VIJAYANAGARA SRI KRISHNADEVARAYA UNIVERSITY, BALLARI

ENVIRONMENTAL STUDIES SYLLABUS

FOR THE UNDER GRADUATE COURSE B.A/B.Sc/B.Com/B.C.A/B.B.A/B.S.W COMMON PAPER (COMPULSORY) (CBCS)

With effect from Academic year 2021-22

VIJAYANAGARA SRI KRISHNADEVARAYA UNIVERSITY

Jnanasagara campus, Vinayakanagara, Cantonment, Ballari.-583105

Ability Enhancement Compulsory Course

SYLLABUS of ENVIRONMENTAL STUDIES (CBCS) for
B.A/B.Sc/B.Com/B.C.A/B.B.A/B.S.W/BHM
COMMON PAPER (COMPULSORY) EFFECTIVE FROM 2021-22

ENVIRONMENTAL STUDIES (CBCS) (AECC)

COURSE CODE: 21AECCES1

Semester: I/II

Internal Assessment: 20 **30 Hrs**
End semester Examination: 30 **Total Marks: 50**

Course Content

Subject	Environmental studies Ability Enhancement Compulsory Courses(AECC)	Semester
Course	BA, BBA,BSW(Group I)	I
	B.Com, BSc and BCA (Group II)	II

The scheme of Examination and the question paper pattern for AECC – Environmental Studies will be multiple choice questions (MCQ) for 30 marks and 20 marks for internal assessment with 2 hours of teaching per week with 2 credits.

Number of Theory/Credits	Number of lecture hours
2	**30**

Content of AECC – ENVIRONMENTAL STUDIES

	Environmental Studies and Ecosystems	**30 hours**
Unit 1	**Environmental Studies and Ecosystems**	**8hrs**
	Introduction to Environmental Studies Multidisciplinary nature of environmental studies Scope and importance; Concept of sustainability andsustainable development. **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: Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystems (ponds, streams, lakes, rivers, oceans,estuaries)	
Unit 2	**Natural Resources and Biodiversity & Conservation**	**14hrs**
	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 tribalpopulations. 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. **Biodiversity & Conservation** Levels of biological diversity: Genetic, species and ecosystem diversity; Biogeographic zonesof 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.	
Unit 3	**Environmental Pollution**	**8hrs**
	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 andindustrial waste Pollution case studies.	

Reference

Carson, R. (2002). Silent Spring. Houghton Mifflin Harcourt.

Gadgil, M., & Guha, R. (1993). This Fissured Land: An Ecological History of India. Univ. of California Press.

Gleeson, B. and Low, N. (eds.) (1999). Global Ethics and Environment, London,Routledge.

Glejck, P. H. (1993). Water in Crisis. Pacific Institute for Studies in Dev.,Environment & Security. Stockholm Env. Institute, Oxford Univ. Press.

Groom, Martha J., Gary K. Meffe, and Carl Ronald Carroll. (2006). Principles of Conservation Biology. Sunderland: Sinauer Associates.

Grumbine, R. Edward, and Pandit, M.K. (2013). Threats from India's Himalaya dams. Science, 339: 36-37.

McCully, P. (1996). Rivers no more: the environmental effects of dams (pp. 29-64). Zed Books.

McNeill, John R. (2000). Something New Under the Sun: An Environmental History of the Twentieth Century.

Nandini, N. (2019). A text book on Environmental Studies (AECC). Sapna Book House, Bengaluru.

Odum, E.P., Odum, H.T. & Andrews, J. (1971). Fundamentals of Ecology. Philadelphia: Saunders.

Pepper, I.L, Gerba, C.P. & Brusseau, M.L. (2011). Environmental and Pollution Science. Academic Press.

Rao, M.N. & Datta, A.K. (1987). Waste Water Treatment. Oxford and IBHPublishing Co. Pvt. Ltd.

Raven, P.H., Hassenzahl, D.M. & Berg, L.R. (2012). Environment. 8th edition. JohnWiley & Sons.

Rosencranz, A., Divan, S., & Noble, M. L. (2001). Environmental law and policy in India. Tripathi 1992.

Sengupta, R. (2003). Ecology and economics: An approach to sustainabledevelopment. OUP.

Singh, J.S., Singh, S.P. and Gupta, S.R. (2014). Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi.

Sodhi, N.S., Gibson, L. & Raven, P.H. (eds). (2013). Conservation Biology: Voices from the Tropics. John Wiley & Sons.

Thapar, V. (1998). Land of the Tiger: A Natural History of the Indian Subcontinent. Warren, C.

E. (1971). Biology and Water Pollution Control. WB Saunders.

Wilson, E. O. (2006). The Creation: An appeal to save life on earth. New York: Norton.

World Commission on Environment and Development. (1987). Our Common Future. Oxford University Press.