

## FYUGP 2<sup>nd</sup> SEMESTER

**Title of the Course : ENVIRONMENTAL SCIENCE**

**Course Code : VAC3**

**Nature of the Course : VALUE ADDED COURSE**

**Total Credits : 02**

**Distribution of Marks : 40 (End-Sem.) + 10 (In-Sem.)**

**COURSE OBJECTIVES:**

1. To understand the various environmental challenges faced by world.
2. To create a sense of how to be more responsible towards the environment.
3. To provide fundamental knowledge of environmental science and its importance in present day context.
4. To develop strategies for the development of environmental degradation

UNITS	CONTENTS	L	T	P	Total Hours
1 (15 Marks)	ENVIRONMENTAL SCIENCE 1.1 Nature, Scope and importance of environmental Science. 1.2 Climate change, causes, societal impacts, adaptation 1.3 Sustainable development and living	8	1		9
2 (15 Marks)	ENVIRONMENTAL DEGRADATION 2.1 Land degradation: Causes and consequences. 2.2 Exploitation of surface and ground water, 2.3 Air pollution: anthropogenic causes, impact on health, agriculture, climate, hydrology	8	1		9
3 (20 Marks)	ENVIRONMENTAL CASE STUDIES AND COMMUNITY BASED ACTIVITIES 3.1 Wildlife; Poaching, man--wildlife conflicts, Conservation and mitigation. 3.2 Waste Management; Solid waste, urban waste, industrial waste and pollution; 3.3 Water management; Reuse and Rain water harvesting, Air pollution reduction and climate change mitigation	10			10
	<b>Total</b>	<b>26</b>	<b>2</b>		<b>28</b>

*Where,*

*L: Lectures*

*T: Tutorials*

*P: Practicals*

**MODES OF IN-SEMESTER ASSESSMENT:**

**(20 Marks)**

- One Internal Examination - **10 Marks**
- Others (Any one) - **10 Marks**
  - Group Discussion
  - Seminar presentation on any of the relevant topics
  - Debate

**LEARNING OUTCOMES:** After successful completion of this course students will be able to understand: to come up with using ethical reasoning for decision making and frame ethical issues as well as operationalize ethical choices. The course integrates various facets of human values and environment.

**SUGGESTED READINGS:**

1. Brunner R.C., 1989, Hazardous Waste Incineration, McGraw Hill Inc. 480p
2. Jadhav, H & Bhosale, V.M. 1995. Environmental Protection and Laws. Himalaya Pub. House, Delhi 284 p.
3. Mckinney, M.L. & School, R.M. 1996. Environmental Science systems & Solutions, Web enhanced edition. 639p.
4. Mhaskar A.K., Matter Hazardous, Techno-Science Publication (TB) n) Miller T.G. Jr. Environmental Science, Wadsworth Publishing Co. (TB)
5. Odum, E.P., Odum, H.T., and Andrews, J. (1971). Fundamentals of Ecology. Saunders, Philadelphia, USA
6. Raven, P.H, Hassenzahl, D.M., Hager, M.C, Gift, N.Y., and Berg, L.R. (2015). Environment, 8thEdition. Wiley Publishing, USA.
7. Singh, J.S., Singh, S.P., and Gupta, S.R. (2017). Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi. Chapter 1 (Page: 3-28)