

# ETP: ENGINEERING TECH: POWER

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Courses	Credit(s)	Contact	Lab
ETP 1501C. INTRODUCTION TO ALTERNATIVE AND RENEWABLE ENERGY. INTRODUCTION TO ALTERNATIVE AND RENEWABLE ENERGY This course will introduce students to a variety of energy sources such as nuclear, wind, geothermal, solar, hydro, and biodiesel.	3	2	2
ETP 2402C. PHOTOVOLTAIC SYSTEMS. PHOTOVOLTAIC SYSTEMS Prerequisite: Minimum grade of C in ETP 1501 or department approval This course examines the direct conversion of solar energy to electricity. Students will be introduced to photovoltaic cell physics, different photovoltaic cell technologies, photovoltaic devices and systems, and photovoltaic energy storage systems. The hands-on experience will reflect topics discussed.	3	2	1
ETP 4240C. POWER ELECTRONICS. POWER ELECTRONICS Prerequisite: EET 1141C and a minimum grade of C in EET 3086C An advanced level course accompanied by hands-on experiments covering the topics of control and conversion of electrical power with high efficiency. Circuits such as power converters, inverters, rectifiers, cycloconverters, and other commonly used applications will be discussed. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement. (Special fee: \$53.00).	3	3	1
ETP 4241. POWER SYSTEMS AND ENERGY CONVERSION. POWER SYSTEMS AND ENERGY CONVERSION Pre-requisites: Minimum grade of C in EET 3086C A study of generation and transmission of electric energy. Topics include DC and AC generators and motors, transformers, efficiency of electrical machines, three-phase systems, energy transmission, and generation plants. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement.	3	3	0
ETP 4440. PHOTOVOLTAIC TECHNOLOGIES. PHOTOVOLTAIC TECHNOLOGIES Prerequisites: EET 1025C or EET 1036C and minimum grade of C in EGN 3428 Students will use PSpice and LabVIEW to analyze and simulate the performance of PV systems. Topics covered will be solar cell technological processes, PV systems engineering, characterization and testing methods, sizing procedures, economic analysis, and instrumentation. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement.	3	3	0