



E6 222 Jan 2:1

Design of photovoltaic systems

Instructor

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Teaching Assistant

Email:

Department: Electronic systems engineering

Course Time: Tue, Thu, 9-10am

Lecture venue: DESE Classroom

Detailed Course Page:

Announcements

Brief description of the course

The emphasis of this course is on design of photovoltaic systems. The students should have a background in power electronics in order to successfully understand the course. The course discusses power interfaces between the photovoltaic source and the various loads.

Prerequisites

Electric circuits, power electronics.

Syllabus

PV cell, characteristics, insolation, irradiance, sizing PV, sizing batteries, interfacing PV and batteries, MPPT, MPPT circuits, charge controller, interfacing dc loads, interfacing ac loads, peltier cooling applications, water pumping applications, single phase and three phase grid connection.

Course outcomes

To enable the student to understand the PV source and how to interface it to real world applications. To enable the student to design such power interfaces.

Grading policy

Labs 30%, tests 30%, final exam 40%

Assignments

Resources