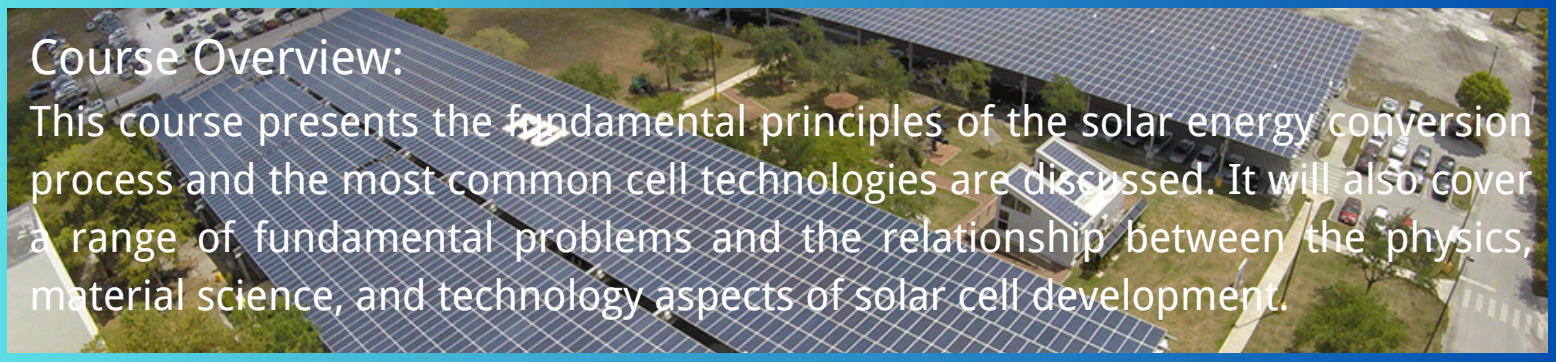
Applied Photovoltaics



Course Overview:

This course presents the fundamental principles of the solar energy conversion process and the most common cell technologies are discussed. It will also cover a range of fundamental problems and the relationship between the physics, material science, and technology aspects of solar cell development.

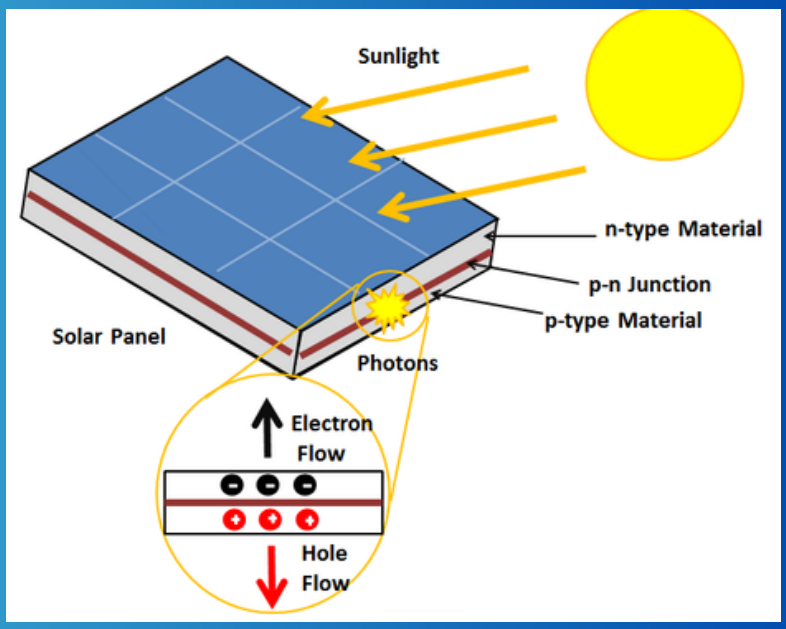
Spring 2024

EEL 4930 U09 Sp Top Elec Eng
EEL 5935 U09 Adv Spec Topics

January 08--April 20
Tuesday & Thursday
12:30 pm--1:45 pm

Room: EC 1113

Prerequisites: EEL 3110C



Course Topics

- PV Introduction and Background
- Semiconductors and p-n junctions
- The Behavior of Solar Cells
- Cell Properties and Design
- Thin-Film Compound Semiconductors
- PV Cell Interconnection and Module Fabrication
- PV System Components(Balance of System)
- Design of Grid-Connected PV Systems
- Specific Purpose PV Applications

Speakers will be invited from Florida Power Light (FPL)

Course Objectives

- List and describe the balance of system components of a solar energy photovoltaic system
- Discuss remedies/potential solutions to the supply and environmental issues associated with photovoltaics, compared to other energy sources
- Simulate, describe, and illustrate basic electrical concepts and system components of a photovoltaics system
- Design, build, and demonstrate a photovoltaic power generation system that delivers power to and drives a load

For more information, contact Prof. Deidra R. Hodges, ***dhodges@fiu.edu***