



YOUR SKILLS,  
YOUR FUTURE.

# SUSTAINABLE ENERGY ENGINEERING SHSM

Elsie MacGill  
Secondary School

## PROGRAM OVERVIEW

Energy is an emerging and expanding sector that encompasses generation, distribution and consumption, including research and development, design, construction, insulation, and maintenance. Core industries in this sector include renewable and alternative energy sources such as wind, solar and biomass, as well as fossil fuels and energy efficiency.

The program will help students explore how they can enter fields in Sustainable Energy Engineering. This SHSM will help students relate to, fit in and have a competitive edge in post-secondary programs of interest. Through unique cross-curricular opportunities both within and outside of classes, students will develop the systems thinking skills needed to nurture a holistic view of fields in energy and environmental sciences.

### Experiential Learning Opportunities

- Trips to various energy related organizations and associations
- Presentations related to different careers within the sector
- Cross Curricular projects related to real world sustainable energy
- Trips to colleges and universities
- Connecting to the UN Sustainable Development Goals
- Experiences related to math, coding and design thinking processes
- Cooperative education courses in related industry of interest

### Related Careers

- Architects
- Energy Policy Advisors
- Electrical & Electronics Engineer
- Environmental Assessor
- Energy modeling specialists
- Land Surveyor
- Mechanical Engineer & Technician
- Power System Operator
- Wind Turbine Material Controller
- Civil Engineer
- Construction Managers
- ... and more

### Possible Certifications

- CPR Level C / AED Training & Standard First Aid
- WHMIS
- Working at Heights
- Project Management
- Industry Leadership Skills
- Renewable Energy
- MicroBits and ARDUINO
- Geographic Information System
- Watershed Management
- Surveying and Mapping
- Design Thinking Framework

# CREDITS

## Course Package

Each SHSM program offers students a bundle of 8 - 10 credits. These courses are regular Ontario secondary school courses that allow students to work towards their Ontario Secondary School Diploma, but have been bundled as the most relevant courses to prepare students for a future in the energy sector.

### The Bundle Includes:

- **4 “major” credits** related to energy in grade 11 and 12 including Mandatory SVN3M
- **Supporting credits**, which include Contextualized Learning Activities (opportunities for students to learn the subject in the context of the fitness and health sector):
  - > 1 Grade 12 English credit
  - > 1 Grade 11 Math credit
  - > 1 Grade 11 or 12 Science, Business Studies or Social Sciences credit
  - > 2 Cooperative Education credits to experience life in the energy sector

### Applying to the Energy Engineering SHSM:

All students in Halton are able to attend the Sustainable Energy Engineering SHSM at Elsie MacGill S.S in Grade 11 or Grade 12. Each student’s goals will be assessed and course selection will be determined based on individual needs. If you want to learn more about this program:

### If you want to learn more about this program:

- Check out the Energy SHSM at **haltonpathways.ca**
- Express interest on [myblueprint.ca/halton](http://myblueprint.ca/halton)
- Speak with your Guidance Counselor in Student Services
- Come to a Pathways Planning Information Evening (see [haltonpathways.ca](http://haltonpathways.ca) for dates and times)

## CONTACT

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**ELSIE MACGILL  
SECONDARY SCHOOL**

