



George Brown College Wind Turbine Technician Program

Fast Facts

About the program

- Self-directed program is delivered online and asynchronously
- There are no post-secondary academic prerequisites required for enrollment
- Program includes 14 modules (courses)
- Average completion time of program is 32 weeks of part-time study
- Initial registration is only \$580 for the first module, web-based curriculum, and 3D Wind Turbine Simulator, which students keep after completion of program
- Complete program cost is \$1,750
- Technical and content support is available seven days a week
- <https://www.windtechnician.com>

About the 3D Wind Turbine Simulation software

The Wind Turbine Technician program includes three proprietary simulation software products: 3D Lab, CircuitLogix Pro, and PLCLogix 500.

- The 3D Lab simulation software is intended to introduce the fundamentals of electricity and basic electronics using "real-world" components in a user-friendly lab environment.
- The CircuitLogix simulator is a more advanced electronics simulation package that is used to enhance the students' knowledge of wind turbine communication systems, as well as power electronic devices and circuits, including converters, inverters and AC generator control systems.
- PLCLogix 500 and its state-of-the-art 3D Wind Turbine world allows students to adjust parameters such as wind speed and direction and gain a much greater understanding of how Programmable Logic Controllers (PLCs) can autonomously control a wind turbine's operation.

Key features of the 3D Wind Turbine Simulator:

- **Real-Time Visualization:** Users can analyze wind patterns from every angle to understand the complex interactions between wind and turbine.

- **Interactive operation:** Modify blade pitch, wind speed, wind direction and other critical parameters to see their effects on turbine efficiency and power output.
- **Pre-Built Lab Projects:** Includes pre-built lab projects presented within the 3D Wind Turbine simulation world, providing a rich resource for practical learning and experimentation.
- **Pitch and Yaw Ladder Logic Applications:** Illustrates how PLCs are used to provide automatic control of wind turbines.

3D Wind Turbine Simulation demo videos

- <https://youtu.be/LpBykWU6TYU?si=qPv64Mn-IKJqb9UH>
- <https://youtu.be/qG9m57R2ITw?si=S4rHXWiNqYrV-OWC>
- <https://youtu.be/1ywTSEDTSQ8?si=qFb65nLxLP5MTq8A>
- <https://youtu.be/lkc8uPyutmY?si=RDzzClmsHd52-mAB>
- Images: <https://drive.google.com/drive/folders/1pEP6bc8OCMAjm7zUPDO58T-jJO0zPFnG?usp=sharing>

About the Wind Energy Sector

- Wind energy is one of the fastest-growing energy sources in the world. The Global Wind Turbine Market is [forecasted](#) to reach a valuation of USD 107.1 billion by 2032, a significant increase from its 2022 valuation of USD 58.5 Billion.
- Wind generation is expected to more than double by 2030. According to Global Wind Energy Council's [Global Wind Report 2023](#), global installed wind generation capacity has jumped from 8.2 gigawatts (GW) in 2002 to 906 GW in 2023.
- [GWEC Market Intelligence](#) also forecasts 680 GW of new capacity in the next five years (2023-27), representing 136GW growth per year, with predictions that 1221 GW of new global wind capacity will be added by 2023.
- The Council estimates that over half a million new wind [technicians](#) will be needed by 2026 to service this new capacity.
- Wind energy currently supplies 10% of all the electricity in the U.S. and in [Canada 5%](#).
- National wind energy capacity [grew by 11.3%](#) across Canada in 2022
- Canada has 6,698 wind turbines ([interactive map](#)).
 - Ontario: 2,663
 - Quebec: 1,991
 - Alberta: 900
 - Nova Scotia: 310
 - British Columbia: 292
 - Saskatchewan: 153
 - Manitoba: 133
 - New Brunswick: 119
 - Prince Edward Island: 104
 - Newfoundland & Labrador: 27

- Northwest Territories: 4
- Yukon: 2

About George Brown College's distance learning

George Brown College (GBC) is the third largest provider of distance education courses in North America. With over 70,000 full- and part-time students, GBC has 3 main campuses in Toronto. The GBC School of Distance Education (SDE), framed by its own mission and values, was formed in 2014 and its virtual campus provides on-line support to over 15,000 distance education students in 40 countries.

George Brown College's other distance learning technician programs:

- EV Technician
- PLC Technician
- PLC II Technician
- Electronics Technician
- Electromechanical Technician
- Automation Technician
- Robotics Technician

www.GeorgeBrown.ca