

Course Syllabus: **ETP1501 – Introduction to Alternative and Renewable Energy** – CRN 27008

Catalog Course Description: (3 credit hours)

This course will introduce students to a variety of energy sources such as nuclear, fossil fuels, hydrogen, biomass, geothermal, hydropower, ocean, wind, and solar.

Prerequisites: None

Class Time and Location: **Monday, 1:00 – 3:45 PM, Building 9 – Room 210**

Textbook(s): **Energy for Keeps: Electricity from Renewable Energy** by the Energy Education Group

Professor's Information:

Instructor: Dr. Hall
Office: West Campus, University Center – Room 254
Phone: (Office) 407.582.1963
Email: dhall@valenciacollege.edu
Office Hours: Posted just outside my office door and within our Blackboard online course

Student Performance Assessment:

Team Solar Suitcase Instruction Manual with Letter and Team Photo

Attendance and In Class Participation	10%		
Discussion Board Commentary Exercises	45%		
Team Solar Suitcase Instruction Manual			
With Letter and Team Photo	10%		
Team Commercial	5%	A	90 – 100 %
Team Power Point Presentation	5%	B	80 – 89 %
Team Peer Evaluation Form	5%	C	70 – 79 %
Final Exam	20%	D	60 – 69
		F	< 59 %

Important Dates:

Martin Luther King Day	January 21 st
Learning Day	February 8 th
Spring Break	March 4 th – 10 th
Withdrawal Deadline for "W" Grade	March 22nd
Final Grades Viewable in Atlas	April 30 th

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Weekly Activities:

Week	Activities	Assignments
1 (1-7)	<ul style="list-style-type: none"> Syllabus & Course Overview Video and/or Hands-on Activity 	
2 (1-14)	<ul style="list-style-type: none"> Break into Teams: <ul style="list-style-type: none"> ➤ Team Icebreaker ➤ Complete "Team Profile" table in class... ➤ Team Solar Suitcase Destination Draw ➤ Team Renewable Energy Topic Draw Nonrenewable versus Renewable Energy Technologies Our current energy usage Existing and traditional power plants (Nuclear and Fossil Fuels) Video and/or Hands-on Activity 	<p><u>Due Today:</u></p> <ul style="list-style-type: none"> Discussion Board Commentary 1 Review Chapter 1: A BRIEF HISTORY OF ENERGY
3 (1-21)	College Closed	
4 (1-28)	<ul style="list-style-type: none"> How our actions directly impact the health of our planet Energy Conservation Measures Energy Efficiency Means Video and/or Hands-on Activity 	<p><u>Due Today:</u></p> <ul style="list-style-type: none"> Discussion Board Commentary 2 Review Chapter 2: ENERGY AND ELECTRICITY
5 (2-4)	<ul style="list-style-type: none"> Solar power generation Video Personal Energy Audit to determine which personal items from home could be powered by the solar suitcase and for how long. 	<p><u>Due Today:</u></p> <ul style="list-style-type: none"> Discussion Board Commentary 3 Review Chapter 3 section on Solar Renewable Energy Resources
6 (2-11)	<ul style="list-style-type: none"> Solar power generation continues... Begin Solar Suitcase Design and Assembly Activity 	<p><u>Due Today:</u></p> <ul style="list-style-type: none"> Discussion Board Commentary 4 Research the specific developing world location that your team's solar suitcase is destined for...
7 (2-18)	<ul style="list-style-type: none"> Solar power generation continues... Finalize Solar Suitcase Design and Assembly 	<p><u>Due Today:</u></p> <ul style="list-style-type: none"> Begin working on your Team Solar Suitcase Instruction Manual with Letter and Team Photo...
8 (2-25)	<ul style="list-style-type: none"> Guest Speaker: Architect and Building Construction Professor Andrew Ray LEED Certification 	<p><u>Due Today:</u></p> <ul style="list-style-type: none"> Review Chapter 4: ENERGY, HEALTH, AND THE

