



UNIVERSITY OF CALICUT

**Abstract**

General and Academic - UG Programmes under CBCSS UG Regulations 2019 with effect from 2019 Admission onwards- Syllabus of Audit Course - Environmental Studies - Implemented- Orders Issued

---

**G & A - IV - J**

U.O.No. 11724/2019/Admn

Dated, Calicut University.P.O, 30.08.2019

---

*Read:-*1. U.O.No. 4368/2019/Admn dated 23.03.2019

2. The minutes of the meeting of the Board of Studies in Geology on 10.06.2019

3. Item No. I.27 in the minutes of the meeting of Faculty of Science held on 27.06.2019

ORDER

The Regulations for Choice Based Credit and Semester System for Under Graduate (UG) Curriculum- 2019 (CBCSS UG Regulations 2019) for all UG Programmes under CBCSS-Regular and SDE/PrivateRegistration w.e.f. 2019 admission has been implemented vide paper read first above. As per the Clause 4.10 of the CBCSS UG Regulations 2019, there shall be one Audit course each in the first four semesters.

The meeting of Board of Studies in Geology held on 10/06/2019 has approved the Syllabus of Audit course - Environmental Studies for all UG programmes in tune with the new CBCSS UG Regulations with effect from 2019 Admission onwards, vide paper read second above.

The Faculty of Science at its meeting held on 27/06/2019 has approved the minutes of the meeting of the Board of Studies in Geology held on 10/06/2019, vide paper read third above.

Under these circumstances, considering the urgency, the Vice Chancellor has accorded sanction to implement the Scheme and Syllabus of Audit Course- Environmental Studies in accordance with the new CBCSS UG Regulations 2019, in the University with effect from 2019 Admission onwards, subject to ratification by the Academic Council.

The Scheme and Syllabus of Audit Course- Environmental Studies in accordance with CBCSS UG Regulations 2019, is therefore implemented in the University with effect from 2019 Admission onwards.

Orders are issued accordingly. (Syllabus appended)

Biju George K

Assistant Registrar

To

The Principals of all Affiliated Colleges

Copy to: PS to VC/PA to PVC/ PA to Registrar/PA to CE/JCE I/ JCE II/ JCE III/JCE IV/  
DoA/EX and EG Sections/GA I F/CHMK Library/Information Centres/SF/DF/FC

Forwarded / By Order

Section Officer

# **UNIVERSITY OF CALICUT**

**SCHEME & SYLLABUS of**

**AUDIT COURSE-ENVIRONMENTAL STUDIES**

**(CBCSS-UG – REGULATION-2019)**

**2019 Admission Onwards**

## AUD1E01 ENVIRONMENTAL STUDIES

### Module 1:

Introduction – Environment in the Indian context: Concept of an ecosystem, Multidisciplinary nature of environmental studies. Components of environment- Atmosphere, hydrosphere, lithosphere and biosphere. Definition, scope and importance. Concept of sustainability and sustainable development.

**Module 2:** Natural Resources : Renewable and non-renewable resources : Natural resources and associated problems. a) Forest resources : Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forest and tribal people. b) Water resources : Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems. c) Mineral resources : Use and exploitation, environmental effects of extracting and using mineral resources, case studies. d) Food resources : World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies. e) Energy resources : Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources. Case studies. f) Land resources : Land as a resource, land degradation, man induced landslides, soil erosion and desertification. • Role of an individual in conservation of natural resources. •Carbon footprint Water conservation, rain water harvesting, watershed management

**Module 3:** Structure and function of an ecosystem. • Producers, consumers and decomposers. • Energy flow in the ecosystem. • Ecological succession. • Food chains, food webs and ecological pyramids. • Introduction, types, characteristic features, structure and function of the following ecosystem :- a. Forest ecosystem b. Grassland ecosystem c. Desert ecosystem d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

**Module 4:** Biodiversity and its conservation • Introduction – Definition : genetic, species and ecosystem diversity. • Biogeographical classification of India • Value of biodiversity : consumptive use, productive use, social, ethical, aesthetic and option values • Biodiversity at global, National and local levels. • Hot-spots of biodiversity. • Threats to biodiversity : habitat loss, poaching of wildlife, man-wildlife conflicts. • Endangered and endemic species of India • Conservation of biodiversity :

**Module 5:** Environmental Pollution Definition • Cause, effects and control measures of :- a. Air pollution b. Water pollution c. Soil pollution d. Marine pollution e. Noise pollution f. Thermal pollution g. Nuclear hazards • Solid waste Management : Causes, effects and control measures of urban and industrial wastes. • Role of an individual in prevention of pollution.

**Module 6:** Environmental Policies and practices: Climate change, Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents.

### Essential Reading

1. Bharucha Erach, The Biodiversity of India, Mapin Publishing Pvt. Ltd., Ahmedabad – 380 013, India, Email:mapin@icenet.net (R) c)

2. Brunner R.C., 1989, Hazardous Waste Incineration, McGraw Hill Inc. 480p
3. Carson, R. 2002. Silent Spring. Houghton Mifflin Harcourt.
4. Gadgil, M., & Guha, R.1993. This Fissured Land: An Ecological History of India. Univ. of California Press.
3. Gleeson, B. and Low, N. (eds.) 1999. Global Ethics and Environment, London, Routledge.
4. McNeill, John R. 2000. Something New Under the Sun: An Environmental History of the Twentieth Century.
5. Singh, J. S., Singh, S. P. and Gupta, S. R. 2014. Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi.
6. Sodhi, N. S., Gibson, L. & Raven, P. H. (eds). 2013. Conservation Biology: Voices from the Tropics. John Wiley & Sons.
7. Warren, C. E. 1971. Biology and Water Pollution Control. WB Saunders.