

# TUMKUR UNIVERSITY

Vishwavidyanilaya Karyalaya, B.H. Road, Tumkur- 572 103

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No. TU: AC: 2017-18 / 2211

Date: 12.09.2017

To

The Principals of Constituent and affiliated colleges

Sir/Madam,

In reference D.O.No.F.1-2/2017(CCP-II) dated: 19.06.2017 recived from, University Grants Commission, regarding compulsory Implementation of module Syllabus on Environmental Studies for undergraduate course of all branches of higher education in Universities and Colleges as per directives of the Hon'ble supreme court of India.

In this regard it is hereby informed to all the Colleges to implement the same as per the directions of the Hon'ble supreme court with immediate effect. A copy of the Syllabus has already been uploaded on University website [www.tumkuruniversity.ac.in](http://www.tumkuruniversity.ac.in).

Yours faithfully,

  
Deputy Registrar  
(Academic Section)

Copy:

- 1) The Secretary, University Grants Commission, Bhaddur Shah Zafar Marg, New Delhi-110002
- 2) System Analyst, Tumkur University, Tumkur.
- 3) Office copy.

## UNIVERSITY GRANTS COMMISSION

### Ability Enhancement Compulsory Course (AECC – Environment Studies)

#### **Unit 1 : Introduction to environmental studies**

- Multidisciplinary nature of environmental studies;
- Scope and importance; Concept of sustainability and sustainable development.

(2 lectures)

#### **Unit 2 : Ecosystems**

- What is an ecosystem? Structure and function of ecosystem; Energy flow in an ecosystem: food chains, food webs and ecological succession. Case studies of the following ecosystems :
  - a) Forest ecosystem
  - b) Grassland ecosystem
  - c) Desert ecosystem
  - d) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

(6 lectures)

#### **Unit 3 : Natural Resources : Renewable and Non-renewable Resources**

- Land resources and land use change; Land degradation, soil erosion and desertification.
- Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations.
- Water : Use and over-exploitation of surface and ground water, floods, droughts, conflicts over water (international & inter-state).
- Energy resources : Renewable and non renewable energy sources, use of alternate energy sources, growing energy needs, case studies.

(8 lectures)

#### **Unit 4 : Biodiversity and Conservation**

- Levels of biological diversity : genetic, species and ecosystem diversity; Biogeographic zones of India; Biodiversity patterns and global biodiversity hot spots
- India as a mega-biodiversity nation; Endangered and endemic species of India
- Threats to biodiversity : Habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; Conservation of biodiversity : In-situ and Ex-situ conservation of biodiversity.
- Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and Informational value.

(8 lectures)

#### **Unit 5 : Environmental Pollution**

- Environmental pollution : types, causes, effects and controls; Air, water, soil and noise pollution
- Nuclear hazards and human health risks
- Solid waste management : Control measures of urban and industrial waste.
- Pollution case studies.

(8 lectures)

#### **Unit 6 : Environmental Policies & Practices**

- Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture