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	<ul style="list-style-type: none"> Embodied Energy and Natural Building Techniques Passive Solar Home Design 	ENVIRONMENT
9 (3-4)	Spring Break	
10 (3-11)	<ul style="list-style-type: none"> The Biomass/Biodiesel Power Team presents a commercial to market their own renewable energy and shares a few of the latest advancements within their particular technology... Video and/or Hands-on Activity 	Due Today: <ul style="list-style-type: none"> Review Chapter 3 section on Biomass Renewable Energy Resources
11 (3-18)	<ul style="list-style-type: none"> The Geothermal/Hydrogen Renewable Power Team presents a commercial to market their own renewable energies and shares a few of the latest advancements within their particular technologies... Video and/or Hands-on Activity 	Due Today: <ul style="list-style-type: none"> Discussion Board Commentary 5 Review Chapter 3 sections on Geothermal Renewable and Hydrogen Renewable and Nonrenewable Energy Resources
12 (3-25)	<ul style="list-style-type: none"> The Hydropower/Ocean Team presents a commercial to market their own renewable energies and shares a few of the latest advancements within their particular technologies... Video and/or Hands-on Activity 	Due Today: <ul style="list-style-type: none"> Discussion Board Commentary 6 Review Chapter 3 sections on Hydropower and Ocean Renewable Energy Resources
13 (4-1)	<ul style="list-style-type: none"> The Wind Power Team presents a commercial to market their own renewable energy and shares a few of the latest advancements within their particular technology... Video and/or Hands-on Activity 	Due Today: <ul style="list-style-type: none"> Discussion Board Commentary 7 Review Chapter 3 section on Wind Renewable Energy Resources
14 (4-8)	Renewable Energy Workforce Panel of Guest Speakers: <ul style="list-style-type: none"> Guest Speaker: Siemens Wind Power Guest Speaker: Blue Chip Energy Guest Speaker: Florida Solar Energy Center Guest Speaker: Blue Sky Solar 	Due Today: <ul style="list-style-type: none"> Discussion Board Commentary 8 Review Chapter 5: ENERGY POLICY AND MANAGEMENT
15 (4-15)	Team Presentations: Renewable Energy Workforce Each team will then present their specific "Renewable Energy Workforce" PowerPoint presentation before the class (15 minute max) about the various types of employment	Due Today: <ul style="list-style-type: none"> Discussion Board Commentary 9 Team PowerPoint (Each team member posts the same file)

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	opportunities within their particular renewable energy fields Note: Each team member will discuss a minimum of 1 to 2 slides each	
16 (4-22)	Final Exam	Due Today: <ul style="list-style-type: none"> Team Solar Suitcase Instruction Manual with Letter and Team Photo (Each team member posts the same file) Team Peer Evaluation Form (Each team member must post their OWN form) Submit all GEOs online (Not Required)

Rules and Comments:

- ❑ Students are strongly encouraged to read the Valencia policy Manual *Student Code of Conduct* and *Computer Acceptable Usage* found at: <http://valenciacollege.edu/policies/policydetail2.cfm?PolicyCatID=10&PolicyID=3>
- ❑ You are expected to be in class **on time**. You are responsible for all information and/or assignments given during class, whether you are present or not.
- ❑ **NO LATE WORK** will be accepted (no exceptions).
- ❑ **NO MAKE UPS** on missed lab assignments or missed exams (no exceptions).
- ❑ No audio or video recording allowed in class unless prior permission is granted from professor and every other student in the class.
- ❑ It is the student's responsibility to withdraw from the course. Any withdrawal after the withdraw deadline may result in earning an **F** as the overall grade for the course.
- ❑ If interested, you may calculate your most current grade in the course utilizing the "Student Performance Assessment" section listed on the first page of this syllabus along with what grades have been posted in Blackboard Learn and with what graded assignments have been returned in class to you thus far in the course. Your professor will calculate the final grade in the course that you have earned after the final exam has been given and will post this grade in Atlas for you to view at the end of the semester.

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Student Core Competencies:

The faculty members of Valencia College have established four Core Competencies that describe the learning outcomes for a Valencia graduate. They are: THINK, VALUE, COMMUNICATE, and ACT. These general competencies can be applied in many contexts and must be developed over a lifetime. They specify how learning can be expressed and assessed in practice. They enable students and faculty to set learning goals and assess learning within and across the many disciplines of human inquiry. Use the descriptions and examples of academic work for each to measure your own learning outcomes. Samples of the academic work are great additions to your Learning Portfolio. For further information on student core competencies please go to: www.valenciacollege.edu/competencies.

Expected Student Conduct:

Valencia College is dedicated not only to the advancement of knowledge and learning but is concerned with the development of responsible personal and social conduct. By enrolling at Valencia College, a student assumes the responsibility for becoming familiar with and abiding by the general rules of conduct. The primary responsibility for managing the classroom environment rests with the faculty. Students who engage in any prohibited or unlawful acts that result in the disruption of a class may be directed by the faculty member to leave the class. Violation of any classroom or Valencia's rules may lead to disciplinary action up to and including expulsion from Valencia. Disciplinary action could include being withdrawn from class, disciplinary warning, probation, suspension, expulsion, or other appropriate and authorized actions. You will find the Student Code of Conduct in the current Valencia Student Handbook

Students with disabilities who qualify for academic accommodations must provide a letter from the Office for Students with Disabilities (OSD) and discuss specific needs with the professor, preferably during the first two weeks of class. The Office for Students with Disabilities determines accommodations based on appropriate documentation of disabilities (West Campus SSB 102, ext. 1523).

Valencia College is interested in making sure all our students have a rewarding and successful college experience. To that purpose, Valencia students can get immediate help with issues dealing with stress, anxiety, depression, adjustment difficulties, substance abuse, time management as well as relationship problems dealing with school, home or work. BayCare Behavioral Health Student Assistance Program (SAP) services are free to all Valencia students and available 24 hours a day by calling (800) 878-5470. Free face-to-face counseling is also available.

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