

Value Added Course (VAC)

Value Added Course (VAC)- 01

VAC-01: ENVS- Environmental Studies

Credits 04 (Full Marks-100)

Course contents:

Unit-I: Introduction to environmental studies (2 lectures)

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

Unit-II: Ecosystems (6 lectures)

- 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)

Unit-III: Natural Resources: Renewable and Non-renewable Resources (8 lectures)

- 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. Joint forest management.
- Water: Use and over--exploitation of surface and ground water, floods, droughts, conflicts over water (international & interstate).
- Energy resources: Renewable and non renewable energy sources, use of alternate energy sources, growing energy needs, case studies.

Unit-IV: Biodiversity and Conservation (8 lectures)

- Levels of biological diversity: genetic, species and ecosystem diversity; Bio-geographic 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.

Unit-V: Environmental Pollution (8 lectures)

- 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.
- Noise pollution.

Unit-VI: Environmental Policies & Practices

(7 lectures)

- Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture
- Environment Laws: Environment Protection Act; Air (Prevention & Control of Pollution) Act; Water (Prevention and control of Pollution) Act; Wildlife Protection Act; Forest Conservation Act. International agreements: Montreal and Kyoto protocols and Convention on Biological Diversity (CBD).
- Nature reserves, tribal populations and rights, and human wildlife conflicts in Indian context.
- Environmental policy and gender issues

Unit-VII: Human Communities and the Environment

(6 lectures)

- Human population growth: Impacts on environment, human health and welfare.
- Resettlement and rehabilitation of project affected persons; case studies.
- Disaster management: floods, earthquake, cyclones and landslides.
- Environmental movements: Chipko, Silent valley, Bishnois of Rajasthan.
- Environmental ethics: Role of Indian and other religions and cultures in environmental conservation.
- Environmental communication and public awareness, case studies (e.g. CNG vehicles in Delhi)

Unit-VIII: Field work

(Equal to 5 lectures)

- Visit to an area to document environmental assets: river/ forest/ flora/fauna, etc.
- Visit to a local polluted site--Urban/Rural/Industrial/Agricultural.
- Study of common plants, insects, birds and basic principles of identification.
- Study of simple ecosystems--pond, river, Delhi Ridge, etc.
- Disaster management.
- Coastal ecosystem

Suggested Readings:

- i. Carson, R. 2002. *Silent Spring*. Houghton Mifflin Harcourt.
- ii. Gadgil, M., & Guha, R. 1993. *This Fissured Land: An Ecological History of India*. Univ. of California Press.
- iii. Gleeson, B. and Low, N. (eds.) 1999. *Global Ethics and Environment*, London, Routledge.
- iv. Gleick, P. H. 1993. *Water in Crisis*. Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute, Oxford Univ. Press.
- v. Groom, Martha J., Gary K. Meffe, and Carl Ronald Carroll. *Principles of Conservation Biology*. Sunderland: Sinauer Associates, 2006.
- vi. Grumbine, R. Edward, and Pandit, M.K. 2013. Threats from India's Himalaya dams. *Science*, 339: 36--37.
- vii. McCully, P. 1996. *Rivers no more: the environmental effects of dams* (pp. 29--64). Zed Books.
- viii. McNeill, John R. 2000. *Something New Under the Sun: An Environmental History of the Twentieth Century*.
- ix. Odum, E.P., Odum, H.T. & Andrews, J. 1971. *Fundamentals of Ecology*. Philadelphia: Saunders.
- x. Pepper, I.L., Gerba, C.P. & Brusseau, M.L. 2011. *Environmental and Pollution Science*. Academic Press
- xi. Rao, M.N. & Datta, A.K. 1987. *Waste Water Treatment*. Oxford and IBH Publishing Co.Pvt. Ltd.
- xii. Raven, P.H., Hassenzahl, D.M. & Berg, L.R. 2012. *Environment*. 8th edition. John Wiley & Sons.

- xiii. Rosencranz, A., Divan, S., & Noble, M. L. 2001. Environmental law and policy in India. Tripathi 1992.
- xiv. Sengupta, R. 2003. Ecology and economics: An approach to sustainable development. OUP.
- xv. Singh, J.S., Singh, S.P. and Gupta, S.R. 2014. Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi.
- xvi. Sodhi, N.S., Gibson, L. & Raven, P.H. (eds). 2013. Conservation Biology: Voices from the Tropics. John Wiley & Sons.
- xviii. 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.
- xix. Wilson, E. O. 2006. The Creation: An appeal to save life on earth. New York: Norton.
- xx. World Commission on Environment and Development. 1987. Our Common Future. Oxford University Press.

Value Added Course (VAC) - 02

VAC-02: Human Rights

Credits 04 (Full Marks-50)

Course contents:

Unit -1: Human Rights: Society and Development-Human Rights in the World

Unit- 2: Human Rights in India: Civil and Political Rights - Human Rights Commissions

Unit -3: Violation of Rights: Violation of Human Rights and Remedies -Violation of Economic, Social and Cultural Rights

Unit - 4: Rights of the Juveniles& Elderly People

- a) Rights of the Juveniles and Child Labour and Old People,
- b) Protection of Rights to Health,
- c) Human Rights and the Civil Society

Suggested Readings

1. Agarwal, H.O., Implementation of Human Rights Covenants with Special Reference to India (Allahabad: Kitab Mahal, 1983).
2. Alam, Aftab, ed., Human Rights in India: Issues and Challenges (New Delhi: Raj Publications, 1999).
3. Amnesty International, Human Rights in India (New Delhi: Sage Publications, 1994).
4. Bajwa, G.S. and D.K. Bajwa, Human Rights in India: Implementation and Violations (New Delhi: D.K. Publishers, 1996).
5. Basu, D.D., Human Rights in Constitutional Law (New Delhi: Prentice Hall, 1994).
6. Baxi, Upendra, Inhuman Wrongs and Human Rights (Delhi: HarAnand Publications, 1994).
7. Begum, S.M., ed., Human Rights in India: Issues and Perspectives (New Delhi: APH Publishing Co., 2000).
8. Bhagwati, P.N., Legal Aid as Human Rights (Dharwad: JagrutBharut, 1985).
9. Bhargava, G.S. and R.M.Pal, ed., Human Rights of Dalits: Societal Violation (New Delhi: Gyan Publishing House, 2000).

OR

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