

VEER NARMAD SOUTH GUJARAT UNIVERSITY

syllabus for B. Sc. Semester III or IV

Subject: Non Renewable Energy Sources (GEC)

[2 credit course- 3 hours per week]

(In force from year : 2012 – 2013)

Introduction to Non Renewable energy sources:

- Oil and Natural Gas(Fossil Fuels): Introduction, Crude Oil Reserves, Natural Gas Reserves, Recovering Oil and Gas, Impact on Environment.
- Coal: Introduction, Coal as a Fossil Fuel of the Future, Coal Reserves, Coal Combustion for Power Generation, Environmental Impacts.
- Nuclear Energy: Introduction, Energy and Mass, Nuclear Fission, Chain Reaction, Critical Mass, Power from Nuclear Fission Reactors, Thermonuclear Fusion, Difficulties, About Fuel Reserves, Safety and Waste Issues.
- Unconventional Oil and Gas Resources: Oil Shale, Tar Sands
- Fossil Fuels and Greenhouse Effect: Greenhouse Effect, Energy and Greenhouse Gas Emissions, Weather and Climate, Natural Change of Climate, Global Warming.

Recommended books:

1. Our Future Resources: Alternatives and the environment. Christian Ngô & Joseph B. Natowitz. JOHN WILEY & SONS 2009
2. Energy and Environment by E.H. Thorndike, Addison – Wesley 1976.
3. Energy , Resources and Policy by R.C. Dorf, Addison – Wesley 1978.
4. Energy by K. Parikh , The Macmillan Company of India, 1976.



(Signature)
I/C Registrar,
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SURAT