



RENEWABLE ENERGY INTRODUCTION AND OVERVIEW

Course Number	RE 103
Course Name	RENEWABLE ENERGY INTRODUCTION AND OVERVIEW
Credit Value (Breakdown of theory and lab credits)	3, 3T+0S
Catalog Course Description	In this course you will view the past, present, and future fields of renewable energy used to: heat, light, and cool buildings; produce domestic hot water; power, heat, and cool industrial processes; provide transportation; and provide communications. You will cover many systems: passive, active, and photovoltaic solar; wind; micro-hydro; wave; geothermal; biomass; fuel cells; human and animal power; and hydrogen. You will also cover vehicle fuels, such as ethanol, biodiesel, CNG, along with electric and hybrid systems, regenerative braking, and flywheels. Classes will be conducted both on- and off-campus. <i>Prerequisite:</i> ENG 108N and MATH 100N. (3, 3T+0S)
Student Learning Outcomes/Objectives /Competencies of the Course	<ul style="list-style-type: none"> • List and generally explain the main sources of energy and their primary applications in the US, and the world. • Describe the challenges and problems associated with the use of various energy sources, including fossil fuels, with regard to future supply and the environment. • Discuss remedies/potential solutions to the supply and environmental issues associated with fossil fuels and other energy resources. • List and describe the primary renewable energy resources and technologies. Describe/illustrate basic electrical concepts and system components. • Convert units of energy—to quantify energy demands and make comparisons among energy uses, resources, and technologies. • Collect and organize information on renewable energy technologies as a basis for further analysis and evaluation.
College-Wide Student Learning Outcomes	Cultural Competence