SIERRA COLLEGE
ESS30 BEGINNING PHOTOVOLTAIC SYSTEMS
FALL SEMESTER 2013 COURSE CALENDAR

Revised: 8/25/2013

Week of	Lecture Topics	Homework	Lab Activities	Comments
August 26 Week 1	*Introduction and Course Syllabus* *Student Survey* *Discussion of Careers in the Solar Industry*	*Safety Handout* *Chapter 1 – Intro to PV Review Questions #1-8, pg. 27*	*Introduction to lab schedule.* *Safety test* *Pre-test* Chapter 1 – discussion (ppt.)	
September 2 Week 2	*Doing an Electric Load Analysis* *Review CD ROM in text*	*Chapter. 3 – p. 87 (prep. For Load Analysis Worksheet)* *Home Electrical Load Analysis Worksheet*	*Lab Activity #1: A. C. Electricity and Sustainability Exercise (How to determine loading of electrical appliances)*	***No Class 9/2/13 - Holiday, Labor Day***
September 9 Week 3	*Energy Efficiency* *Basic Electrical Concepts & The Electrical Grid*	*Home Electrical Load Analysis Worksheet (cont'd) - Energy Efficiency Audit*	*Energy Efficiency Audit*	*EE Audit Photos* *Bring in two small appliances for next Lab*
September 16 Week 4	*Series & Parallel Sources and Loads*	*Home Electrical Load Analysis Worksheet (concluded)* *SP Sources & Loads worksheet*	*Lab Activity #2: D.C. Electricity and Series & Parallel Sources and Loads*	
September 23 Week 5	*Intro to PV Systems Diagrams & Photos* *Solar Radiation & Insolation*	*Chapter 2 -- Solar Radiation* Review Ques. # 1-12, pg. 59	*Introduce Design Project*	***Start Design Project***

SIERRA COLLEGE
ESS30 BEGINNING PHOTOVOLTAIC SYSTEMS
FALL SEMESTER 2013 COURSE CALENDAR

Week of	Lecture Topics	Homework	Lab Activities	Comments
September 30 Week 6	*Site Surveys & Pre-Planning*	*Chapter 3 – Site Surveys & Pre-Planning Review Ques. #1-11, pg. 94*	*Lab Activity #3: Evaluating the Solar Resource* ***Ongoing: Design Project***	***Demo –** The Solar Pathfinder & Solmetric Suneye*
October 7 Week 7	*System Components & Configurations* *Cells, Modules & Arrays*	*Chapter 4 – System Components & Configurations Review Ques. #1-1, pg. 121* *Chapter 5 – Cells, Modules & Arrays Review Ques. #1-13, pg. 156*	*Lab Activity #4: Site Planning & Evaluation (using software for Solar Pathfinder and Solmetric Suneye)* ***Ongoing: Design Project***	***System Demonstrations***
October 14 Week 8	*Cells, Modules & Arrays (cont.)* *Batteries* *PV Controllers*	*Chapter 6 – Batteries Review Ques. #1-9, pg. 184* *Chapter 7 – PV Controllers Review Ques. #1-11, pg. 214*	*Lab Activity #5: Evaluation of Solar Cells, Modules and Arrays* ***Ongoing: Design Project***	
October 21 Week 9	*Inverters*	*Chapter 8 – Inverters Review Ques. #1-11, pg. 245*	*Lab Activity #6: Assembling and Testing of a Solar Photovoltaic Array*	
October 28 Week 10	*System Sizing*	*Chapter 9 – System Sizing Review Ques. #1-11, pg. 272*	*Lab Activity #7: Completing the System for a Off-Grid Battery System & Commissioning*	***Midterm Exam – Chapters 1-8 (first hour)*** ***Sat Lab Class – 11/2/13***

SIERRA COLLEGE
ESS30 BEGINNING PHOTOVOLTAIC SYSTEMS
FALL SEMESTER 2013 COURSE CALENDAR

Week of	Lecture Topics	Homework	Lab Activities	Comments
November 4 Week 11	*Mechanical & Electrical Integration*	*Chapter 10 – Mechanical Integration Review Ques. #1-12, pg. 304* *Chapter 11 – Electrical Integration Review Ques. #1-15, pg. 349*	*Saturday Lab Activity #8: Field trip*	*Review Midterm Exam*
November 11 Week 12	*Utility Interconnection* *Permitting & Inspection*	*Chapter 12- Utility Interconnection Review Ques. #1-9, pg. 373* *Chapters 13- Permitting & Inspection Review Ques. #1-7, pg. 395*	***No Lab Activity***	***No Class 11/11/13 - Holiday, Veterans Day***
November 18 Week 13	*Commissioning, Maintenance, and Troubleshooting*	*Chapter 14 - Commissioning, Maintenance, and Troubleshooting*	***No Lab Activity***	
November 25 Week 14	*Rebates*	*Chapter 15 – Economic Analysis, Handout on Rebates*	*Lab Activity #9: Rebate process* ***Ongoing: Design Project***	
December 2 Week 15	*PV System Proposals and Comparisons*		*Lab Activity #10: Class Design Project*	***Turn in Student Design Project***
December 9 Week 16	Final Exam			***Final Exam – Chapters 9-15*** *Review Final*