

# Outlines of Courses for BS Degree in ENVIRONMENTAL SCIENCE

## SEMESTER 1

### **COURSE 1: INTRODUCTION TO ENVIRONMENTAL SCIENCE 3 (3-0)**

#### **Objectives:**

The objective of this course is to provide orientation on the evolution and scope of this emerging discipline and to motivate them to think beyond basic sciences to decision sciences. After completing this course, the students are expected to learn the importance of Environmental Science in human life, its relationship with various segments of society and sectors of development. The students are also expected to become familiar with current national, regional and global challenges for sustainable development.

#### **Course Outline:**

Basic principles: about convergence of ecology with economic and sociology to evolve as environmental science, its nature, history, scope and the contribution to society. Environmental aspects: physic-chemical, biological, socio-economic, socio-cultural, moral and ethical, and philosophical thinking.

Environmental problems: local, regional and global level. Environmental challenges: Sustainability of resources for development: efficiency of energy and water resources, current and future trends in growth and resultant environmental pollution, poverty and resource depletion, development in industry, agriculture and urbanization.

#### **Recommended Books:**

1. *Environmental Science: Earth as a Living Planet*, Botkin, D.B & Keller, E.A. 9<sup>th</sup> Ed. John Wiley & Sons, 2013.
2. *Environmental Science: systems and solutions*, McKinney, M.L., Schoch, R.M. & Yonavjak, L. 5<sup>th</sup> Ed. Jones & Bartlett Publishers, 2013
3. *Environmental Science: Toward a Sustainable Future*, Wright, R.T. & Nebel, B.J. 10<sup>th</sup> Ed. Pearson Educational, 2007.
4. *Environmental Science: working with the Earth*. 11<sup>th</sup> Ed. Miller, G., Tyler. Cengage Learning, 2005.