Course Title: Environmental Science for Sustainable Development

Course Code: DVST-851

Credit Hours: 3-0

Pre-requisite Courses: None.

Course Description:

1. The Earth's Systems are experiencing dramatic changes that bring into question the sustainability of our planet. In order to address these changes, development studies students must understand how the Earth's various systems function, and the ways that they support human life on Earth. This course teaches non-environmental studies students those fundamentals of Earth system science that are necessary for understanding the relationships between human development and the natural environment. Due to the complexity of these relationships, theoretical material about ecosystems, biospheres, weather systems, and natural resources will be interspersed with case studies that underline the significance of environmental stewardship in sustainable development.

2. Course Objectives:

a. To provide non-environmental studies background students with the knowledge of Earth systems necessary to understand and implement sustainable development.
b. To instill an appreciation for environmental stewardship, and the importance of caring for the Earth's resources in a sustainable manner and with a view to long-term prosperity.
c. To lay the foundations for later advanced-level coursework in environment-related subjects in students' chosen thematic stream.

Course Outcomes:

3. At the end of this course, students should be able to
   a. explain the dynamics of various environmental systems in detail;
   b. identify linkages between development issues and their environmental contexts;
   c. conduct preliminary assessment and research into the environmental impacts of development policies.

Course Contents:

4. Students will learn about each of the following from a sustainable development perspective: the Earth's ecosystems and the unique challenges and opportunities each presents; natural resources extraction and management; weather systems and climate change; and human impacts on environmental sustainability.

Lab work:

5. Discussion of relevant topics may be reinforced with class visits to local sites in and around Islamabad.

6. Textbooks or Reference Books:

Rowntree, L., Lewis, M., Price, M., and Wyckoff, W. (2000) *Diversity Amid Globalization: World Regions, Environment, Development.* 6th Ed. Upper Saddle River, NJ: Prentice Hall.

Wilson, G., Furniss, P., and Kimbowa, R. (2009) *Environment, Development, and Sustainability: Perspectives and Cases from Around the World.* Milton Keynes, UK: The Open University.