

Course Proposal
Energy, Environment and Global Affairs
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Overview – The Importance of Energy Studies

Civilization and Culture

Ecology – Pollution, Climate Change, Loss of Habitat

Global Conflict – War, Poverty and Terrorism

World Energy Consumption at Present

Physical Definition of Energy and Units of Measurement

By Geographical Location

By Usage – Agriculture, Manufacturing, Transportation and Domestic

By Source – Coal, Oil, Gas, Nuclear, Hydro, Bio-fuel, Solar, Wind, etc.

The Solar Radiation Balance

Solar Radiation in Space and at the Earth's Surface

The Balance of Radiation In and Out

Climatic, Seasonal, Latitudinal Variations

Greenhouse Gases and Global Warming

Fossil Fuels, Their Importance and Problems – Ecological, Financial and Political

Coal, Oil, Gas, Shale Oil

Alternative Sources of Energy in the Future

Interaction of Engineering, Economics and Politics

Public Policy and Private Choice

Household, Local, Regional, National and Global Choices

Survey of Present and Near Future Feasibility

Hydro

Bio-fuel

Solar Heat and Hot Water, Solar Electric

Wind, Geothermal

Nuclear

Energy Conservation and Reducing Consumption

Residential Usage – Heating, Appliances, Lighting and Cooking

Industrial Usage

Energy Efficient Manufacturing

Using Fewer Raw Materials, Recycling, Making Things That Last

Transportation

Modes of Transportation and Energy Consumption

Technology and Future Directions

Living Better with Less Consumption – Mind and Materialism