Renewable Generation Technology Degree Program

This program, available on-campus and online, is designed for entry-level employment in the areas of wind, solar, geothermal, fuel cell, biomass, hydro and tidal power generation. Graduates of the program will have the technical skills and knowledge needed to gain employment in this rapidly developing industry. Included is an understanding of hydraulic systems, electrical and electronics knowledge and extensive troubleshooting on several types of systems. Graduates will also possess the tools to stay abreast of the expected developments in the area of renewable generation of electricity. Students have the option to enter into the Bachelor of Applied Science in Energy Management degree, also available entirely online, upon completion of this program.
The Renewable Generation Technology program provides students an introduction to many sources of renewable power including wind, solar, fuel cells, and others. The program includes basic operation principles as well as maintenance and troubleshooting procedures. Graduates will be prepared to work in wind turbine "farms", solar generation facilities, commercial or industrial plants, or in any other industry where knowledge of many types of systems and control equipment is required.

Those successfully completing the program will have the knowledge to enter the workforce in the area of renewable systems or other industrial plants. Topics included in the program are electronics, mechanics, hydraulics, programmable logic controllers, motor control and many others that are commonly found in renewable and industrial plants. This program will also include extensive troubleshooting of the systems that are taught.

Students choosing to complete all courses within the Renewable Generation Technology program can follow the recommended sequence or create a customized schedule based on their needs. Students should consult with their academic advisor prior to registration for academic advice based on individual educational plans.

**Recommended Sequence - 1st Semester**
- ENRT 101 Introduction to Energy Technology
- ENRT 105 Safety, Health & Environment
- ENRT 107 Mechanical Fundamentals
- ENRT 110 Plant Equipment & Systems

**Recommended Sequence - 2nd Semester**
- ENRT 112 Print Reading
- ENRT 103 Applied Math
- ENRT 104 Electrical Fundamentals
- ENRT 116 Instrumentation & Control

**Recommended Sequence - 3rd Semester**
- RENG 210 Safe Work Practices
- RENG 216 Advanced Mechanicals
- RENG 213 Hydraulic Fundamentals
- RENG 218 Solar & Distributed Grid Systems

**Recommended Sequence - 4th Semester**
- RENG 221 Applied Electronics
- RENG 224 Automation & Control
- RENG 226 Commercial Wind Systems
- RENG 228 Renewable Applications & Troubleshooting

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For more information on the Renewable Generation Technology program, visit our website at [bismarckstate.edu/energy](http://bismarckstate.edu/energy). Contact us at 701.224.5651 or 800.852.5685.

This program is offered online or on-campus. Online courses require brief on-campus labs or shadowing at an approved facility.