

**RAICHUR
UNIVERSITY**



STATE EDUCATION POLICY (SEP) -2024-25

ENVIRONMENTAL STUDIES

(COMPULSORY COURSE/ CONSTITUTIONAL VALUES)

SYLLABUS

I SEMESTER - B.Com, BBA, BCA

II SEMESTER – BA, BS.c, BSW

SUBMITTED TO

RAICHUR UNIVERSITY RAICHUR- 584133

**COMPULSORY COURSE
(ENVIRONMENTAL STUDIES)**

| Content of AECC – Environmental Studies | |
|--|--|
| Unit1: | <p>Environmental Studies: Introduction, Scope and importance; Concept of sustainability.</p> <p>Ecosystem: Structure and function of ecosystem; Energy flow in an ecosystem: food chains, food webs and ecological succession. Case studies of the following ecosystems:</p> <ol style="list-style-type: none"> a) Forest ecosystem, b) Grassland ecosystem, c) Desert ecosystem, d) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries) <p>Ecosystem and biodiversity services: Ecological, economic, social, aesthetic and informational value.</p> |
| Unit2: | <p>Natural Resources: Land resources and land-use change; Land degradation, Soil erosion, and desertification.</p> <p>Deforestation: Causes and impacts mainly due to Mining and Dam construction.</p> <p>Water: Use and over-exploitation of surface and ground water, conflicts over water (International and Inter-state).</p> <p>Energy resources: Renewable energy sources- Solar, Wind, Geothermal, Hydropower. Non-renewable energy sources- Coal, Petroleum, Natural Gas and Nuclear energy. Use of alternate energy sources.</p> <p>Biodiversity and Conservation: Levels of biological diversity: Genetic, species and ecosystem diversity. Biogeography zones of India, Biodiversity Hot spots, Mega-biodiversity of India, Endangered and Endemic species of India. In-situ and Ex-situ conservation of biodiversity.</p> <p>Threats to biodiversity: Habitat loss, Poaching of wildlife and Biological invasions.</p> |
| Unit3: | <p>Environmental Pollution and Policies: Environmental pollution: types, causes, effects and control; Air, water, soil, noise, light and radioactive pollution. Global warming and climate change, Ozone layer depletion, Acid rain. Nuclear hazards and human health risks. Solid waste management. Control measures of urban and industrial waste. Pollution case studies.</p> <p>Environmental Policies: Environment Protection Act; Air Prevention and Control of Pollution) Act; Water (Prevention and control of Pollution) Act; Wildlife Protection Act; Forest Conservation Act.</p> <p>International agreements: Montreal and Kyoto protocols and Convention on Biological Diversity (CBD).</p> |
| Unit4: | <p>Human Communities and the Environment: Human population and its impacts on environment, human health and welfare, hazards of Tobacco- smoked and Smokeless products like Cigar and Gutka, resettlement and rehabilitation.</p> <p>Disaster management: floods, earthquakes, cyclones, landslides and forest fires.</p> <p>Environmental movements: Chipko movement, Ladakh's climatic movement and</p> |

Climate action strike in India.

Environmental ethics: Role of humans in environmental conservation, Importance of CNG in sustainable transportation.

Field work

Reference

1. Bharucha, E. (2015). *Textbook of Environmental Studies*.
2. Carson, R. (2002). *Silent Spring*. Houghton Mifflin Harcourt.
3. Climate Change: Science and Politics. (2021). *Centre Science and Environment*, New Delhi.
4. Gadgil, M., & Guha, R. (1993). *This Fissured Land: An Ecological History of India*. Univ. of California Press.
5. Gleeson, B. and Low, N. (eds.) (1999). *Global Ethics and Environment*, London, Routledge.
6. Groom, Martha J., Gary K. Meffe, and Carl Ronald Carroll. (2006). *Principles of Conservation Biology*. Sunderland: Sinauer Associates.
7. McCully, P. (1996). *Rivers no more: the environmental effects of dams* (pp. 29-64). Zed Books.
8. McNeill, John R. (2000). *Something New Under the Sun: An Environmental History of the Twentieth Century*.
9. Nandini, N., Sunitha N., & Sucharita Tandon. (2019). *A text book on Environmental Studies (AECC)*. Sapna Book House, Bengaluru.
10. Odum, E.P., Odum, H.T. & Andrews, J. (1971). *Fundamentals of Ecology*. Philadelphia: Saunders.
11. Pepper, I.L, Gerba, C.P. & Brusseau, M.L. (2011). *Environmental and Pollution Science*. Academic Press.
12. Rajit Sengupta and Kiran Pandey. (2021). *State of India's Environment 2021: In Figures*. Centre Science and Environment.
13. Raven, P.H., Hassenzahl, D.M. & Berg, L.R. (2012). *Environment*. 8th Edition. John Wiley & Sons.
14. Rosencranz, A., Divan, S., & Noble, M. L. (2001). *Environmental law and policy in India*.
15. Sengupta, R. (2003). *Ecology and economics: An approach to sustainable development*. OUP.
16. Singh, J.S., Singh, S.P. and Gupta, S.R. (2014). *Ecology, Environmental Science and Conservation*. S. Chand Publishing, New Delhi.
17. Sodhi, N.S., Gibson, L. & Raven, P.H. (Eds). (2013). *Conservation Biology: Voices from the Tropics*. John Wiley & Sons.
18. Wilson, E. O. (2006). *The Creation: An appeal to save life on Earth*. New York: Norton.
19. World Commission on Environment and Development. (1987). *Our Common Future*. Oxford University Press.