

RENEWABLE ENERGY CERTIFICATE PROGRAM

College: College of Science and Health

Department: Physical Sciences

Student Type: Non Degree Seeking Undergraduate

Degree: Certificate

Campus: Lisle Campus

Renewable energy is rapidly evolving into a suitable alternative to conventional energy resources. There is an open market demand for engineering professionals with training in renewable energy technologies and understanding of public policy. The Certificate in renewable energy offered at BenU meets the requirements for the profile of the next-generation specialists by offering a combination of theoretical and hands-on experience beyond the traditional undergraduate physics or engineering courses. This Certificate enables understanding of the scientific and operational principles behind various renewable energy technologies, including solar photovoltaics and wind energy. It allows for understanding the public policy on renewable energy and acquiring skills in analyzing the current energy markets.

Renewable Energy Certificate

Code	Title	Hours
IDS 2204	Catholic/Benedictine Intellectual Traditions: Sustainability/Stewardship and Global ¹	3
PHYS 3234	Materials Science	3
ENGR 3330	Renewable Energy Engineering I	3
ENGR 3331	Renewable Energy Engineering II	3
Total Hours		12

Applicants must demonstrate proof of completed coursework in College Physics and General Chemistry, or the equivalent, and must meet with an Engineering program advisor prior to registering and upon completion of the certificate courses.

¹ Energy and Environmental Sustainability.

Objectives

1. Demonstrate knowledge in concepts of engineering (University-level SLO 1 and 2) Performance indicators:

- Demonstrate knowledge of engineering design principles
- Demonstrate knowledge of electronics

2. Demonstrate the ability to solve problems using engineering principles (University-level SLO 1 and 3)

Performance indicators:

- Communicate engineering concepts in writing.
- Demonstrate proper data collection techniques.

3. Engagement with engineering outside of the classroom (University-level SLO 3)

Performance indicators:

- Communicate research findings to audiences beyond the classroom

University-level SLOs:

1. Disciplinary competence and skills
2. Critical and creative thinking skills
3. Analytical skills
4. Personal Development