considerations to pricing and sourcing materials to installation in the building, the students are fully responsible for their role

Success Stories

"Starting with the first day after the program ended, I have worked on different construction projects including: timber framing, carpentry, conventional building, passive solar construction of a greenhouse, plumbing and electrical work, earth wall partitions, interior and exterior natural finishes, energy efficient retrofits, plaster repairs on existing straw bale buildings, and hosting natural building workshops in Canada and Japan. Plus more work to come in the next year with more plastering projects, workshops, natural finishes for a wider range of customers than before, and participating in the planning of a sustainable housing project for the county of Haliburton."

-Sebastian Rennel

Career Opportunities

Program graduates will have a range of career options, depending upon their background:

- employment with sustainable building companies in Ontario, across Canada and internationally
- work with renewable energy, heating, cooling and ventilation companies, indoor air quality specialists, professional designers, water and waste treatment or ecological renovations companies
- employment with conventional construction companies that provide "green building" options
- self-employment as a builder or designer of sustainable homes or as a specialist in a particular field
- work in product or service development related to sustainable building
- employment with government housing agencies, non-profit housing organizations, international development agencies, or in public awareness and education.

Minimum Admission Requirements

OSSD with the majority of credits at the College (C) and Open (O) level, including:

- 2 College (C) English courses (Grade 11 or Grade 12)
- Or a current Certificate of Qualification as a Carpenter - General.

Mature Students

If you are 19 years of age or older before classes start, and you do not possess an OSSD, you can write the Canadian Adult Achievement Test to assess your eligibility for admission.

If you are interested in starting this program in Spring 2012, apply through ontariocolleges.ca and use the application for the 2011-2012 application year.

Additional Costs

Plan on spending approximately \$700 for books and supplies.

Curriculum for Sustainable Building Design and Construction

Semester 1

Code	Course Name	Hours
CNST 47	Architecture and Design	45
CNST 75	Construction for Sustainable Building: Mechanical	157.5
CNST 74	Construction for Sustainable Building: Structural	157.5
CNST 48	Contracting and Project Management	45
MECH 156	Design for Sustainable Building: Mechanical	90
CNST 73	Design for Sustainable Building: Structural	90
CNST 72	Project Administration for Sustainable Building	135
MECH 114	Services and Mechanical Systems for Sustainable Building	45
ENVR 34	Sustainable Building Design	45
ENVR 33	The Natural, Sustainable and Green Building Movements	45

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