SUBJECT NO-ES60007, SUBJECT NAME- ENERGY: POLICY AND GOVERNANCE

LTP- 3-0-0,CRD- 3

SYLLABUS :-

A total number of 30 lecture hours will be covered for the entire syllabus and 15 hour of tutorials Course Description: Energy is directly related to some of the critical economic and social consideration and impacts life on earth. With the rising demand to secure energy sources particularly at low prices there is a competition for resources. Global, social, economic and environment goals of sustainability cannot be achieved if energy security is not achieved. The International Energy Agency forecasts that the world primary energy demand will grow by 1.6 percent per year on average in 2006-2030. Rising energy needs has always been a major concern in India's growth endeavor and energy security is going to be one of the most crucial economic and strategic policy challenges for India in the next few decades, especially with an additional goal of following a low carbon growth path. With increased economic growth, changing lifestyle and increase in energy intensity in the economy, ensuring reliable and cheap supply of clean energy to the Indian economy will be a difficult task. A recent report by World Economic Forum, tried to estimate the challenges faced by countries to achieve energy security in a sustainable way. According to this study, India is ranked 98th among 124 countries in terms of providing energy security and access to its citizens. To ensure an acceptable level of energy consumption for everyone, the overall availability ofenergy would need to be increasedsubstantially.Renewable energy resources are an important consideration which offer a chance for reduced carbon 4emissions, cleaner air and a more sustainable use of earth resources. Technology options like cogeneration have become more important. Energy governance plays an important role in standardization. Decision trees, regulatory considerations and sustainability criteria help in achieving good governance in transportation sector and other end use sectors. There is active engagement of governments in adapting international policy in domestic front and developing better regulatory and pricing structures in the energy markets. Objective of the Course: a. The course will equip students to understand the ongoing technological, policy and implementation aspects related to different forms of energy used worldwide. b. A critical understanding on the development of national policies and technology deployment vis a vis economics of energy. c. Understanding interdisciplinary aspects of policy and socio-economic contexts in energy commercialization worldwide d. Understanding factors related to geopolitical stability, geographical accessibility and underdeveloped international as well as domestic energy markets Teaching- Learning Methodology: The method of teaching-learning such a course on Energy: Policy and Governance has to maximize the (1) information package (2) provide an interdisciplinary focus into the multiple considerations of implementing energy technologies from a technical, policy and governance perspective. A combination of lectures, interactive exercises, assignments, case studies will form the method of teaching-learning. Student will learn about the different energy

types, their production and policy influences on energy use and development, governance and regulation. 5The course may facilitate one visit to the nearest energy unit/WBREDA implementing units to enable students to practically understand related to policy support, compliance requirements and certain aspects of energy commercialization.