

**SYLLABUS FOR UNDER GRADUATE COURSE  
IN ABILITY ENHANCEMENT COURSE (I)-  
ENVIRONMENTAL SCIENCE  
&  
DISASTER MANAGEMENT  
(Bachelor of Arts/Sc/Com/BCA Examination)  
UNDER  
CHOICE BASED CREDIT SYSTEM (CBCS)  
2021-2022**



**First Semester Examination**

**2021-22**

**SCIENCE COLLEGE (AUTONOMOUS) HINJILICUT,  
GANJAM, ODISHA**

**STATE MODEL SYLLABUS FOR UNDER  
GRADUATE  
COURSE IN ABILITY ENHANCEMENT  
COURSE (I)-  
(Bachelor of Arts/Sc/Com Examination)**

**UNDER  
CHOICE BASED CREDIT SYSTEM**

# SEMESTER – I

## AECC-I- Environmental Studies & Disaster Management

FOR UNDER GRADUATE COURSES ARTS, SCIENCE, COMMERCE & BCA –  
(2021-22)

### Unit – I (Environment)

(13 periods x 45 min.)

**The Environment:** The Atmosphere, Lithosphere, Hydrosphere, Biosphere. (03 periods)

**Ecosystem:** Structure of Ecosystem, Function of Ecosystem, Energy flow in ecosystem. (03 periods)

**Biogeochemical cycle;** Water Cycle, Carbon Cycle, Nitrogen Cycle. (02 periods)

**Pollution:** Water Pollution, Air Pollution, Soil Pollution, Radiation Pollution, Industrial Pollution, Noise Pollution (05 periods)

### Unit – II

**Climate Change & sustainable Development:- (13 periods x 45 min.)**

Human Population Growth, Population Control Methods, Urbanization and its effect on society. (03 periods)

**Climate Change:** Causes, effects, Global Warming, Carbon footprint and Environmental Protection (05 periods)

**Brief idea on Sustainable Development:** Sustainable development concept, sustainable Development Goal (SDGs), Agenda 21 of Rio Earth Summit (02 Periods)

**Steps taken towards sustainable Development:** Management of Plastics, Automobile Scrapping Policy, Promotion of Electrical Vehicles. (03 periods)

### Unit- III

#### Disaster Management

**Disaster Management:** Types of disasters (Natural and Man-made) and their causes and effects (03 periods)

**Vulnerability Assessment and Risk Analysis:** Vulnerability to various disasters (Flood, Cyclone, Earthquake, Tsunami, Heat waves and Lightning) (03 periods)

**Institutional Framework:** National Disaster Management Authority (NDMA), State Disaster Management Authority (SDMA), District Disaster Management Authority (DDMA), National Disaster Response Force (NDRF) and Odisha Disaster Rapid Action Force (ODRAF)

(05 periods)

**Preparedness Measures:** Disaster Management Cycle: Early Warning System, Pre-Disaster and Post-Disaster Preparedness, Community Preparedness, Stakeholders participation, Corporate Social Responsibility (CSR)

(05 periods)

**Unit-IV:**  
**(Public Health Management)**

**Brief idea on Epidemics and Pandemics** (01 period)

**Non-communicable diseases** with special reference to cardiovascular diseases, Cancer, Diabetes, Hypertension and Obesity and their prevention (03 periods)

**Communicable diseases** with special reference to Covid-19, Dengue, Hepatitis and AIDS, their transmission (04 periods)

**Prevention of Epidemic/Pandemic Diseases:** Prevention Measures (Quarantine, Sanitization, Personal Protective measures such as Hand washing and use of protective devices, Vaccination); Control Measures (Surveillance, Isolation, Contact Tracing) (03 periods)

**Life Style management:** Diet, Physical Exercise, Yoga and sleeping habit (01 period)

**Role of different Sectors in Managing Health Disaster:** Role of Government and Non Government agencies in health management. (01 period)