**Contra Costa College**

Phone: (510) 235-7800

Catalog: http://www.contracosta.edu/schedulecatalog/Shared%20Documents/PRINTED%20CLASS%20SCHEDULE%20Documents/Spring2012Schd-FinalAll.pdf

Website: [www.contracosta.edu](http://www.contracosta.edu)

**Alternate Energy Systems – Certificate**

**Program Information**

Covers present day energy systems, and then cover an in-depth analysis of the design and installation of alternate energy systems. Alternate energy systems to be covered in detail are solar water heating systems, solar electrical systems, wind electrical systems, wind mechanical systems, small hydro-electrical systems, and unique conservation methods. Also presented are topics on geothermal energy, fuel cells, and biomass systems. Additional topics include applications of alternate energy in transportation, industrial, commercial, and residential systems.

**Career Opportunities**

Electronic engineer technician, maintenance supervisor, network computer repair technician, telephone, computer, or network communication equipment or manufacturing plan technician

**Alternate Energy – Classes**

**CCT-120 Introduction to Alternate Energy Systems**

This course will cover present day energy systems, and then cover an in-depth analysis of the design and installation of alternate energy systems. Alternate energy systems to be covered in detail are solar water heating systems, solar electrical systems, wind electrical systems, wind mechanical systems, small hydro-electrical systems, and unique conservation methods. Also presented are topics on geothermal energy, fuel cells, and biomass systems. Additional topics include applications of alternate energy in transportation, industrial, commercial, and residential systems

**CCT-130 Photovoltaic Systems Design and Installation**

This course will show students how to do solar site evaluations, electrical load calculations, solar system size calculations, and installation techniques. This course will help students design and install their own solar system and obtain skills for employment.

**Computer Science – Associates (Transfer)**

**Program Information**

The Computer Science (COMP/COMSC) program prepares students to major in Computer Science, Computer Engineering, Information Systems, Information Technology, or Software Engineering at four-year colleges and universities. COMP/COMSC assists professionals to refine or update their computer science related skills.

**Career Opportunities**

COMP/COMSC is a component in the preparation of student for careers in fields including: Computer programmer, software engineer, systems analyst, chief information officer, civil engineer, structural engineer, mechanical engineer, electrical engineer, computer operator, computer service technician, operations analyst, computer security specialist, technical support specialist, hardware analyst, quality assurance analyst, microcomputer support specialist, semiconductor design analyst or technician, network technician, robotics technician, digital design analyst, CAD/CAM analyst

**Upon completion of this program, the student will be able to:**

• analyze development projects and divide them into smaller production tasks.

• build a project while utilizing the project development model.

• manage a programming project, both individually and as a member of a team, from initial concept through design, programming, debugging, testing, and deployment.

• evaluate a program to determine how it will meet the needs of its intended audience.

• design, write, test, debug, and implement computer programs in a structured language, a low-level language, and an object-oriented language.

• create programs utilizing both Windows and Linux operating systems.