

Late Course Addition for Fall 2015:

Solar Photovoltaic System Engineering BRAE 470/471

Art MacCarley, Ph.D., PE., Professor, BRAE and EE, and
Justin Hitchcock, Regional Director, Grid Alternatives

Theory, design, analysis, permitting and installation of solar photovoltaic systems.

Open to all engineering and science students. Co-requisite lecture and project-based laboratory. Listed on PASS as:

BRAE 470-1 6701 Lec (3) MWF 8:10-9:00 AM

BRAE 471-1 6702 Lab (1) F 12:10 – 3:00 PM

Web: <http://www.loragen.com/Solar/public.html/>



Course topics include the physics of solar energy, solar site planning, electrical and mechanical design, grid-tie and off-grid systems, regulatory approval and permit processes, government and utility incentives, financial return-on-investment analysis, component specification and practical installation experience.

The project-based laboratory will involve the students in the installation of a community service grid-tie system and a campus off-grid system.

No textbook. Some individual research or skill-building may be required. Considerable time outside of the scheduled laboratory meeting will be required, including a full weekend for the community service project and a half-day field trip on a Friday TBD. Some course conflicts allowable; please contact instructor.

No formal prerequisites, but knowledge of lower division physics (electricity, energy and power) and strong work ethic is assumed. Contact instructor if concerned about preparation (amaccarl@calpoly.edu).

